Young People, Tobacco and Cannabis: Social and Place-based complexities in Co-Consumption

Richard Eric Tyler

The thesis is submitted in partial fulfilment of the requirements for the award of the degree of Doctor of Philosophy of the University of Portsmouth.

November 2015
Abstract

Young people are considered to be a key market for the tobacco industry and are therefore vital targets for public health intervention. Current estimates in the UK suggest that more than 200,000 young people under the age of 16 try tobacco smoking each year. As tobacco and cannabis use share the common method of consumption through burning and inhaling smoke, the link between these two substance has drawn a growing focus from researchers. However little is known about the interplay of these two behaviours with specific gaps centring on the risk factors of co-consumption and an awareness of how young people’s own beliefs about cannabis and tobacco co-use drives these interconnected behaviours. There is also a particular absence of literature on place-based practices (e.g. contexts and locations of use) of cannabis and tobacco and how one substance may be used as a result of nuanced aspects of the other. Responding to these gaps, this thesis examines the complexity and inter-connected practices of tobacco and cannabis use among young people in two empirical studies. First, the prevalence of co-consumption is investigated via an online questionnaire with 4,499 11-16 year olds in 12 secondary schools. Second, in a complimentary study, in-depth interviews conducted with 51 adolescents aged 12-19 in two youth club settings explore narratives of use.

Results illustrate that co-consumers may not report using tobacco in surveys unless they use tobacco specifically for cigarettes and that young people may rationalise cannabis use due to a lack of evidence indicating that cannabis is unsafe. Results also suggest that cannabis users may deliberately smoke tobacco cigarettes in order to conceal their cannabis use in public settings and this demonstrates the need for a focus on place-based practices alongside individual reasoning for co-use. The thesis extends a small body of research outside of the UK indicating that despite negative attitudes towards tobacco and an avoidance of acknowledging their own involvement with tobacco, young cannabis users may continue to use tobacco because it plays an important role in facilitating cannabis use.
Declaration
Whilst registered as a candidate for the above degree, I have not been registered for any other research award. The results and conclusions embodied in this thesis are the work of the named candidate and have not been submitted for any other academic award.

Word count: 75,158

Signed……………………..  Date……………..
# Table of contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>i</td>
</tr>
<tr>
<td>Declaration</td>
<td>ii</td>
</tr>
<tr>
<td>Table of contents</td>
<td>iii</td>
</tr>
<tr>
<td>List of Tables and Figures</td>
<td>iv</td>
</tr>
<tr>
<td>Abbreviations</td>
<td>vii</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td>ix</td>
</tr>
<tr>
<td>Dissemination</td>
<td>x</td>
</tr>
</tbody>
</table>

## Chapter One: Introduction
- 1.1 Background
  - 1.1.1 Adolescent smoking
  - 1.1.2 The interplay of tobacco and cannabis
  - 1.1.3 Young people’s perspectives of smoking
  - 1.1.4 Co-consumption practices
- 1.2 Gaps in understanding of co-consumption
- 1.3 Thesis outline

## Chapter Two: Exploring co-consumption; patterns, and practices
- 2.1 Introduction
- 2.2 How do young people come to co-use of cannabis and tobacco
- 2.3 Patterns of co-consumption - Micro and macro contexts
  - 2.3.1 Individual/socio demographic factors and co-consumption
  - 2.3.2 Family and peer smoking
  - 2.3.3 School and neighbourhood environments
- 2.4 Attitudes and understanding of co-use
  - 2.4.1 The symbolic nature of being a smoker
  - 2.4.2 Navigating cannabis and tobacco use; using harm awareness to rationalise co-consumption
  - 2.4.3 Co-users wanting cannabis, needing tobacco
- 2.5 The role of tobacco in facilitating cannabis: social and place-based contexts of co-use
  - 2.5.1 Accessing tobacco and cannabis
  - 2.5.2 Cannabis and tobacco use in public
- 2.6 Conclusion and summary of research questions
Chapter Three: Researching cannabis and tobacco co-use among adolescent participants

3.1 Revealing cannabis and tobacco use
- 3.1.1 Detecting smokers and co-users
- 3.1.2 Eliciting honest and reliable accounts of tobacco and cannabis use
- 3.1.3 Responsibilities of disclosure

3.2 Getting the data: researching young populations
- 3.2.1 Who can and should give informed consent?
- 3.2.2 Does the method of seeking parental permission harm research on cannabis and tobacco use?

3.3 Conclusion

Chapter Four: Defining patterns of co-consumption in a school-study

4.1 Survey design
- 4.1.1 The questionnaire (studying cannabis and tobacco use)
- 4.1.2 The co-consumption outcome
- 4.1.3 Additional contextual variables

4.2 Data collection
- 4.2.1 Recruiting participants
- 4.2.2 Administering the questionnaire
- 4.2.3 Data analysis

4.2.4 Respondent characteristics, missing data and dealing with inconsistencies

4.3 Conclusion

Chapter Five: Narratives of co-consumption practices from a youth club interview study

5.1 Data collection
- 5.1.1 The interviews
- 5.1.2 Recruiting young people
- 5.1.3 Youth club sites – participants

5.2 Analysis
- 5.2.1 Preparing the interview data for analysis
- 5.2.2 Addressing the research questions – underlying discourses

5.3 Conclusion
Chapter Six: Explaining patterns of tobacco and cannabis use: evidence from the school survey ................................................................. 93
6.1 Introduction .................................................................................. 93
6.2 Prevalence of tobacco and cannabis use ........................................ 93
   6.2.1 Tobacco use .......................................................................... 93
   6.2.2 Cannabis use ....................................................................... 96
   6.2.3 Co-use patterns .................................................................... 97
6.3 Modelling tobacco and cannabis co-use ......................................... 99
   6.3.1 Model development ............................................................... 100
   6.3.2 Stage 1: Individual factors affecting co-consumption .............. 103
   6.3.3 Stage 2: The influence of friends and family ............................ 106
   6.3.4 Stage 3: Co-consumption, school and neighbourhood factors .... 108
6.4 Micro and macro contexts of tobacco and cannabis co-consumption ... 110
6.5 Concluding comments – examining tobacco-for-cannabis use ........ 113

Chapter Seven: What makes a smoker? ............................................. 115
7.1 Adopting the tobacco user identity ................................................. 115
   7.1.1 Smoking but not a smoker ................................................... 116
   7.1.2 When you must be a smoker ................................................. 119
   7.1.3 Embracing the smoker identity ............................................. 120
7.2 Cannabis use identities: more clear cut? ....................................... 122
   7.2.1 I am a cannabis smoker ..................................................... 122
   7.2.2 A (tobacco) cigarette makes a smoker; a joint is different ...... 123
   7.2.3 Tobacco is not the focus of cannabis use ................................ 125
7.3 Concluding comments - Identifying smokers ............................... 126

Chapter Eight: Co-consumption explanations .................................... 128
8.1 Awareness of tobacco and cannabis use ....................................... 128
   8.1.1 The certain harms of tobacco and the uncertainty of cannabis ... 129
   8.1.2 Tobacco is the harmful part of cannabis joints ....................... 134
8.2 Mixing cannabis and tobacco: choices and compromises .............. 138
   8.2.1 Conserving cannabis with tobacco ...................................... 139
   8.2.3 Controlling the high with tobacco ...................................... 140
8.3 Concluding comments – contrasting and confused beliefs ............. 142

Chapter Nine: Tobacco practices in place – facilitating cannabis use .... 143
9.1 Accessing cannabis and tobacco .................................................. 143
   9.1.1 Circumventing tobacco access restrictions ............................ 144
   9.1.2 Parent complicity - cannabis and tobacco differences .......... 148
   9.1.3 Access to cannabis ‘If you know the right people’ .................... 151
9.2 Cannabis and tobacco place-based practice of use ....................... 157
   9.2.1 Cannabis is special; ‘they don’t treat it like tobacco’ .......... 157
   9.2.2 Unrestrained tobacco use in public .................................... 160
   9.2.3 The role of tobacco in the inconspicuous use of cannabis ....... 162
9.3 Concluding comments – a complex relationship between cannabis and
tobacco ..................................................................................... 166
List of Tables and Figures

<table>
<thead>
<tr>
<th>Box 1.1 Typical cannabis and tobacco consumption methods</th>
<th>Page No. 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Box 2.1 Key themes to address in the current thesis</td>
<td>38</td>
</tr>
<tr>
<td>Box 2.2 Research questions</td>
<td>42</td>
</tr>
<tr>
<td>Table 3.1 Cannabis and tobacco questioning in large data collections</td>
<td>45</td>
</tr>
<tr>
<td>Box 4.1 Tobacco use questioning</td>
<td>60</td>
</tr>
<tr>
<td>Box 4.2 Cannabis use questioning</td>
<td>61</td>
</tr>
<tr>
<td>Box 4.3 Cannabis joint use questioning</td>
<td>62</td>
</tr>
<tr>
<td>Table 5.1 Youth club participant demographic information</td>
<td>86</td>
</tr>
<tr>
<td>Box 5.2 Analysis steps</td>
<td>89</td>
</tr>
<tr>
<td>Box 6.1 Tobacco user classification breakdown</td>
<td>94</td>
</tr>
<tr>
<td>Figure 6.1 Current tobacco use by sex and year group</td>
<td>95</td>
</tr>
<tr>
<td>Box 6.2 Cannabis user classification breakdown</td>
<td>96</td>
</tr>
<tr>
<td>Figure 6.2 Current cannabis use by sex and year group</td>
<td>97</td>
</tr>
<tr>
<td>Figure 6.3 Current co-use by sex and year group</td>
<td>98</td>
</tr>
<tr>
<td>Table 6.1 Working sample predictor characteristics</td>
<td>102</td>
</tr>
<tr>
<td>Table 6.2 Results of model 1 – Individual characteristics</td>
<td>104</td>
</tr>
<tr>
<td>Table 6.3 Results of model 2 – Individual characteristics and smoking among close others</td>
<td>106</td>
</tr>
<tr>
<td>Table 6.4 Results of model 3 – Individual characteristics, smoking among close others, and school and neighbourhood factors</td>
<td>109</td>
</tr>
<tr>
<td>Table 6.5 Explained variance (including school level variance) for co-use models</td>
<td>113</td>
</tr>
<tr>
<td>Figure 7.1 Smoking status and identifying as a smoker</td>
<td>113</td>
</tr>
<tr>
<td>Box 10.1 Research questions</td>
<td>169</td>
</tr>
</tbody>
</table>
**Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAQDAS</td>
<td>Computer-assisted qualitative data analysis software</td>
</tr>
<tr>
<td>ENFL</td>
<td>English not as a first language</td>
</tr>
<tr>
<td>EMCDDA</td>
<td>European Monitoring Centre for Drugs and Drug Addiction</td>
</tr>
<tr>
<td>ESPAD</td>
<td>European School Survey Project on Alcohol and Other Drugs</td>
</tr>
<tr>
<td>FSM</td>
<td>Free school meals</td>
</tr>
<tr>
<td>HBSC</td>
<td>Health Behaviours in School-aged Children survey</td>
</tr>
<tr>
<td>IDACI</td>
<td>Income Deprivation Affecting Children Index</td>
</tr>
<tr>
<td>LSOA</td>
<td>Lower layer super output area</td>
</tr>
<tr>
<td>MHCYP</td>
<td>Mental Health of Children and Young People in Great Britain</td>
</tr>
<tr>
<td>OCJS</td>
<td>Offending, Crime and Justice Survey</td>
</tr>
<tr>
<td>SALSUS</td>
<td>Scottish Schools Adolescent Lifestyle and Substance Use Survey</td>
</tr>
<tr>
<td>SDD</td>
<td>Smoking, Drinking and Drug Use among Young People in England</td>
</tr>
<tr>
<td>THC</td>
<td>Tetrahydrocannabinol</td>
</tr>
<tr>
<td>YPBAS</td>
<td>Young People’s Behaviour and Attitudes Survey for Northern Ireland</td>
</tr>
</tbody>
</table>
Acknowledgments

My first and heartfelt thanks must go to Dr Liz Twigg, Professor Graham Moon and Dr Julia Brown, their support has been paramount to my progress over the past three years, not only in conducting this PhD research but also in helping me to grow in my personal as well as professional life. It is necessary, also, to acknowledge the instrumental support of Sarah Preece and her team at Hampshire County Council who have been on hand since day one.

Confidentiality precludes the acknowledgement of specific individuals who provided support to the project within the schools and the youth clubs but without them I could not have hoped to achieve a fraction of what I had set out to. Nonetheless, thank you to the staff at schools who were prepared to hear about the research and particularly to the staff in the two youth clubs who made me feel instantly at ease and allowed me to seamlessly fit into their youth club environments. To the young people who completed the surveys, and those who spent their time talking to me in the interviews, you have truly helped progress our understanding of cannabis and tobacco use and I am eternally grateful for your support in allowing me to conduct my research.

To my wife Klare, I will forever be indebted to you for the patience and support you have given me over this turbulent rollercoaster of a journey. To mum and dad, thanks for giving me the freedom to be inquisitive and space to grow.

To my fellow PhD colleagues in the department, I will never forget the supportive environment you created, the monthly ‘PhD networking’ events helped to keep the sanity in check. I have made lifelong friends with many of my colleagues, both inside and outside of the University of Portsmouth, but special thanks must go to Dr Mark Holton, who gave me so many words of wisdom, usually on the daily commute, and was prepared to listen to my anxieties day or night. A final thank you to all my friends and family who have humoured me over the past three years and to those who supported me in the final stages, I will be in your debt for a long time to come.

I really could not have done it without all of you.
Dissemination


Chapter One: Introduction

The rationale for this PhD thesis is to contribute to an emerging literature that suggests declines in youth tobacco use may be hindered by the intricate relationship between tobacco and cannabis. In particular, the study responds to research evidence showing that young people’s tobacco use may be facilitated through their consumption of cannabis.

1.1 Background

1.1.1 Adolescent smoking

In the UK, smoking is the primary cause of preventable illness and premature death with nearly 100,000 premature deaths attributed to smoking each year (Action on Smoking and Health, 2014a). Smoking is also an established global public health issue with 6 million deaths attributed to tobacco use recorded each year (World Health Organization, 2012). The national and worldwide death toll of smoking is expected to continue to rise and by the end of the century it is expected that tobacco will have killed one billion people (Action on Smoking and Health, 2014a). Despite increases in mortality rates due to the long term effects of smoking, worldwide prevalence appears to be in decline, particularly for high-income countries (Eriksen, Mackay, & Ross, 2012) and in the UK, overall smoking prevalence is the lowest it has ever been since routine monitoring began, but large disparities remain across groups based on age and socio-economic status (Lifestyle Statistics, 2013). Highest prevalence rates in England are found in the 20 to 24 year age group, but for most, their smoking careers begin in the teenage years (Charlton, 1992; Hughes & Atkinson, 2005; Viner, 2013).

Young people are considered to be a key market for the tobacco industry as potential new recruits and so are a vital target for public health interventions (Youdan & Sandford, 2014). A number of public health strategies have been in place to prevent uptake of smoking among young people or to support them to stop smoking. These include school based education, community interventions, mass media campaigns, tobacco advertising restrictions, age restrictions on access, tobacco taxes and restrictions on locations of smoking (Lantz et al., 2000). Examples of these include raising the age at which people could be sold tobacco from 16 to 18 in 2007, adding pictorial health warnings to all cigarette packaging in 2008 and recent changes in point of sale legislation which remove tobacco displays from shops in 2013 (Department of Health, 2010a). These activities are all aimed at prevention of youth access to tobacco, educating them about the risks of smoking and urging young people to stop. Part of the UK government’s ‘Smokefree‘ agenda is to stop the inflow of young people recruited as smokers (Department of Health,
2010a, 2010b) as estimates suggest that around 207,000 young people under the age of 16 still try tobacco each year (Hopkinson, Lester-George, Ormiston-Smith, Cox, & Arnott, 2013). Many of these will become nicotine dependent and form part of the core adult smoking cohort later in life. Researchers therefore still have work to do to identify the factors that facilitate adolescent tobacco use and to identify further potential avenues of intervention and prevention.

1.1.2 The interplay of tobacco and cannabis

The use of tobacco and other substances such as alcohol and cannabis are closely intertwined (Johnson, Webber, Myers, Boris, & Berenson, 2009; Leatherdale & Ahmed, 2010). The 2010 drug strategy for England (UK Home Office, 2010) noted that polydrug use was becoming increasingly normative and that it was important to bring together efforts to address legal drug use such as alcohol and tobacco alongside illegal drug use support into one cohesive strategy. In October 2014, tobacco was included in the joint strategic needs assessment for drugs and alcohol in England (Public Health England, 2014).

The first examination of concurrent use across Europe (Olszewski, Matias, Monshouwer, & Kokkevi, 2009) uses data from 2003 and indicated that a third of all 15-16 year olds across 22 European countries, including the UK, had consumed two or more substances in the 30 days leading to the survey. Of those who co-consumed, most restricted their co-consumption to using alcohol and tobacco (72%) and of those who also used illegal substances it was overwhelmingly the additional use of cannabis-only (20%) rather than ecstasy, cocaine or amphetamines (3%) among adolescent alcohol and tobacco users (Olszewski et al., 2009).

As tobacco and cannabis use shares the common method of delivery through burning and inhaling smoke (Dave & Saffer, 2013; Jones et al., 2011; Longman, Pritchard, McNeill, Csiakar, & Croucher, 2010; Tullis, DuPoint, Frost-Pineda, & Gold, 2003), the link between these two substances specifically has drawn an increasing focus from researchers (Okoli, Richardson, Ratner, & Johnson, 2008). For example, reviews of youth oriented smoking cessation services in the UK (Grimshaw & Stanton, 2008; Platt et al., 2006) revealed that tobacco users who concurrently use cannabis often find it difficult to reduce their tobacco use although the role of cannabis has largely been ignored in tobacco control programmes. In a study of co-using adolescents in Scotland (Amos, Wiltshire, Bostock, Haw, & McNeill, 2004), users often turned to tobacco cigarettes if they could not obtain cannabis or when they were trying to stop one substance, their use of the other increased. This
indicates a clear need to address tobacco and cannabis use simultaneously although Leatherdale and Ahmed (2010) suggest that most prevention efforts are substance-specific, and particularly focus on tobacco use.

There are a variety of consumption methods typified in western users for tobacco and cannabis (see Box 1.1). Tobacco is primarily consumed in a smoked form with manufactured cigarettes accounting for 96% of tobacco sales worldwide (Eriksen et al., 2012). Tobacco is also consumed in rolling papers and pipes as well as ingested or consumed nasally (e.g. snuff) without the need to burn the tobacco. Electronic cigarettes have emerged as a contemporary alternative to smoked tobacco in recent years (Berridge, 2014; Grana, Benowitz, & Glantz, 2014). Although the uptake of e-cigarettes among young people has yet to be properly quantified there is some indication that young people’s use is rare (Action on Smoking and Health, 2014b). Identifying methods of cannabis use can be more difficult due to the illicit nature of cannabis, which renders it a clandestine activity although online information sites (e.g. Williams, 2014) and www.talktofrank.co.uk, the UK government backed resource of drug information, indicate that although methods of consuming cannabis are diverse (e.g. users can consume the substances orally (Jones et al., 2011) cannabis is primarily consumed with tobacco added to it. Specifically, tobacco is often used in the preparation of cannabis joints1 whereby herbal cannabis or cannabis resin is rolled in paper with tobacco (Bélanger, Akre, Kuntsche, Gmel, & Suris, 2011) and sometimes cannabis is added to partially emptied filtered cigarettes (Haines-Saah, Moffat, Jenkins, & Johnson, 2014). The amount of tobacco added to a joint containing cannabis varies among users; from no tobacco to a mix containing three-quarters tobacco and one quarter cannabis (Bélanger et al., 2013).

1 The term ‘joint’ is used to describe a different cannabis consumption method in other parts of the world with the term in the USA meaning cannabis wrapped in cigarette paper without any tobacco and in some East African countries a joint often contains cannabis, tobacco and heroin (Johnson, Ream, Dunlap & Sifaneck 2008).
This work illustrates that as tobacco and cannabis share many common consumption methods, co-consumption of tobacco and cannabis should be considered as part of a comprehensive investigation of polydrug use. As such, the use and co-use of cannabis and tobacco through smoking will be the focus of discussion in this thesis in two forms; single substance cigarettes (i.e. preparations containing either tobacco or cannabis) and joints (i.e. rolling papers containing both tobacco and cannabis).

There have been several attempts to map the antecedents of cannabis and tobacco co-consumption to consider whether co-users are different to users of just tobacco or just cannabis. These have almost exclusively been conducted with young people in the USA and Switzerland and primarily with young adults rather than adolescents. Three recent review articles (Agrawal, Budney, & Lynskey, 2012; Peters, Budney, & Carroll, 2012; Ramo, Liu, & Prochaska, 2012), advocate a set of risk factors that are unique to co-consumption; although there is a noticeable absence of literature on contextual influences for co-consumption related to family, peer, school and wider environmental influences. It is not known, for example, whether co-consumers are influenced in the same way by the smoking patterns of friends and families or whether the same associational patterns with social deprivation for tobacco are evident for co-users. These investigations also assume that those who co-consume tobacco and cannabis are captured by measures of tobacco cigarette and cannabis joint use.
1.1.3 Young people’s perspectives of smoking

A stronger understanding of which co-use behaviours are occurring, and the risk factors preceding co-use will go some way in preventing the uptake of tobacco and cannabis. However, this alone ignores the more complex issue of the reasoning behind tobacco and cannabis co-use and young people’s own perspectives of smoking (Humfleet & Haas, 2004). Reasons for adding tobacco include making cannabis supplies last longer (and so reduce the cost of becoming intoxicated) or making the inhalation of cannabis smoke less unpleasant (Akre, Michaud, Berchtold, & Suris, 2010).

There is a small body of qualitative work that has specifically addressed young people’s perspectives of co-consumption (e.g. Akre et al., 2010; Amos et al., 2004; Haines-Saah et al., 2014; Hight, 2004). This work indicates that many cannabis joint users are anti-tobacco and consider tobacco to be unnatural, addictive, and harmful to health in comparison to cannabis which has therapeutic qualities. Tullis et al. (2003) argue that young people fail to generalise anti-smoking messages from tobacco cigarettes to cannabis smoking. Some worrisome beliefs among young people have been observed that tobacco use may be less harmful as long as it is consumed alongside cannabis (Hight, 2003b). There is no evidence to support a view that cannabis counters the harms of tobacco use. As a result of mixed messaging young people have to weigh up evidence from a variety of sources including peers and the internet (Moffat, Jenkins, & Johnson, 2013; Nutt, 2012).

A message emerging from the qualitative work to date is that most joint users emphasise that they only use tobacco because it is beneficial to their cannabis use, and many cannabis users are anti-tobacco (Amos et al., 2004; Haines-Saah et al., 2014). The contrast between cannabis and tobacco may reflect the wider denormalisation of tobacco use in society as well as public attitudes among young people and adults that have become more and more tolerant to cannabis as a recreational drug (Parker, Williams, & Aldridge, 2002; Roy, Wibberley, & Lamb, 2005; Webster, Chaiton, & Kirst, 2014). Moreover, a comprehensive dissemination of information for tobacco use harms (Henry, Oldfield, & Kon, 2003; Wakefield, Loken, & Hornik, 2010) and a simultaneously uncertain and scant evidence base for cannabis harms (Jones et al., 2011; Nutt, 2012) has resulted in mixed messaging about the safety of cannabis use and the implications of mixing cannabis and tobacco together. Importantly for the discussion here is that if cannabis is primarily consumed with tobacco added to it, in joints, then joint users must justify their use of tobacco in the face of very clear messages about the harmfulness of tobacco even if they do not smoke tobacco cigarettes. Understanding more about these issues for cannabis and tobacco co-users is
important for addressing the tobacco epidemic in the UK and the rest of the western world in seeking to understand the nuances of youth smoking.

1.1.4 Co-consumption practices

The available literature on co-consumption narratives, discussed above, indicates that cannabis smokers use tobacco because it makes supplies of cannabis last longer and the smoke of cannabis is less unpleasant to inhale when mixed with tobacco. However, there is also a suggestion that tobacco use practices may facilitate cannabis use in other ways. There is an absence of literature, to the current author’s knowledge, explicitly examining the role of access to tobacco in facilitating access to cannabis, although some researchers suggest that users of tobacco will have more opportunities to meet peers who use cannabis (Agrawal, Madden, Martin, & Lynskey, 2013). Moreover, the available literature does suggest that transactions inherent in obtaining cannabis are unlike traditional illicit drug markets for young people and more like practices associated with the access to legal substances like tobacco and alcohol (e.g. supplied primarily by peers and family members). It may be important, therefore, to explore the similarities in these transaction practices of young people and how they influence co-use.

Secondly, as a result of the current prohibition of possession and consumption of cannabis (UK Home Office, 1971) users of cannabis must identify semi-private, secluded locations where they can consume cannabis in groups and not be interrupted or sanctioned by police (Ream, Johnson, Dunlap, & Benoit, 2010; Room, 2008). Whilst tobacco access is prohibited for those under the age of 18 it is not currently illegal for young people to smoke tobacco in public (DrugScope, 2013). A small body of work has noted that consuming cannabis mixed with tobacco in a way that looks as if the user is smoking a tobacco cigarette may serve to facilitate the use of cannabis in public settings (Haines-Saah et al., 2014; Humfleet & Haas, 2004). The suggestion that cannabis users may deliberately display tobacco smoking practices, including the possession of tobacco cigarettes, in order to disguise their cannabis smoking warrants further exploration. A young person, who possesses tobacco cigarettes, even if they only use tobacco cigarettes to camouflage their cannabis use, may be encouraged to consume cigarettes and this may be an important practice for co-consumption. It is therefore pertinent to explore how settings and the micro-geographies of use for each substance interact and promote the use of both substances.
1.2 Gaps in understanding of co-consumption

Section 1.2, above, highlighted the clear need to understand more about the intricate relationship between tobacco and cannabis and co-consumption. It is essential for public health workers to recognise more about the nuanced elements of youth smoking in order to develop appropriate public health messages and practices.

Researchers have proposed that there may be unique risk-factors which predict a vulnerability to the co-use of tobacco and cannabis, although research has primarily been conducted on young adults rather than adolescents and only a handful of studies have taken place outside of the USA. Moreover, these studies tend to focus on the shared genetic risk-factors that predispose individuals to co-use rather than focusing on the importance of family smoking, peer smoking and other contextual factors on co-consumption. How these factors influence co-use represents a critical information gap and the literature review in the next chapter will go into these factors in more depth and reveal that whilst there is much qualitative and quantitative work documenting contextual influences on youth tobacco smoking, these factors are not fully understood for young people who co-use tobacco and cannabis.

Moreover, the variety of specific behaviours related to co-use is complex and the limited research indicates that not all of the preparations which include tobacco are considered to constitute smoking and as a result, young people who smoke cannabis joints but do not smoke tobacco cigarettes at other times may not report their behaviours as tobacco smoking when responding to surveys. As a result, we need to know more about the specific patterns of cannabis and tobacco smoking that make up co-consumption. This thesis therefore addresses this second gap in the literature focusing on the understanding of how young people conceptualise their smoking behaviours and identify as smokers if they smoke cannabis and tobacco together.

A third gap in research concentrates on how young people make decisions to consume cannabis, particularly with tobacco, and where they get their information to make consumption decisions. The literature suggests that despite comprehensive dissemination of information regarding tobacco use harms, young people receive mixed messages regarding the safety of cannabis use and there is almost no information available to young people regarding the implications of mixing cannabis and tobacco together. Themes emerging from qualitative investigations suggest that young co-users understand the negative health implications of tobacco use but feel that their use of cannabis (which is
considered therapeutic and more natural) negates these harms. Further exploration is required to ascertain how cannabis users justify their use of tobacco.

Finally, there is evidence that practices relating to the use of tobacco may contribute to practices of cannabis use and this may in turn lead to co-consumption. There appear to be similarities in practices of access for tobacco and cannabis although the explicit role of tobacco in facilitating access to cannabis (and vice versa) has not been examined to date. A small body of work has suggested, however, that cannabis users may also use tobacco smoking practices to facilitate their cannabis use by disguising their cannabis preparations as tobacco smoking which is permissible in public settings (Haines-Saah et al., 2014; Humfleet & Haas, 2004). It is therefore important to explore how settings of use for each substance interact and promote the use of both substances.

Unless these gaps in the literature are addressed, further reductions in youth tobacco smoking prevalence may prove challenging. In response to the gaps in understanding above, this thesis will examine co-use using a mixed methods project design. Firstly, I will examine co-use prevalence in more detail than is currently achievable via an online school questionnaire. Although various surveys attempt to capture prevalence of the co-consumption of cannabis and tobacco, they fall short in acknowledging the explicit patterns of co-use (e.g. cannabis joint use). Moreover, such surveys are not effective at capturing context, identity and social meaning of smoking (these shortcomings will be addressed in Chapter Three). Whilst a survey can provide broad brush information on some of these issues, in-depth information on smoking beliefs and practices of co-consumption can only be examined through in-depth interviews of young people. Therefore, in a complimentary study, I will examine young people’s narratives of co-consumption in an interview study with pairs and small groups of adolescents in two youth club settings in the south of England. Data from both studies will support the thesis in addressing the overriding research aim to explore the complexity of tobacco use among young people and the inter-connected practices of cannabis consumption.

1.3 Thesis outline

I begin a comprehensive literature review in Chapter Two with an examination of the phenomena of tobacco and cannabis use and how the substances may be linked. I then present literature in three areas; the complexity of the smoker identity and capturing smoking in self-report surveys, contextual risk factors that are thought to influence cannabis and tobacco use, and finally consumption practices relating to cannabis and tobacco use. This chapter culminates with a comprehensive discussion of the key gaps in
the literature that were noted above and details the specific research questions that are addressed in this thesis.

The following three chapters consider methodologies used to answer the identified research questions. Chapter Three comprises a discussion of considerations for conducting research with young people on the topic of substance use. I start by drawing on literature relating to the identification of co-use patterns among young people. Following this, I turn to more practical issues surrounding the disclosure of substance use, encouraging honest responses from participants and the legal and moral obligations of reporting young people’s disclosures of substance use. I also discuss implications of involving parents and guardians in the decision to take part in research. The issues addressed in Chapter Three embody both the quantitative and qualitative studies. Chapters Four and Five outline the design decisions for the specific primary data collection studies that support this thesis. Chapter Four details the design of the quantitative school-based survey study. Here, I outline the development of the questionnaire and the challenges in recruiting schools, participants and administering the study during school time. I also discuss the processes involved in preparing the data for analysis, checking for inconsistencies in reporting and managing missing data. Chapter Five details the qualitative interview study and focuses particularly on the development of the topic guide and the field work experiences of recruiting participants and conducting the interviews in youth club settings. I also discuss the analysis process for this study. An initial inductive thematic analysis explores and describes the range of concepts within the interviews although as the analysis progresses to more interpretative work, it moves beyond description to engage with the data, interrogating the use of language to confer meanings and identities and the consequences that arise following particular choices of narratives. I also use this chapter to advocate the use of computer-assisted qualitative data analysis software throughout the data preparation and analysis processes in affording an efficient and auditable research process.

The next four chapters comprise the substantive results chapters for the thesis. Chapter Six begins with an analysis of the school survey data; quantifying patterns of co-use and building a model of key individual and contextual risk factors predicting the concurrent use of tobacco and cannabis. Chapters’ Seven to Nine focus more on the narratives of co-use garnered from the qualitative interviews. Chapter Seven specifically considers young people’s own conceptions of cannabis and tobacco smoking patterns and explores how different practices constitute the adoption or avoidance of particular smoking identities. Chapter Eight explores the explanations behind decisions to co-consume and primarily focuses on the rationalising of tobacco use despite the evidence that it is harmful to health.
Chapter Nine centres on the practices of cannabis and tobacco smoking and examines two issues; accessing substances and finding suitable locations to smoke. Here the gaze on the place of consumption is most prominent.

The final chapter, Chapter 10, concludes the thesis with an overview and critical summary of the results presented in this study. I also outline the wider importance of this research and particularly its implications for monitoring substance use and for public health messages surrounding the consequences of mixing cannabis with tobacco. I document the original contribution of this investigation to the, as yet, under-developed topic of cannabis and tobacco co-consumption as well as the avenues for going forward with this work.
Chapter Two:
Exploring co-consumption; patterns, and practices

2.1 Introduction

Chapter One emphasised the importance of knowing more about the prevalence of co-consumption as well as the contextual influences and social meaning surrounding tobacco and cannabis use. Specifically, the introductory chapter has suggested how co-use may interfere with smoking identity formation. The literature base for co-consumption is gaining momentum, particularly in the USA (Ramo et al., 2012) with increasing emphasis by drug policy makers and researchers which has involved moving away from a focus on single substances. However, there is a long way to go, in the UK at least, in terms of building a comprehensive picture of co-consumption. In this chapter I consider where there are specific and important gaps in the literature surrounding the co-consumption of cannabis and tobacco. Issues surrounding empirical measurement of co-use however, are reviewed in Chapter Three. Here the review focuses on the patterns and practices of cannabis and tobacco co-consumption. It is useful first, however, to outline the conceptual framework for the project, and its early priorities.

In the last decade or so, it has become clear across disciplines including anthropology, epidemiology, geography, genetics, psychology, public health, pharmacology, among others, that tobacco use has become embedded within the context of everyday life and social structures across the globe (O’Loughlin, Karp, Koulis, Paradis, & DiFranza, 2009; Unger et al., 2003; Viner et al., 2012). Health behaviours have been typically studied at the individual level and as such motivational forces (potential targets of influence) are therefore thought to lie either within the individual or within contexts very proximal to them (Wilcox, 2003). More recently, there has been a call to examine the social context that adds to (not replaces) individual risk factors of smoking (Poland et al., 2006). Social context, that is the factors relating to the contexts in which people find themselves, was argued by Poland and colleagues to be the key to understanding the ‘diverse sources of resistance’ to efforts of tobacco control. Moreover, epidemiological research shows consistently that there are non-random patterns of smoking across communities defined by geographical areas and groups defined by gender, race, education level, income, occupation etc. The idea that context and place is important for health behaviour research is by no means new and began around the mid 1980’s when Sally Macintyre wrote about social and spatial patterning of health. The first texts explored area-based variations in mortality and morbidity (e.g. Macintyre, 1986) but soon started to examine the variations in uptake of a variety of health behaviours. Indeed, there was a rapidly established
consensus among health researchers and other academics that the contexts and cultures of our daily lives, including where we live, play and work influence our actual behaviours and attitudes towards them (Bernard et al., 2007; Cummins, Curtis, Diez-Roux, & Macintyre, 2007; Curtis & Rees Jones, 1998; Duncan, Jones, & Moon, 1993; Macintyre, Ellaway, & Cummins, 2002; Macintyre, Maciver, & Sooman, 1993; Pickett & Pearl, 2001).

The acknowledgement that context and culture are vital to understanding the uptake of, or resistance to, health behaviours is particularly useful for behaviours such as tobacco smoking where there is clear evidence that smoking is harmful to health despite many young people unable to resist pressure; emphasising that there are wider drivers of behaviours. Wilcox (2003) proposed an ecological approach to understanding youth smoking trajectories, arguing that the individual and their own demographic characteristics should not be the only unit of analysis for smoking research as there are important contributions to be made by studying collectives such as shared resources, shared identities, cultural and sub-cultural practices, as well as collective characteristics of individuals within wider communities. The study of communities is also complex as boundaries are not always clearly demarked geographic spaces; they can be imprecise and varying social boundaries in which individuals, their proximal contexts (families and peer groups) and their physical structures (e.g. shops, schools or parks) are embedded, resulting in a larger, more distal, multi-layered, context. These environments can be physical as well as virtual (e.g. young people engaging with others online anywhere in the world). This social structure comprises shared resources and a sense of identity. It can include; community level economic disadvantage, extent and content of peer networking, religious practices, opportunities for and emphasis on education, media exposure and access to tobacco outlets and healthcare.

Conceptualising the influence of culture on such a complex behaviour as tobacco use has proven to be a difficult task for any single scientific discipline to undertake and as Unger et al. (2003) describe, tobacco research necessitates a transdisciplinary approach. This approach draws together discipline-specific theories, concepts and methods to address a single problem. This is well suited to tobacco control research, and to cannabis research as well, as these behaviours have so many contributory factors. Unger et al (2003) proposed a framework that allows us to view the context of tobacco use (and by extension cannabis use) from three nested levels of investigation, which is helpful for the work in this thesis. Influence may begin at the micro level and include factors that can be related to families and peers (for example, whether friends or family smoke, or their beliefs about smoking). At a wider (meso) level are school and neighbourhood contexts; which include norms
about areas where smoking is accepted or perhaps locations where there is a strong anti-smoking atmosphere or culture. Finally at the macro level (perhaps regionally or nationally) there may be policies, social norms and media influences for smoking. Tobacco control efforts are unlikely to be successful if a change only occurs at a single level of influence. Moreover, Cook (2003) advocated the case for studying a host of contexts, at varying levels (micro, meso and macro) at once as they influence behaviour all together. Cook noted that individuals traverse different social contexts in an instant, in the time they spend with different people (e.g. peers, teachers, parents) in different proximal and more distal environments (e.g. at home, school, in their neighbourhoods, and even their online and media worlds). Cook argued that because the social worlds we inhabit are so complex and multilevel, it is necessary to approach the task of studying behaviours from many angles and that to progress our understanding of these complex relationships between factors researchers had to take theoretical and empirical leaps of faith by including several potentially connected (or equally unconnected) factors simultaneously in their studies.

For the aforementioned reasons, a transdisciplinary and multi-level approach is adopted in this thesis. Our understanding of tobacco use is built on a foundation of decades of research implicating the complex multi-layered influences in the social context surrounding an individual. However, there is currently a relative lack of data on the multilevel factors implicated in cannabis use and even less on the factors implicated in co-use. Without simultaneously investigating factors within several contexts, it is impossible to know which contexts have a larger effect than others. Even basic description of the multitude of influences, at various levels as Cook (2003) discusses, will go some way in focusing later attention on which factors to intervene with. In order to achieve this, it is necessary to adopt a transdisciplinary approach, which is forgiving of conflicting theoretical perspectives to pragmatically map out the potential patterns and influences of co-consumption. It is therefore within the parameters of this work to draw on several literatures beginning with the substance, to the individual, and then out to more distal factors to unpick the protagonists of cannabis and tobacco co-consumption. The search strategy focused on identifying studies of cannabis and/or tobacco use among children and young people, published in English language, using the CINAHL (1981-2014), Medline (1964-2014), PsychINFO (1964-2014), SocINDEX (1964-2014) and Web of Science (1964-2014) databases. Following the initial searches for variations of the terms ‘cannabis’, ‘tobacco’ and ‘young people’, the search terms were amended as key themes and concepts emerged to include terms which offered additional results. The full texts of relevant citations were then reviewed and critically appraised. The reference lists of these
texts were also searched to identify additional literature missed by the original database searches.

The remainder of this literature chapter will focus on a discussion of the link between cannabis and tobacco, starting with how the substances may come to be used together (section 2.2) before addressing patterns of co-consumption and risk-factors that have been identified as contributing to cannabis and tobacco use (section 2.3). In section 2.4, I examine the beliefs young people hold towards the consequences of using one or both substances. Acknowledging the social and contextual influence on behaviour, the chapter develops its focus by entrenching tobacco and cannabis as practices situated in the social lives of users and non-users and I explore the merits of displaying smoking behaviours as part of a display of social identities. This work hints that cannabis smoking is viewed more positively than tobacco smoking. Particularly for co-consumers (e.g. those who smoke cannabis joints) there is a sense of an anti-tobacco attitude whereby users believe any harms of smoking cannabis are largely attributable to the tobacco they add, and they only use tobacco because it is useful for their cannabis consumption. Following this, in section 2.5, I turn to discuss alternative ways in which tobacco use may facilitate cannabis use and the discussion focuses on practices of accessing the substances and place-based practices of cannabis and tobacco co-consumption. The literature reviewed in this chapter highlights the gaps in our understanding that limit the potential to prevent the uptake of tobacco use among young people and also illuminates the key areas of focus for the current work. The chapter therefore concludes with a brief summary of the research objectives for the thesis.

### 2.2 How do young people come to co-use of cannabis and tobacco

Researchers have proposed a number of explanations for how young people come to co-consume tobacco and cannabis and these centre on tobacco as a gateway to cannabis use, the similarities in the methods of consumption, and the use of cannabis and tobacco mixed together in joints. The first explanation is the gateway hypothesis (Kandel & Jessor, 2002; Kandel & Logan, 1984; Kandel, Yamaguchi, & Klein, 2006; Lindsay & Rainey, 1997) which asserts that an individual’s engagement with substance use occurs hierarchically with tobacco beginning the sequence and then cannabis acting as a bridge between licit (alcohol and tobacco) to other illicit drugs. However, whilst many users of harder drugs tend to use tobacco and cannabis, only a small proportion of cannabis and tobacco users, usually less than one in ten, progress to harder substances (Olszewski et al., 2009).

The trajectory between tobacco and cannabis is also an area where the gateway hypothesis has been considered weak (Degenhardt et al., 2010; Kandel & Jessor, 2002; Vanyukov et
al., 2012; Zimmerman, 2002) with several commentators highlighting the propensity for tobacco to be used as a result of cannabis use (Agrawal et al., 2011; Amos et al., 2004; Labouvie & White, 2002; Tarter, Vanyukov, Kirisci, Reynolds, & Clark, 2006; Timberlake et al., 2007). In an Australian sample, weekly or more frequent use of cannabis was predictive of later tobacco initiation and dependence among non-smoking teenagers and young adults (Patton, Coffey, Carlin, Sawyer, & Lynskey, 2005). Mayet et al. (2010) reported that whilst tobacco consumption explained the largest variance in cannabis use (and appeared to be more important than alcohol in influencing cannabis use) the processes linking these substances was complex. Mayet et al. (2011) developed a multifaceted model of progression which incorporates transitions from tobacco to cannabis as well as from cannabis to tobacco. The authors noted that the transitions from cannabis to tobacco were more prominent than transitions from tobacco to cannabis indicating a strong vulnerability to use tobacco among cannabis users. Identifying directional causation has been one of the biggest challenges for the gateway hypothesis (Hall & Lynskey, 2005) and authors such as Degenhardt et al. (2010) proposed that environmental and cultural factors such as access and attitudes towards particular drugs (which will be discussed later in this chapter in sections 2.4 and 2.5) may play a role in influencing which substances begin the sequence.

Another factor offered in explanation of co-consumption is the common method of consuming the substances via the inhalation of smoke. Although using an adult sample, Agrawal and Lynskey (2009) observed that smoked tobacco use was more strongly associated with cannabis use compared to the use of smokeless tobacco. The authors suggest that individuals with experience of a particular route of administration would be more willing to experiment with other substances which have the same route of administration. Further, an individual who has experienced regular inhalation of tobacco smoke will enjoy the sensation of smoking a cannabis joint more readily than someone whose airways are not used to such inhalation. The gateway hypothesis and the route of administration models have both come under fire because of the observation that there is a reciprocal relationship between tobacco, cannabis and alcohol; that is, any one of the three substances has been found important in predicting the use of one of the other substances (Palmer et al., 2009). Agrawal and Lynskey (2009) acknowledge that route of administration is not the sole explanation for co-use patterns and others suggest that alcohol is equally powerful in predicting cannabis use (van Leeuwen et al., 2011). However the unique commonality involved in inhaling tobacco and cannabis smoke is clearly an important factor to consider.
The final explanation for co-use is the specific consumption practice of smoking cannabis mixed with tobacco. There is limited prevalence data available for cannabis joint use despite the practice being reported in the UK (Amos et al., 2004; Highet, 2004) as well as Australia (Burns, Ivers, Lindorff, & Clough, 2000; van Beurden, Zask, Passey, & Kia, 2008), Canada (Leatherdale, Ahmed, & Kaiserman, 2006), and Switzerland (Akre et al., 2010). Importantly, researchers have identified that smoking cannabis along with tobacco (either simultaneously in a joint or by smoking a tobacco cigarette straight after smoking cannabis) increases symptoms of cannabis dependence (Ream, Benoit, Johnson, & Dunlap, 2008). Van der Kooy et al. (2009) suggests that the higher burning temperature of tobacco means that greater concentrations of Tetrahydrocannabinol (THC) are released when tobacco is added to cannabis. The limited research base on cannabis joint use specifically has meant that it is unclear whether tobacco use specifically for joint use has a direct link to future episodes of cigarette use although Bélanger et al (2013) suggest that more than half of young adult (16-25 year old) cannabis joint users (who do not smoke tobacco cigarettes at other times) have urinary cotinine levels, a biomarker of nicotine exposure, comparable to light or moderate cigarette smokers. As signs of dependence and loss of autonomy appear after only days of weeks of light and intermittent smoking (DiFranza, 2009; DiFranza et al., 2000; Scragg, Wellman, Laugesen, & DiFranza, 2008) it is plausible that cannabis joint smoking may lead to later cigarette use.

In this section I have outlined three explanations regarding co-consumption use that are important for this thesis. Early theorists have proposed that cannabis operates as a bridge between tobacco and other drugs however the sequence has been disputed with evidence that for some young people cannabis may lead to tobacco use. This link is also complicated by other substances such as alcohol although researchers tend to agree that the commonality of the route of administration through smoking means that a focus on tobacco and cannabis specifically is justifiable. Importantly, the specific simultaneous mixing of cannabis and tobacco may be linked to future smoking of tobacco cigarettes and cannabis although there has been little research on how joint use specifically (as opposed to other preparation methods) relates to future co-consumption. Whilst these explanations are not directly the focus of this thesis, although young people’s own understandings of these links will be discussed, an awareness of the debate and uncertainty in the literature that surrounds explanations of co-use serves as important context to the remainder of the chapter.
Attention now turns to understanding the social epidemiology of tobacco and cannabis co-use by discussing the individual and contextual risk factors which underpin each of the single and joint behaviours.

2.3 Patterns of co-consumption - Micro and macro contexts

Socio-ecological models of health-related behaviour propose that behaviour uptake is shaped, in some part, by an individuals’ interaction with proximal and distal environments, as well as interactions with other people in these environments, above and beyond individual level demographic factors (Duncan et al., 1993; Dunn & Cummins, 2007; Pickett & Pearl, 2001; Twigg & Cooper, 2009; Wilcox, 2003). In this section, I consider the contributions of a range of these factors (including individual, family and peer, and school and neighbourhood influencing) to the co-consumption of cannabis and tobacco. The focus on cannabis and tobacco co-use specifically is justified by the observation that the majority of young people who use more than one drug primarily restrict their use to tobacco and cannabis (or alcohol) rather than other drugs. Moreover, a review of co-occurring cannabis and tobacco use by Agrawal et al. (2012) suggests that there may be antecedents for the co-use of cannabis and tobacco that are distinct from risk-factors of the co-use of drugs more generally although there are several gaps in our understanding of these underlying mechanisms. Whilst we know a lot about the risk factors for adolescent tobacco smoking (Amos, Angus, Bostock, Fidler, & Hatings, 2009), and some of the risk factors for cannabis use (Piontek, Kraus, Bjarnason, Demetrovics, & Ramstedt, 2013) an understanding of co-consumption is in its infancy. Moreover, whilst psychological and clinical antecedents of co-consumption are beginning to emerge (Peters et al., 2012) we know much less about the social and contextual risk factors for cannabis and tobacco co-consumption (Ramo et al., 2012). In the following sub-headings of section 2.3, I consider the evidence for a series of risk factors of co-consumption (which have been implicated as influential for young people’s smoking of tobacco or cannabis separately) beginning with individual and socio demographic factors before moving to more distal factors relating to other people and neighbourhood contexts.

2.3.1 Individual/socio demographic factors and co-consumption

Age and sex are strong predictors of tobacco and cannabis use and often intersect contextual influences (Guxens, Nebot, Ariza, & Ochoa, 2007). A systematic review of young people’s co-consumption (Ramo et al., 2012) found three studies examining the influence of age on co-use. Increase in age was identified as significantly related to concurrent use of tobacco and cannabis in two of these studies (Suris, Akre, Berchtold,
Jeannin, & Michaud, 2007; Victoir, Eertmans, Van den Bergh, & Van den Broucke, 2007) and the third study (Aung, Pickworth, & Moolchan, 2004) found no conclusive relationship. Although more girls smoke tobacco than boys, the rates of tobacco smoking between boys and girls aged 13-15 differs by less than five percentage points in almost half of the world’s countries (Eriksen et al., 2012). Male sex is frequently associated with cannabis use, and 15-16 year old boys are more likely to have tried or recently used cannabis in almost all European countries (Godeau, Vignes, Bogt, & Gabhainn, 2007; Hibell & Andersson, 2008). Ramo et al’s (2012) review identified six studies examining the influence of sex on co-use. Positive relationships between co-use and male sex observed in three out of the six studies (Guxens, Nebot, & Ariza, 2007; Penetar et al., 2005; Victoir et al., 2007), negative association between male sex in two studies (Ohene, Ireland, & Blum, 2005; Suris et al., 2007) and one study (Aung et al., 2004) reported a non-significant conclusion. Webster et al’s (2014) investigation of cannabis and tobacco co-use patterns among adolescents in Canada revealed that among past year tobacco users, males were more likely than females to also report cannabis use although among cannabis users, males were less likely to report also using tobacco. These studies indicate that age and sex may be important factors for co-consumption and should be investigated further.

Although the data are limited, there is general support for the finding that prevalence of smoked tobacco use is higher among White young people in England compared to young people from other ethnic groups (Amos et al., 2009). Finding up-to-date ethnicity data specifically for cannabis use among young people is challenging although findings presented in 2005 found White adolescents (aged 15-16) were more likely than Asian adolescents to report cannabis use but cannabis was more common among Black males than White males (Rodham, Hawton, Evans, & Weatherall, 2005). The systematic review of cannabis and tobacco co-consumption by Ramo et al. (2012) reported that African-American ethnicity, reflecting the reliance on USA based studies, was associated with concurrent co-consumption. One of the few UK studies to examine co-consumption and ethnicity, albeit not limited to cannabis and tobacco use explicitly, is Viner et al. (2006). The authors observed that co-use was significantly higher among Caucasian British adolescents (both male and female) and lowest among Asian Indian and Pakistani adolescents (Viner et al., 2006). Again although there was no focus explicitly on cannabis, Hale and Viner (2013) reported that White young people (aged 14-15) had higher prevalence rates of illicit drug use and concurrent use of tobacco and other drugs than other ethnic groups but the differences were only marginally significant for mixed ethnicity adolescents.
Although this thesis focuses on the co-consumption of tobacco and cannabis, it is important to acknowledge there is a strong link between the use of alcohol and other drugs and smoking among young people (Johnson et al., 2009; Leatherdale & Ahmed, 2010). Being drunk or drinking multiple alcoholic drinks on the same occasion has been implicated in the initiation and progression to daily cigarette use among young teenagers (O’Loughlin et al., 2009) and alcohol use has been reported to double the risk of cannabis initiation (Perez et al., 2010). For example, adolescents who report the use of both tobacco and alcohol are more likely to initiate cannabis use than those reporting use of just tobacco or alcohol (van Leeuwen et al., 2011). Some authors have also noted a generalised propensity for polydrug use (Derringer, Krueger, Iacono, & McGue, 2010; Mayet et al., 2011; Palmer et al., 2009) such that use of any drug may increase the likelihood of co-use but that the use of specific substances may be more influential than others in predicting particular substance using patterns. The factors discussed so far are clearly worthy of future investigation as risk factors for co-use. However, these factors alone fail to take into account the influence of context and the interaction with others that has been proposed as important in shaping behaviours. As such, I now turn to discuss the influence of others in promoting tobacco and cannabis use among adolescents.

2.3.2 Family and peer smoking

Parental, sibling, and peer modelling are strongly associated with the use of cannabis and tobacco separately (Bricker et al., 2006; Fagan & Najman, 2005; Okoli, Richardson, & Johnson, 2008). Hill et al. (2005) found that parental attitudes towards tobacco use did not predict smoking when controlling for parents own use of tobacco, indicating that what parents do may be more important than perceptions of what they think. However, in a systematic review, Avenevoli and Merikangas (2003) indicated that evidence for parental influences was inconsistent and modest at best, particularly when other variables were accounted for. The authors also suggested that whilst there were fewer studies examining sibling influence, there was more consistent support in studies that sibling smoking is predictive of adolescent current and life-time tobacco smoking. Further, when sibling and parental smoking are modelled together, sibling smoking consistently appears more strongly associated with tobacco use. Finally, the review found support for peer smoking across studies and across definitions of peers (best friend, close friends) and across tobacco use behaviours (initiation, experimentation, current use and ever use).

Li et al. (2002) examined the influence of parent and peer use on adolescents use of tobacco, cannabis, and alcohol, within the same USA study, to see if other people’s use of
one substance exerts an influence on adolescent use of substances. The authors identified
that the combination of having parents and peers who used a particular substance
augmented the positive likelihood of that substance being used by the adolescent. Having
non-using parents, however, appeared to have a protective effect on the influence of peers
such that peer use was in some cases non-significant in predicting adolescent use. In a
more recent study, again in the USA, close peer use of any substance was associated with
adolescent use of tobacco, alcohol, cannabis and to a lesser degree, harder drugs
(Branstetter, Low, & Furman, 2011). This demonstrates a crossover effect whereby
substance-taking modelling from parents but particularly peers, regardless of which
substance, may influence adolescent use.

Although the importance of peer modelling of smoking has been recognised, an emerging
focus has been on adolescents who appear to seek out to associate with friends who smoke
(de Vries, Candel, Engels, & Mercken, 2006; Urberg, Luo, Pilgrim, & Degirmencioğlu,
2003) as if tobacco use was a component of gaining status within peer networks. Kobus
and Henry (2009) proposed that tobacco use was reinforced among members of small
groups with close ties to one another whilst individuals with no ties used tobacco as a way
to improve their connectedness (e.g. peer selection may be important for these young
people). Kobus and Henry (2009) also suggest that peer involvement relates to tobacco and
cannabis differently. For cannabis, use among peers was most strongly associated to use
among those with loose ties whilst those with close or no ties were relatively unaffected by
peer cannabis use. The authors proposed that having loose ties to several adolescents may
facilitate more contact with cannabis users and consequently increases susceptibility to use
cannabis.

The literature in this subsection illustrates the importance of examining smoking model
behaviours among other people, particularly peers. There is also some indication that use
of cannabis and tobacco may be promoted, regardless of which substance is modelled (e.g.
parental or peer use of tobacco may increase the likelihood of adolescent cannabis use).
Moreover, the section highlights that it is important not only to explore peer modelling but
also aspects of actively seeking out peers who use tobacco and cannabis to further an
individual’s position within peer networks. In the next section I take the exploration of
peer influences a step further, to look at the importance of examining the demographics of
groups of young people within everyday environments such as school and the local
neighbourhood and examine interactions with other people in these environments as well
as the environments themselves (e.g. the ethos or culture of particular environments).
2.3.3 School and neighbourhood environments

The contextual factors outlined so far in section 2.3 have arguably received a greater deal of attention than school and neighbourhood environments. This may be, in part, because demographic factors, and the presence of smoking among other people, are perhaps easier to measure (e.g. through a self-report survey or through observational research) whilst more distal influences surrounding the environmental contexts of young people are more difficult to observe. Macintyre et al. (2002) discuss that until recently the study of specific area covariates has been largely based on availability of data and the use of opportunistic indicators (e.g. using access to private transport and housing tenure from the English census to study income deprivation as income is not assessed directly) rather than a-priori theorising about the role of such measures. These covariates have been largely seen as coming from two distinct categories; aggregated area composition variables (e.g. the percentage of people in an area who do not own a car, or the percentage of unemployed people in a community) and the effect of factors in the environment which cannot be reducible to characteristics of individuals within groups (e.g. recreational and health facilities/amenities); both of these (e.g. who you and others are and where you live) are thought to contribute to health (Pickett & Pearl, 2001). These compositional and contextual factors have been described as mutually exclusive. However, Macintyre et al. (2002) argue that contextual explanations should account for the collective social functioning of a community. Collective explanations consider the shared norms, traditions, interests and values of individuals within a community adding an anthropological perspective to understanding the relationship between area and health. The authors argue that as collective properties of the local residents that make up a community are part of the context in which any individual faces in their community, that they should perhaps not be seen as distinct from context explanations. In essence there is a constant recursive interplay between context and the collective of individuals living and experiencing those everyday environments.

The operationalisation of area factors has been a highly contested topic for health geography and other socio-cultural research and although opportunity and availability of key area data has inevitably driven the choice of mechanisms that have been studied previously, there are at least now clearer explanations of the mechanisms through which these covariates may influence health. As such, in this section it is beneficial to discuss the available evidence surrounding school and neighbourhood area covariates and the pathways through which they are thought to operate to influence smoking. In particular, the composition of people within school and neighbourhood environments as well as the
environments themselves may influence substance use through mechanisms of social-miasma, localised responses to tobacco control, and access to health promoting/damaging resources and these are discussed next.

We have already noted the influence of modelling behaviour above (modelling of smoking amongst family and peers) but it is also important to consider that the wider presence of smoking may uniquely contribute to a young person’s susceptibility to use tobacco and by extension, cannabis. Pearce, Barnett and Moon (2011) discuss that a contagion, or miasma, effect may link aggregated collective behaviours (e.g. the proportion of pupils within the school who smoke) to individual smoking behaviours. Within a contagion explanation, the higher the proportion of people in the wider environment who smoke, the more normalised the behaviour may become, and with increased visibility of smoking outside of the immediate interactions with peers and family members, there may be increased opportunities to access cigarettes as well as use smoking to meet new people and form new friendships. Related to this, the perceived availability and use of tobacco or cannabis in a local area (e.g. within school or within neighbourhoods) may also be important predictors of susceptibility to use which is impacted by the miasma pathway. Several authors have suggested that pro-smoking attitudes, seeing other pupils smoking, and expectations that smoking or access to substances is normative increase smoking susceptibility (Leatherdale, Brown, Cameron, & McDonald, 2005; Leatherdale & Manske, 2005). Moreover, there is also suggestion that because opportunities to use and affiliations with smoking peers arise within schools, perceived availability could also be usefully measured at the school level to explain inter-school variation of prevalence; however, the social modelling factors have rarely been considered as school- or place-level factors. With regards to cannabis, Piontek et al. (2013) conducted a multilevel analysis to assess cross-country differences and found peer use was more strongly associated with cannabis use in countries where access to cannabis was perceived to be more difficult. This may reflect the need to rely more on peers as sources of cannabis when cannabis is less widely available. Operationalisation of the level at which perceived availability should be studied (e.g. at individual or higher area level) aside, there is worth in studying how perceiving the availability and use of tobacco and cannabis may promote or hinder the uptake of both substances remains an important gap in our understanding of co-consumption.

Beyond pupil composition factors, school-level factors surrounding the academic achievement, teacher workload, school ethos and policies towards substance use have modest contributions for regular tobacco smoking and cannabis use (Aveyard, Markham, & Cheng, 2004; Fletcher, Bonell, Sorhaindo, & Strange, 2009), although the specific links
between school factors and co-consumption have not yet, to our knowledge, been tested in the literature. As others have noted, there is a lack of theorising surrounding the mechanisms by which schools may influence substance use. The structure, including health policies and clear outlining of acceptable behaviour (e.g. rules), of schools may have a unique although small effect on smoking as well as drinking habits once known individual covariates have been accounted for (Maes & Lievens, 2003). It was proposed that clear communication of boundaries affords a sense of security and fairness to pupils and avoidance of health risk behaviours although the authors acknowledged that evidence for school effects was far from clear. Fletcher, Bonell and Hargreaves (2008) examined research on school effects on young people’s drug use and reported that reducing disaffection and truancy among pupils may reduce drug use and negative attitudes towards school may increase experimentation with substances. Fletcher et al. (2009) also noted in a qualitative case study that young people may adopt or reject drugs as a source of identity and differentiation between groups of students and so schools which promote opportunities for alternative identities (e.g. those which don’t revolve around substance use) may limit the uptake of using drugs. I discuss identity in more detail in section 2.4 but it is important to note here that school level factors surrounding a culture of participation may plausibly have a part to play in discouraging tobacco and cannabis use and should be considered to explain inter-school variation.

More recently, Bonell et al. (2012) proposed that certain structures of schools may be better equipped to address the specific substance use issues that are present in their school. Academies, which are contemporary institutions that unlike community schools are not run by local authorities and have more volition over the school’s specialised subjects and wider curriculum (UK Government, 2013), may better enable young people to resist taking up tobacco and other drug use through flexible and targeted work. It may be posited that with greater control, governors of academy schools can address areas of low performance and teaching staff can engage with pupils who need more support. As a result, it might be posited that in schools where staff are more able to address pupil tobacco and other substance use through support groups and prevention strategies, there may be fewer pupils who take up these behaviours. It is through this mechanism that school type may influence tobacco and cannabis use. However, as Aveyard et al. noted in 2004, pupils in schools where tobacco control policies are more visible, may simply be less willing to disclose their smoking behaviours, although the effects of socially desirable responses can be reduced through effective surveying methods which ensure anonymity and confidentiality of responses (these methods will be discussed in more detail in chapter Three). This section has highlighted that our understanding of the mechanisms through which school-
level factors effect tobacco and cannabis use (and by extension co-use) is incomplete. However, there is promising evidence that particular institution structures may be influential through their ability to respond to the collective needs of their pupils and as such offers one viable avenue for research on school effects.

The last area of discussion here is the influence of socioeconomic disadvantage on youth tobacco and cannabis use and the explanations surrounding differential levels of access to health promoting environmental resources among those in disadvantaged areas. Higher smoking prevalence is commonly observed among disadvantaged groups of all ages (Hiscock, Bauld, Amos, Fidler, & Munafò, 2012). Residential area deprivation, independently of individual or family disadvantage, has been linked to cigarette smoking in adults (Halonen et al., 2012; Miles, 2006; Shohaimi et al., 2003). Galea et al. (2007) found that neighbourhoods with greater income inequalities were significantly associated with current use of cannabis and alcohol, but not tobacco among adults in the USA. Authors such as Duncan, Jones and Moon (1999) observe that when individual level covariates are accounted for in modelling, there is an independent contribution of neighbourhood deprivation to smoking (as measured by the percentage of economically active people seeking work, percentage of people in households where the house is rented from the Local Authority, percentage of people in households where the head of the household in in social class IV or V and the percentage of people in households without access to private transport).

Whilst the relationship between socio-economic disadvantage and smoking among adults is clear, the evidence for smoking update among young people is more complex (Hiscock et al., 2012). A UK study (Green, Leyland, Sweeting, & Benzeval, 2014) noted that socioeconomic status was related to tobacco use among 11-15 year olds for particular stages of use (e.g. initiation, experimentation, progression to daily use, and quitting) suggesting that the relationship between disadvantage and substance use is complex. According to Green et al (2014), there is weak evidence for the link between socioeconomic disadvantage and experimenting or quitting tobacco although evidence of higher rates of progression to daily smoking among those most disadvantaged is clear. Legleye, et al. (2011), using a French sample of nearly 30,000 17 year olds, suggest that family SES, denoted by parents occupations, was differently associated with particular stages of both cannabis and tobacco use. Whilst experimental use of tobacco and cannabis is primarily concentrated among more affluent groups, sustained and heavy use was related to less affluent groups. The authors noted a strong association between tobacco use and later cannabis use (and vice versa) although they did not report any risk of consuming both
substances related to family SES. As with school-level factors, the measurement of disadvantage is also often driven by the availability of indicators of deprivation. The proportion of pupils eligible for free school meals (FSM), is often considered as a proxy measure of deprivation (Bhattacharyya, Ison, & Blair, 2003; Hobbs & Vignoles, 2007; Strand, Malmberg, & Hall, 2015) because it is usually available from routinely captured data in the school census (Department for Education, 2015) although it is generally non-significant in models for tobacco use (Fuller, 2013). However, in the same models, illicit drug use (not specifically measuring cannabis) is thought to be less likely in schools with higher percentages of pupils eligible for FSM. As the Fuller research is largely a descriptive project outlining national trends in substance use over time, there is little discussion of the mechanisms that might be in place here.

One explanation for the pathway between disadvantage and poor health (or poor health behaviours) is the differential access to resources among disadvantaged populations such that those in deprived localities had worse accessibility to health promoting resources whilst those in more affluent areas benefited by a high provision of such resources. This posited initially that individuals who were facing disadvantage (e.g. low income and low education) may be subject to deprivation amplification as they were also unable to easily (locally) access good schools and better paid jobs (Macintyre & Ellaway 2003). However, the unequal and restricted access to resources that was initially proposed by researchers is no longer uniquely situated in poorer environments (Macintyre, 2007; Macintyre, Macdonald & Ellaway, 2008; Pearce et al., 2007). Indeed, geographical information systems analysis of physical distance to resources such as recreational amenities, shopping, educational and health facilities finds that access is much better in deprived neighbourhoods (Pearce et al., 2007). Macintyre (2007) emphasises however, that the same resource can be health promoting for some and health damaging for others and that the social meaning and symbolic importance of resources is equally as crucial as accessibility.

Focusing on young people’s initiation of tobacco use, Frohlich et al. (2002) proposed that individuals indeed have different ways of interacting with and interpreting the social structure of their surroundings. For Frohlich and colleagues, mechanisms influencing substance use cannot be defined by simply exploring the composition of people in an area nor by describing the attributes (e.g. schools with a tobacco control policy or number of recreational spaces) in an area but these must account for how the people in those areas make sense of the attributes in their surroundings.

Pearce, Barnett and Moon (2011) proposed two pathways linking deprivation and smoking; place-based practices and neighbourhood regulation. It has been proposed that
disadvantaged communities, which are segregated from higher income groups, tend to be more isolated such that smoking norms are reinforced through practices and norms (e.g. being cast as outsiders fosters resistance to wider society practices such as smoking cessation campaigns aimed at the general public) or by enacting smoking as a way of setting out identity and status among peers and as a shared response to adversity. Spatially targeted smoking regulation and policy (e.g. legislation for ‘smoke-free places’) is also thought to influence smoking differently among low and high socioeconomic groups.

Feelings of stigma when smoking in public have reinforced smoking in private spaces such as the home. Tobacco retailing is often more preferentially located in socially deprived neighbourhoods and this can lead to a competitive local market (reducing the cost of smoking). Although not well understood, it is also argued that gentrification of deprived urban neighbourhoods may actually serve middle and high income individuals and displace those who are already disadvantaged, which may further reinforce resistance to normative practices such as stopping smoking. From this work we can see that there may be socioeconomic patterning of tobacco, and cannabis use, which is important to delineate at the individual and area level. However, this section also highlights that it is necessary to capture people’s own perspectives of their interactions with their environments; a feat not easily achieved using readily available and objective indicators of the attributes of local areas (e.g. the presence of smoking policies or other regulatory practices).

Section 2.3 has considered the available evidence for individual, family, school and neighbourhood area effects on tobacco and cannabis use. The literature reviewed indicates that there is emerging evidence that individual factors such as age, sex, ethnicity and other drug use, as well as family and peer smoking, perceptions of easy access to substances and measures of school and neighbourhood disadvantage influence the use of cannabis and tobacco use. However, there is almost no research specifically focusing on the co-consumption of tobacco and cannabis although the work investigating each substance on its own suggest a number of pathways that may be important for the current work. The evidence base is not compelling, however, with some studies reporting conflicting findings and many of these studies collect data on just one risk factor rather than examining the collective impact of these factors. Importantly, it is worth noting that identifying patterns of use is, of course, only an initial part of the story and from an understanding of what is happening, it is necessary to delve deeper into explaining why these patterns may occur, as highlighted by the work around collective explanations of area effects and the need to consider people’s own experiences and symbolic understandings of their environmental surroundings and so in the next section I focus the discussion on young people’s own
explanations and narratives of tobacco and cannabis co-use practices and examine the self-identification as a tobacco smoker more closely.

2.4 Attitudes and understanding of co-use
So far in this chapter, the focus has been on observing patterns of co-use among young people and it is also important to ground this exploration to consider the attitudes and perceptions of risk as drivers for these behaviours. Section 2.4.1 outlines the symbolic significance of tobacco and cannabis use in producing social identities (Denscombe, 2001; Highet, 2003b). This work proposes that tobacco and cannabis may not be held in equal esteem as useful social tools; with cannabis being viewed more favourably among young people. This stems in part by young people’s awareness of tobacco as a harmful and addictive substance but simultaneous confusion about cannabis harms and this is the focus of section 2.4.2. Sections 2.4.1 and 2.4.2 illustrate that although decisions to use cannabis and tobacco will depend in part on understandings about the worth of these behaviours for social identity, they are also shaped by expectations of the effects of particular consumption methods and mixing particular substances (Olthuis, Darredeau, & Barrett, 2013). I conclude this ‘attitudes and understanding’ section by focusing explicitly on explanations from co-users and explore why young people mix cannabis with tobacco and how they justify tobacco use in the face of undisputed evidence that smoking tobacco is harmful.

2.4.1 The symbolic nature of being a smoker
There have been calls within health geography and allied disciplines for increased recognition of the social context and understanding of tobacco use (Pearce, Barnett, & Moon, 2011; Poland et al., 2006). Specifically, Poland et al. (2006) commented that in order to fully understand the complexity of smoking it needed to be viewed as a collective social practice with multiple dimensions; incorporating power relations, the social geography of smoking and the construction and maintenance of social identities which relate to smoking. Pearce et al. (2011) demonstrate the importance of considering that health behaviours are influenced by multiple factors operating at several levels; from a context and place perspective in addition to individual forces. Inherent in this conceptualisation of smoking in particular, is that smoking is more than just a behaviour; there is a certain level of competency required in how the cigarette is held, how the smoke is inhaled, which brands are smoked, where, and with whom before an individual can claim themselves to be an authentic smoker (Poland et al., 2006). Indeed, researchers have suggested that identifying as a skilled or authentic social smoker (as opposed to never
trying it) during adolescence functions as a source of social distinction (Haines, Poland, & Johnson, 2009; Scheffels, 2009), particularly when young people spend their time socialising with others (Amos & Bostock, 2007; MacFadyen, Amos, Hastings, & Parkes, 2003).

There are similarities between cannabis and tobacco in facilitating access to social networks, as seen in section 2.3.2, and just like young people may exchange music or clothes, cannabis and tobacco may be traded as part of adolescent lifestyle and identity formation (Cullen, 2010). Being able to give someone the end of a cigarette or a spare cigarette when they cannot afford their own is another way to maintain social cohesion (Amos & Bostock, 2007). Cannabis use also fosters feelings of shared identity and social belonging (Hight, 2003b). Amos et al., (2006) suggest however that, in contrast to tobacco, cannabis has a much more positive functionality as it facilitates deeper experiences of relaxation and enjoyment, than is possible with social tobacco use. In addition, getting together with friends to co-experience intoxication is a core part of cannabis use for young users (Järvinen & Demant, 2011; Lee & Kirkpatrick, 2006). For practical reasons, cannabis smoking in groups is preferred over smoking in isolation. Groups provide the comfort of knowing someone else is there to help if the individual has an adverse reaction or if they become too intoxicated to look after themselves and, related to this, sharing also helps young people to moderate their consumption (Dunlap, Johnson, Benoit, & Sifaneck, 2006).

These positive attitudes and expectations are primarily reported by those young people who use cannabis, however, attitudes of both users and non-users towards the use of cannabis are expected to become more and more tolerant as they progress through adolescence (Järvinen & Demant, 2011) although again, there are certain conduct norms (e.g. users are expected to consume the substance responsibly and socially rather than on their own). The tolerant attitudes of non-users towards a particular substance is purported to be one of the most influential dimensions of normalisation (Hathaway, 2004; Parker et al., 2002). Just as with tobacco smoking, cannabis smoking appears to have important functions for identity management and differentiation among young people and their peers (Hammersley, Jenkins, & Reid, 2001).

However, whilst tobacco use is a welcomed performance of social identities (Johnson, Bottorff, et al., 2003; Scheffels, 2009; Scheffels & Schou, 2007) young people are discouraged from smoking too often (i.e. every day) or smoking alone as it conveys the image of dependence or addiction and those who are seen to be smoking on their own are considered out of control (Bottorff et al., 2004). Johnson, Lovato et al. (2003) identified
that some in-control smokers defined their use of tobacco-only in certain situations and often indicated that they were non-smokers who happened to smoke in those social circumstances. A common theme in the tobacco use literature is that these social smokers resist the smoker ‘proper’ identity. In a UK (Scotland) study with 17-18 year olds, MacFadyen et al. (2003) found that many tobacco users did not identify themselves as ‘smokers’ as they felt it carried negative connotations whereas a ‘social smoker’ identity (i.e. not addicted) allowed for a more comfortable self-view.

The Bélanger et al. (2011) study in Switzerland reported that nearly three quarters of cannabis users who reported that they had never used tobacco cigarettes also reported that they smoked cannabis mixed with tobacco. This work demonstrates that not all cannabis joint users smoke tobacco cigarettes and there is a need to employ more sophisticated research techniques and questions to identify specific patterns of cannabis and tobacco use as the cannabis joint patterns of co-use may not be identified by tobacco cigarette smoking questioning alone. For example, Burns, Ivers, Lindorff and Clough (2000) warned that adolescent cannabis users tend to under report their tobacco use when smoking cannabis joints. The phenomenon of smoking but not identifying as a smokers is also evident in adult samples (e.g. Leas, Zablocki, Edland, & Al-Delaimy, 2014) and is beginning to be recognised as a concern for collecting accurate smoking prevalence estimates. One explanation of the reluctance to report tobacco use may be the differences in social meaning of tobacco and cannabis use.

This is important because several authors have discussed how non-daily or social smokers (both adults and young people) perceive their risks of nicotine addiction to be reduced and that they are less prone to health effects of tobacco than more frequent smokers (Amrock & Weitzman, 2015; Leatherdale & Ahmed, 2010; Levinson et al., 2007; Rubinstein, Halpern-Felscher, Thompson, & Millstein, 2003; Schane, Glantz, & Ling, 2009).

The misplaced optimism of the safety of smoking among young people whose tobacco use is intermittent is alarming as there is overwhelming evidence that no level of tobacco use is safe (David, Esson, Perucic, & Fitzpatrick, 2010; US Department of Health and Human Services, 1981). As Amrock and Weitzman (2015) discuss, it is important to understand more about these views and what leads young people to justify their tobacco use. It is argued in the current thesis that this literature has relevance for co-consumption and it would be pertinent to consider how those who add tobacco to their joints, but do not smoke tobacco cigarettes may also perceive their use of tobacco to be safe. As already noted above, there is evidence to suggest that those who use cannabis joints have comparable exposure to nicotine to that of moderate tobacco cigarette users (Bélanger et al., 2013).
such, the next sub-section highlights the understanding of risks of tobacco and cannabis as well as co-consumption.

2.4.2 Navigating cannabis and tobacco use; using harm awareness to rationalise co-consumption

In the previous section I have identified that there are benefits of using modest amounts of cannabis and, although to a lesser extent, social uses of tobacco may also be accepted behaviours which promote young people’s social identities. However, there is an overwhelming presence of information regarding the dangers of tobacco use and although the harms of cannabis use are still hotly debated, there are dominant social discourses of cannabis as a dangerous and risky drug (Peretti-Watel, 2006). It is important therefore to explore what young people understand as the risks of using these substances and how this underpins their decisions to use cannabis and tobacco together. I start this section by noting the current scientific evidence on the harms of cannabis and tobacco co-use before looking at other sources of information specifically used by young people.

It is well-established that tobacco use is linked to a wide range of chronic conditions including; chronic obstructive pulmonary disease, ischaemic heart disease, diabetes, cerebrovascular disease, as well as bronchus and lung cancers (Asma et al., 2004; David et al., 2010; Royal College of Physicians, 1962). There is also evidence to suggest that cannabis users who add tobacco to their joints expose themselves to the dangers of tobacco use. Identifying the unique contribution of cannabis to cancer relative to tobacco is difficult though, in part because the co-use of the substance is common, and rarely studied (Jones et al., 2011). It is reported though, that the lungs of a cannabis smoker can contain up to 50% more carcinogens, as well as increased signs of bronchial and other respiratory diseases and more tar deposits than the lungs of filtered tobacco cigarette users (Ashton, 2001; Budney, Moore, & Vandrey, 2004; Roth et al., 1998; Taylor et al., 2002). One explanation for the increased exposure to harm from cannabis use is that users may take a deeper breath when inhaling and hold the smoke longer in the lungs before exhaling to increase the absorption and ‘high’ associated with THC (British Lung Foundation, 2012; Lee & Halpern-Felsher 2011; Lee & Hancox 2011).

The evidence suggests that tobacco and cannabis co-consumption may be more detrimental to health than consumption of each substance individually yet there has been very little evidence of these co-use harm messages extending beyond academic literature to health information disseminated to the public. It has been argued that young people fail to generalise anti-smoking messages from tobacco cigarettes to cannabis smoking (Tullis et
Roy et al. (2005) conducted a longitudinal study in the north west of England and identified that 15 and 16 years olds’ risk ratings of tobacco had increased (e.g. the young people were more aware of risks) over the course of the five years with 42% of young people rating tobacco as high risk in 1997 which increased to 59% of participants in 2001. For cannabis, however, there was little change over the period in terms of risk ratings of cannabis use; around two thirds of young people in 1997 and 2001 believed cannabis to have little or no health risk. Indeed, the health harms of cannabis are far less well understood than those for tobacco (Hall & Degenhardt, 2009) and there is a perceived therapeutic quality of using cannabis, particularly for pain-relief and alleviating nausea (Jones et al., 2011). This is not, by any means, meant to say that young people who take drugs are ignorant of the health risks. Instead, recent research from Switzerland (Dermota et al., 2013) reported that young substance users were highly health literate and often were more aware of health risks of substance use than those who abstain.

Young users appear to search for health information through a variety of sources, including unofficial sources (e.g. internet websites or information passed through peers) and this makes it difficult to assess the quality of the information being transmitted to young users (Faulkner, McCambridge, Slym, & Rollnick, 2009). To my knowledge there is just one government funded campaign (www.talktofrank.com) in the UK emphasising to cannabis users (of all ages, not just children) that they are exposing themselves to dangers of tobacco by smoking joints but they do not specifically explain the additional harms of the way in which cannabis is smoked (i.e. longer inhalations of smoke). The lack of official messaging may stem from a perception that young people ignore genuine (official) public health warnings about cannabis use because they believe that harms are exaggerated (Nutt, 2012). Moffat et al. (2013) argue that adolescents receive public health messages regarding the harms of use but are simultaneously exposed to messages about permissible medicinal uses and recreational use among peers and in the media. Developments in the USA regarding medical cannabis use only adds to the uncertainty that young people (and adults) have with regards to expectations of cannabis harms (Haines-Saah et al., 2014).

The literature explored in this sub-section suggests that whilst tobacco harms are well known and acknowledged by young people, awareness of cannabis harms is at best limited and at worst, young people’s understanding of harms relating to mixing tobacco and cannabis is confused. However, this does not appear be the product of ignorance to the, albeit limited, evidence of harmful consequences of cannabis smoking as many young people search for information on cannabis use using their social networks either in person or online. Instead, young people are thought to use strategies such as emphasising their
ability to control their consumption (e.g. not to smoke too much, as has been discussed in section 2.4.1) as well as contesting the harms evidence to rationalise their cannabis use (Peretti-Watel, 2006). Bennett (2008) argued that information about the health risks of cannabis use are largely disseminated by peers who use cannabis, as well as suppliers of drug taking paraphernalia. With a lack of regulation of these sources, it might be expected that rationalising cannabis use is not a difficult task. Moreover, public exchanges on internet sites are also increasingly common; particularly on forums such as ‘Bluelight’ (www.bluelight.org) which are maintained by volunteers to share knowledge (Bluelight, 2014) about a range of substances; including co-consumption. There is evidence that the information garnered from such unofficial sources may be inaccurate and detrimental to young people’s decisions to use cannabis and tobacco together. For instance, whilst young people in Highet’s (2004) study believed that tobacco was addictive and harmful to health, some also believed that so long as the tobacco was mixed with cannabis, the damage caused by tobacco could be undone by the therapeutic qualities of cannabis and its ability to dilute toxins and clear the airways. Although limited, the evidence base for harms of co-use does not support this therapeutic role (see Jones et al., 2011).

This section highlights the paucity of clear evidence for health harms of co-consumption although the available evidence suggests that co-use is more detrimental to health (through increased exposure to toxins and carcinogens) than use of just tobacco or just cannabis. This information does not appear to have been disseminated well to young people who primarily learn about drug taking through peers and on internet forums. There is evidence that young people believe, contrary to available evidence, that the mixing of cannabis and tobacco is somehow healthier than just using tobacco. There is clearly a need to further understand what underpins these beliefs and this will be a focus of the current thesis.

2.4.3 Co-users wanting cannabis, needing tobacco

The final element for discussion relating to beliefs and understanding is the overall difference in attitudes between the substances. Four noteworthy qualitative studies examining co-consumption of tobacco and cannabis explicitly are reviewed here. The first study is Highet (2004) who conducted 30 interviews with 59, 13-15 year old Scottish adolescents to discuss their smoking experiences. The second study is by Amos et al (2004) who conducted focus groups with 46 adolescents aged 15-16 and also paired interviews with 99, 16-19 year olds, also from Scotland. The third study is by Akre et al (2010), who conducted focus groups and interviews with 22 current/former cannabis users aged 15-24 living in Switzerland. The final study is Haines-Saah et al (2014) who used
interview data collected between 2005 and 2009 to explore views of 77 young people, aged 13-18 in Canada, on the health harms and social consequences of using tobacco and cannabis together. All of these studies were conducted with samples selected on the basis of their cannabis use. The work showcases the conflicting awareness of harms for each substance and suggests that whilst cannabis users have a sense of desire for cannabis, they appear to use tobacco reluctantly and only because of the role it plays for facilitating cannabis use.

There were stark differences in the perceptions of both substances even though they were consumed in parallel (Amos et al., 2004). Tobacco was considered unnatural, addictive and harmful to health in all of the studies. As mentioned already, some cannabis users in the Highet (2004) paper described the therapeutic qualities of cannabis as able to undo the damage caused by cigarettes. The majority of participants in the Akre et al. (2010) study were also largely ignorant of the harmful consequences of cannabis use but they were keen to express their concern for health harms of tobacco use, particularly added chemicals in pre-prepared cigarettes (as opposed to roll-your-own tobacco). In the Haines-Saah et al (2014) study, those who only used cannabis (the purists) often positioned themselves as anti-tobacco. Some acknowledged their limited awareness of cannabis harms although they were adamant that cannabis was safer than tobacco. These participants also stated, like those in the Akre et al (2010) study, that they enjoyed the effects of cannabis but felt no value in smoking tobacco. However, some of Akre et al’s (2010) participants also discussed that the smoke from burning pure cannabis as too strong (making them cough) and so they needed to add tobacco because it helped to make the smoke more smooth and therefore less unpleasant. This is evidence of acknowledging the risks of tobacco but making a compromise in order to make their consumption of cannabis bearable.

The young people in Highet’s (2004) study often described a love hate relationship with cigarettes, with tobacco being used all the time it was beneficial to cannabis smoking. Many of the young people in all four qualitative studies were anti-tobacco because of the evidence of health harms and a common theme was the desire to give tobacco smoking up either now or in the future. However, participants abandoned giving up cigarettes while smoking cannabis as they still needed it for their cannabis (Amos et al., 2004). Participants often emphasised that their tobacco cigarette smoking was compensating their cannabis use when cannabis use was unavailable. The desire to quit was entirely absent from discussions about cannabis, although a minority of participants in the Haines-Saah et al (2014) study said they intended to quit cannabis because of the concern of becoming addicted to tobacco through smoking joints. Talking specifically about experiences of smoking joints over pure
cannabis preparations, some of the young people in Haines-Saah et al.'s (2014) sample attributed experiences of dizziness and feeling ill to the nicotine in the tobacco when smoking cannabis joints.

Overall, these papers all described participants who tended to favour cannabis over tobacco. Whether or not the participants of these studies, as a result of their anti-tobacco stance, avoided using the label tobacco smoker for their smoking is unclear. The denial of smoking has been observed elsewhere among cannabis smokers (Burns et al., 2000; Humfleet & Haas, 2004) and poses issues for researchers in recording prevalence and targeting interventions. A more recent investigation of cannabis joint use in Switzerland revealed that whilst most cannabis joint users also reported being daily cigarette users, some joint users reported that they had never even tried smoking cigarettes (Bélanger et al., 2011). I return to this issue of measuring tobacco use in the next chapter (section 3.1.1) but it is important to note here that there may be a group of young tobacco users who usually smoke cannabis joints who are reluctant to label their tobacco use as smoking. Perhaps more importantly, these seemingly non-smoking, smokers may be reluctant to acknowledge their potential to become nicotine dependent or to seek help to stop smoking (Berg et al., 2009). Young people are unlikely to perceive a need to stop or cut down a behaviour which they do not consider themselves to be doing and so it is important to address how identities are negotiated and understood amongst young tobacco and cannabis smokers.

The literature considered in section 2.4.1 encapsulates the common thread of the thesis that young people favour cannabis over tobacco. Moreover, young people may resist labels of regular or committed smokers of either substance, but particularly tobacco, and some smokers of tobacco may be reluctant to call themselves smokers at all. Section 2.4.2 highlighted that young people may believe their cannabis smoking is less harmful than tobacco and even that tobacco harms can be alleviated by mixing it with cannabis. Section 2.4.3 also demonstrated that young people reluctantly use tobacco because it is beneficial to their cannabis consumption but otherwise they would not use tobacco. Section 2.4 illustrated that whilst there is perhaps less value in practices related to tobacco use compared to cannabis use, tobacco plays an important role for the simultaneous co-consumption of cannabis joints. In addition to the benefits of tobacco use for the consumption act itself, there is a small body of evidence emerging that suggests tobacco practices more widely (including place-based practices) may have a beneficial role for facilitating cannabis use. This is the topic of the next section.
2.5 The role of tobacco in facilitating cannabis: social and place-based contexts of co-use

Substance use can be thought of as a behaviour shaped by place; which includes exploring the impact of local availability of substances, cultural norms about use, as well as specific environmental features of specific settings which hinder or enhance opportunities to use substances (McLafferty, 2008). McLafferty’s argument echoes earlier work by Zinberg (1984) that research, and intervention, must explore beyond the individuals using tobacco and cannabis to examine use in social and place-based contexts. Understanding young people’s awareness of the beneficial uses of tobacco-for-cannabis consumption, as a driver for their tobacco use, is an important, but relatively under-developed component of co-consumption research. In this section, I first explore how tobacco practices may play a role in facilitating cannabis use more widely (e.g. regardless of whether tobacco is added). Despite calls for focusing on contexts of substance use, research in the clandestine field of accessing cannabis is sparse, although some authors have proposed that rather than entering into a wider illegal drug market to access cannabis, young people’s access to cannabis is more akin to the transactions that surround the supply of legal drugs such as tobacco and alcohol (Coomber & Turnbull, 2007).

The current prohibition of cannabis possession and use in the UK means that young people have to identify locations in which they can use cannabis without fear of sanction from other members of the public or the police and this is the second focus of this section. It has also been postulated that as a result of the relatively easy availability, and the current legal status of tobacco products, that cannabis users will turn to tobacco as a substitute when it is not possible to obtain cannabis or when the young users are in an environment where cannabis use is not possible (Amos et al., 2004; Haines-Saah et al., 2014). Moreover, there is some evidence that cannabis users may draw on practices related to tobacco use to conceal their cannabis consumption. Understanding where episodes of cannabis and tobacco take place, and where practices overlap is important for developing interventions to engage users; primarily to prevent use or encourage cessation but also to ensure young people are safe, particularly if they are in secluded and potentially dangerous environments.

2.5.1 Accessing tobacco and cannabis

The UK is considered to have one of the strongest and most comprehensive tobacco control policies in Europe (Joossens & Raw, 2010). It is important to consider though that whilst the sale of tobacco products is prohibited for those under the age of 18, it is not an offence for any young person to use cigarettes or tobacco products (DrugScope, 2013).
Relevant to the discussion here are the legislative actions proposed to prevent the accessibility of tobacco products to young people. For example, the minimum age at which retailers can sell tobacco was raised from 16 to 18 years in 2007 (Department of Health, 2010c). For the most part, direct purchasing from commercial sources of tobacco appears to play a small role in facilitating young people’s access to tobacco and appears to be more important for regular smokers compared to intermittent smokers (Gendall, Hoek, Marsh, Edwards, & Healey, 2014). However, regular and intermittent smokers often rely on social sources of tobacco (Croghan, Aveyard, Griffin, & Cheng, 2003); from buying tobacco in the school playground (Ogilvie, Gruer, & Haw, 2005), asking older friends and family members (Bown & Moodie, 2012; DiFranza & Coleman, 2001; Turner, Gordon, & Young, 2004) or as a last resort asking strangers outside shops (Marsh, Dawson, & McGee, 2013; Robinson & Amos, 2010). Sutcliffe et al. (2011) conducted a systematic review of young people’s access to tobacco specifically in the UK. The review concluded that young people perceive ready access to tobacco given the right strategy and this emphasised the volume of opportunity that young people have to obtain tobacco. The multiplicity of sources identified has illustrated the need to focus away from the retailer and toward convincing adults and particularly parents not to be complicit in the supply tobacco to minors.

Evidence of the sources of cannabis as well as how young people actually go about obtaining cannabis are limited (Duffy, Schaefer, Coomber, Connell, & Turnbull, 2008) perhaps due to the clandestine nature of cannabis use. This may be the result of the current prohibition of production, supply and possession of cannabis under the Misuse of Drugs Act (UK Home Office, 1971). Despite this prohibition, a cross national comparison of youth cannabis use (Ter Bogt, Schmid, Nic Gabhainn, Fotiou, & Vollebergh, 2006) found that over half of 15 year olds in the UK and over three quarters of 15 year olds in the USA thought it would be very easy or fairly easy to obtain cannabis. Over three quarters (79%) of young people aged 11-19 in a UK sample said they could obtain cannabis in less than an hour and an additional 11% said they could get cannabis in three hours or on the same day (Coomber & Turnbull, 2007). The small literature base on young people’s access to cannabis suggests that cannabis access is distinct from other illicit drug markets and primarily facilitated by trusted friends and family much like tobacco use (Coomber & Turnbull, 2007; Duffy et al., 2008; Ogilvie et al., 2005).

Young people report being able to access cannabis or tobacco relatively easily with evidence of supply coming from parents, relatives and peers rather than unknown suppliers, dealers or official retailers for tobacco. It remains to be seen what impact the restrictions on access of one substance has on the other. Authors such as Amos et al.
(2004) described how tobacco cigarettes would often replace cannabis joints when it was not possible to obtain cannabis. From the literature reviewed here, one might expect there to be little need to substitute one for the other, at least on the grounds of inaccessibility. As Amos et al. notes, there may be other reasons for substitution such as restrictions of certain environments (in public for example) on cannabis use that leads users to smoke tobacco cigarettes, and this is the final focus of this literature review.

2.5.2 Cannabis and tobacco use in public

The prohibition of cannabis, discussed above, has resulted in pushing consumption into private or semi-private places (Room, 2008). As a result, users must develop skills for judging the suitability of an environment for the consumption of cannabis (Zinberg, 1984) and how to negotiate situations where cannabis use is interrupted; for example if other people (including the police) enter a location where smoking cannabis is taking place (Ream et al., 2010; Reinarman & Cohen, 2007). Individuals follow a set of conduct norms to prevent such unwanted encounters and are also thought to rely on the expectancy that other users around them will exercise similar caution to avoid the collective group of cannabis users receiving unwanted attention (Dunlap et al., 2006).

The literature on spaces that young people go to use cannabis is scarce (Goncy & Mrug, 2013; Mennis & Mason, 2012) and these spaces are often claimed as youth only spaces (Johnson et al., 2008) which are not common knowledge of adults, or researchers. However, one study, (Moffat, Johnson, & Shoveller, 2009) examined cannabis smoking among young people (aged 14-18) in Canada, and this identified that smoking outdoors in secluded, natural and wooded areas were preferred locations for cannabis consumption as they were away from the scrutiny of adults; and young people were prepared to make long journeys to reach such locations.

In the USA, Dunlap et al. (2006) identified three distinct environments of cannabis consumption among adolescents. ‘Sessions’ are organised, indoor activities with groups of three or more people who get together for the purpose of consuming cannabis over a prolonged period of time alongside other non-smoking activities such as watching films or playing games. ‘Cyphers’ are more discrete activities where a smaller number of people get together, with the purpose of getting intoxicated quickly. Limiting the number of participants, particularly outdoors, helps to avoid drawing attention from others. Cyphers are more opportunist than sessions and often occur outside when young people cannot access private or inside locations to smoke. ‘Party’ settings reflect activities which do not always revolve around cannabis use, where users and non-users interact, and where use is
usually separated from the bigger group. There is relatively little research on how these practices translate to young people’s use in England although one study in Sheffield (Hammersley et al., 2001) suggests that cannabis is ideally consumed in a discrete environment, where young people feel safe and where they do not feel paranoid.

Although it appears that young people have strategies to consume cannabis in groups, the experiences described in the literature often take place in semi-private, secluded settings. One study in Canada (Haines-Saah et al., 2014) has hinted however, that tobacco cigarettes may play a vital role in enabling young people to consume cannabis in more conspicuous locations. Specifically, some participants in the Haines-Saah et al (2014) study proposed that tobacco was sometimes used to camouflage their cannabis use. Participants felt sure that no one would care if they were smoking cigarettes so would hope that their cannabis smoke was mistaken for tobacco smoke as tobacco smoke was thought to mask the smell of cannabis. This finding warrants further exploration as a young person pretending to smoke tobacco cigarettes, even if they do so only to camouflage their cannabis use, may be encouraged to consume tobacco and this may be an important practice for co-consumption.

This work, carried out in Canada, did not consider how these practices specifically influenced the places that young people choose to go to smoke and so place-based practices of tobacco and cannabis co-consumption represent an important area of focus for the current investigation.

2.6 Conclusion and summary of research questions

In this chapter, I have identified several areas of the literature where our understanding of the co-use of tobacco and cannabis is lacking. These have culminated in the identification of six research themes (Box 2.1) and four specific questions which are outlined here.

**Box 2.1 – Key themes to address in the current thesis**

1) Patterns of co-use; individual and contextual risk factors
2) Knowledge of tobacco and cannabis
3) Reasons for co-use
4) Types of smoker identities
5) Access to cannabis and tobacco
6) Local neighbourhood and encounters of substances

In section 2.2 I explored three explanations of co-consumption and these centred on an expected hierarchy of use, the shared element of inhaling the smoke from tobacco and from cannabis as well as the practice of mixing tobacco and cannabis together.

In section 2.3, recognising the socio-ecological nature of health behaviours, I examined the literature on young people’s individual characteristics as well as their families, peers and
wider school and neighbourhood contexts as specific risk factors for cannabis and tobacco use. For example, co-use is suggested to be more likely in older age groups and amongst boys compared to girls. There is also some evidence that co-use of tobacco and other drugs (e.g. not cannabis specifically) is more likely amongst White adolescents as opposed to young people from Black or other ethnic minorities. Using alcohol or other drugs is a strong predictor of tobacco or cannabis but these links have not been assessed for the use of both cannabis and tobacco. Parent, peer, and sibling modelling of tobacco have been linked to adolescent tobacco and cannabis use although peer influences are thought to be the most influential.

School environments, particularly the composition of pupils within a school, are commonly assessed indicators for investigations on substance use and more recently attention has been given to achievement at school level and institution structure. Although these factors are only modestly linked to substance use, the evidence base for a link between these factors and co-consumption of tobacco and cannabis specifically is insufficient to dismiss these as risk factors. Outside of the school context, perceptions of accessibility to tobacco and cannabis are proposed to be important factors in predicting use. Finally, individual, family, and socioeconomic disadvantage at an area level (residential neighbourhood) has been linked to the use of tobacco and cannabis but in a non-linear fashion. Low levels of disadvantage are linked to experimental use whilst heavier use is linked to higher rates of disadvantage.

Overall, whilst a picture of co-use is being painted, these links are tentative at best, due to a lack of data concerning populations where the use of both cannabis and tobacco can be assessed and moreover, issues of fully capturing co-consumption (e.g. among cannabis joint smokers who do not also smoke tobacco cigarettes) precludes a comprehensive understanding of those who co-use tobacco and cannabis. This represents a critical information gap which the current thesis attempts to address. The first research question therefore is; What are the individual and contextual patterns of tobacco and cannabis co-consumption among school-aged children?

The contrasting attitudes towards tobacco and cannabis is important for our understanding of the co-use of tobacco and cannabis; particularly tobacco used in joints. The literature suggests that whilst tobacco plays an important role for adolescents in their socialisation and development of identities, young people may resist identities as smokers because being a committed or ‘confirmed’ smoker confers instability and lack of control; an undesirable identity. More importantly, it appears in a handful of studies that those who use tobacco-for-cannabis may be reluctant to see their tobacco use as smoking. This represents an
important focus for this thesis, not only in fully capturing co-consumption patterns but it is also a goal of this work to build on the emerging work surrounding how users of tobacco-for-cannabis conceptualise their smoking and if this is different to how tobacco-for-cigarette users define themselves as tobacco smokers. As such the second research question identified in the literature is; *How are smoking identities negotiated in relation to tobacco-for-cigarettes and tobacco-for-cannabis use?*

Although identifying patterns of use is an integral step in targeting groups of young people who may be particularly vulnerable to cannabis and tobacco use, it is also important to consider young people’s own understanding of the substances and their experiences of use as drivers for their behaviours. The literature reviewed in section 2.4 suggests that despite comprehensive dissemination of information regarding tobacco use harms, young people receive mixed messages regarding the safety of cannabis use and have almost no understanding of the implications of mixing cannabis and tobacco together. Young people have to weigh up evidence from a variety of sources and increasingly learn from experimentation or by turning to other users who give anecdotal evidence on internet forums. A handful of qualitative researchers have explored narratives of the co-use of cannabis and tobacco and identified that some young co-users believe that their use of cannabis negated the harms of tobacco smoking. The qualitative work also indicates that cannabis users often only use tobacco because it is beneficial to their cannabis consumption; in reducing costs and making supplies last. Moreover, many of these cannabis joint users perceive no value in smoking tobacco and are somewhat anti-tobacco with cannabis joint users often attributing negative experiences to the tobacco in their joints rather than the cannabis. The third research question identified in the literature, therefore, is; *How do belief systems surrounding the relationship between tobacco and cannabis influence their co-use?*

In section 2.5 I focused on the role of tobacco in facilitating cannabis access and use. It has been suggested that cannabis access practices may be more similar to those associated with tobacco use and dissimilar to practices of accessing harder drugs. The literature reveals a multiplicity of sources of tobacco for young people which circumvent legislated access restrictions. Although to a lesser extent, cannabis also appears easy to access for young people with perceptions of easy access being widespread. A concerning avenue of access for both tobacco and cannabis appears to be the reliance on the complicity of trusted friends and family members which unites these substances and distances them from other illegal drug markets. There is limited data on how the access of one substance is linked to the other with some authors suggesting that restrictions in accessing cannabis may lead to
increased use of tobacco as a substitute. Closer exploration of the similarities and differences in practices of youth access to cannabis and tobacco is therefore warranted.

Lastly, there is evidence that tobacco may also facilitate the use of cannabis in public settings and this draws our gaze to the place-based practices of co-use. The literature indicates that both tobacco and cannabis are primarily viewed by young people as social experiences which are usually group-based. As a result, young people must identify suitable locations for group use as they rarely have access to their own private spaces. Whilst this is relatively easy for consuming tobacco, which is not currently prohibited, it is much more difficult to find locations where cannabis can be consumed without fear of interruption or attention from the public and the police. Limited qualitative research in Canada has identified that typical locations of cannabis use are secluded and natural (wooded) outdoor locations and young people are prepared to travel long distances to reach these settings. One study however, suggested that tobacco may play a critical role in facilitating cannabis use in less inconspicuous locations. In particular, a practice of using tobacco to try to camouflage cannabis use has been highlighted as young people believe tobacco smoking is viewed as more innocuous by other members of the public (that they would care less about seeing a young person use tobacco compared to cannabis). This finding requires further investigation is settings outside of Canada. As such, the final research question addressed in this thesis is; How do cannabis consumption practices interact with and contribute to tobacco consumption practices?

The literature reviewed here highlights that beyond the physical properties of supporting the smoking of cannabis (e.g. making cannabis smoke easier to inhale) tobacco may have an inseparable and as yet not fully understood link to cannabis. The four research questions (given again in Box 2.2) are necessarily ambitious in order to progress our understanding and recognition of the relationship between tobacco and cannabis specifically as a target for future interventions on young people’s smoking. Primarily there is a need to quantify the pattern of co-consumption and consider key risk factors of use. This task will be met through the use of a school-based survey examining cannabis, tobacco, and co-use behaviours. Once an outline of the behaviours associated with co-use are established, this will serve as a backdrop to explore the more nuanced facets of co-consumption in questions two, three and four. These questions will be primarily answered through the use of interviews with young people who have experiences of and awareness of cannabis and tobacco although where appropriate, school survey data will be used to support the qualitative findings. This will provide insight into the decision making and interplay of tobacco and cannabis behaviours.
**Box 2.2 Research questions**

1. What are the individual and contextual patterns of tobacco and cannabis co-consumption among school-aged children?
2. How are smoking identities negotiated in relation to tobacco-for-cigarettes and tobacco-for-cannabis use?
3. How do belief systems surrounding the relationship between tobacco and cannabis influence their co-use?
4. How do cannabis consumption practices interact with and contribute to tobacco consumption practices?

The dual use of quantitative and qualitative methods represents a pragmatic approach which is flexible in aligning with methodologies that work best to answer specific research questions. These methodologies both have unique and important contributions to furthering our understanding of co-use. In the next chapter I outline key concepts in the methodological literature (capturing smoking behaviours and researching young people) that are important for both the survey and interview studies and shape the substantive work of the thesis. Chapters Four and Five are devoted to outlining the methodological decisions for the school survey and interview study respectively.
Chapter Three: 
Researching cannabis and tobacco co-use among adolescent participants

In the previous chapter I illustrated the current gaps in knowledge and developed the aims and research objectives for this research. The research takes the form of two substantive data collection studies; a quantitative study outlining the prevalence and risk factors of co-consumption as well as a qualitative interview study to explore narratives of use. In this, the first of the three methodological chapters, I consider issues that pervade the project as a whole, before outlining study-specific decisions in Chapters Four and Five for the quantitative and qualitative studies respectively. I explore two overarching issues here; studying cannabis and tobacco (co)use, and the ethical issues of using young people as research participants. Researching the topic of cannabis and tobacco use is complicated by virtue of these substances being subject to legal and social control that makes them somewhat clandestine.

As I will argue, regardless of whether the study is qualitative or quantitative, identifying cannabis and tobacco users is challenging because young people may not always see their tobacco use as smoking; particularly when smoking cannabis joints (as discussed in section 2.4) and so questions must specifically focus on co-use behaviours. It is also imperative to take steps to ensure the validity of reporting and to assure participants that their responses are confidential in order to encourage substance users to take part in research and discuss their experiences and understanding of use openly. This is particularly so for young people, who may be reluctant to disclose information to adults in fear of getting into trouble. I begin by examining the available methods and instruments for capturing tobacco and cannabis co-use; focusing on young people in the second decade of their lives (10-20 years old).

3.1 Revealing cannabis and tobacco use
This section discusses the issue of collecting valid data on young people’s tobacco and cannabis use. First I present the currently available methods of capturing the prevalence of specific co-consumption patterns at a large (population) scale. I then discuss the issue of inaccurate reporting of substance use (e.g. giving erroneous reports or recanting previous admissions of use) and how researchers have addressed these issues. This is important for both large scale surveys and in questioning young people in interviews to study their co-use behaviours. Finally, after considering how to achieve valid and honest accounts of cannabis and tobacco use, I discuss the responsibilities that researchers have to their participants in dealing with these disclosures of illegal and harmful activity; should
researchers report illegal activity to relevant authorities, refer participants to drug services or do nothing?

3.1.1 Detecting smokers and co-users

Understanding the prevalence of co-consumption is integral to supporting those most vulnerable to co-use as well as targeting intervention resources. A major source of data for those involved in intervention planning is the use of population-representative surveys that are routinely collected to monitor substance use among young people. There has also been increasing attention on co-use of tobacco and cannabis within routine surveys in many high income countries across Europe (Hale & Viner, 2012). There are clear benefits of harnessing these existing data collections over conducting an original survey to study co-use. Many of these survey studies anonymise the data and store it on a repository such as the UK Data Service (http://ukdataservice.ac.uk) for researchers to re-use.

Whilst it may be possible to take advantage of these data collections for secondary analysis, the literature reviewed in Chapter Two highlights that the surveys must capture specific co-use patterns (e.g. cannabis joint use). This will be important for creating a close approximation of existing surveys in the current thesis, which is integral for ensuring that any findings from the survey can be more easily replicated in future population surveys. In developing the current project I examined questioning in eight population representative surveys, used to monitor substance use among young people nationally and internationally. This exercise had a dual purpose. It would primarily enable the development of appropriate questioning for the current study to quantify co-use. It also highlighted whether co-consumption could be captured in a meaningful way from the routine surveys; e.g. can we only identify young people who report using both substances at some point in their lives, or do more explicit co-use options exist to measure specific patterns of co-consumption. Being able to conduct secondary analyses utilising large, population representative, datasets is of great benefit to researchers; not only in relation to keeping costs of research down but also in reducing the burden of over surveying young people.

The data collections I examined were; the European School Survey Project on Alcohol and Other Drugs (ESPAD, Hibell et al., 2012), the international (Europe and North America) Health Behaviours in School-aged Children survey (herafter HBSC; Currie et al., 2010), the Mental Health of Children and Young People in Great Britain 2004 survey (hereafter MHCYP; Green, McGinnity, Meltzer, Ford, & Goodman, 2004), England and Wales’ Offending, Crime and Justice Survey (hereafter OCJS; Roe & Ashe, 2006), the Scottish Schools Adolescent Lifestyle and Substance Use Survey (hereafter SALSUS; NHS
Scotland, 2010), the Smoking, Drinking and Drug Use Among Young People in England survey (hereafter SDD; Fuller & Hawkins, 2014), England’s Tellus survey series (Chamberlain, George, Golden, Walker, & Benton, 2010), and the Young People’s Behaviour and Attitudes Survey for Northern Ireland (hereafter YPBAS; Central Survey Unit, 2013). Asking if a person has ever used both cannabis and tobacco is not helpful in ascertaining the prevalence of concurrent co-consumption as we cannot say, for example, if the individual had used both substances together or even in the same time period. As such, the discussion here focusses on current behaviours captured in eight surveys (Table 3.1 shows a synthesis of the available questions). All questions relating to tobacco and cannabis that are used in the eight surveys are given as Appendix A.

Table 3.1 Cannabis and tobacco questioning in large data collections.

<table>
<thead>
<tr>
<th>Definition of co-use</th>
<th>Example questions allowing for co-use to be computed</th>
<th>Data collections containing co-use questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concurrent use (smoking status)</td>
<td>Do you smoke cigarettes nowadays?</td>
<td>ESPAD (Hibell et al. 2012)</td>
</tr>
<tr>
<td></td>
<td>Have you smoked tobacco in the last 30 days?</td>
<td>HBSC (Currie et al. 2010)</td>
</tr>
<tr>
<td></td>
<td>Have you taken cannabis in the last 30 days?</td>
<td>MHCYP (Green et al. 2005)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SDD (Fuller &amp; Hawkins 2014)</td>
</tr>
<tr>
<td>Additional smokers identified by quantity/frequency of use questions</td>
<td>How many cigarettes have you smoked in the last 7 days?</td>
<td>SDD (Fuller &amp; Hawkins 2014)</td>
</tr>
<tr>
<td></td>
<td>How often do you smoke tobacco at present?</td>
<td>HBSC (Currie et al. 2010)</td>
</tr>
<tr>
<td></td>
<td>On how many occasions (if any) have you used marijuana or hashish (cannabis) in the last 30 days?</td>
<td>ESPAD (Hibell et al. 2012)</td>
</tr>
<tr>
<td>Explicit mixing of tobacco and cannabis</td>
<td>How often do you add tobacco to cannabis?</td>
<td>ESPAD – Switzerland only (Bélanger et al 2011)</td>
</tr>
</tbody>
</table>

To capture concurrent use, researchers ask participants to think about their current use of substances (Olszewski et al., 2009) and all eight of the data collections had at least some questions which would enable researchers to identify individuals who report currently using tobacco and currently using cannabis, or at least use of the substances in the last 30 days. However, as noted earlier, occasional users or those who only use tobacco-for-cannabis may not consider themselves to be smokers when asked simply about their current smoking status. Examples of more discriminative questioning include asking about the quantity and frequency of tobacco and cannabis use (Fendrich, 2005). Fendrich (2005), suggests asking participants to say or sometimes mark on a calendar the days when they smoked and how many cigarettes they smoked on each day. The researcher can then calculate a percentage of days when tobacco was consumed as well as other metrics such as consistency of daily smoking or days of abstinence (Lewis-Esquerre et al., 2005). Few of the national datasets asked this sort of question although the SALSUS questionnaire
(NHS Scotland, 2010) and the SDD survey (Fuller & Hawkins, 2014) asked how many cigarettes were smoked on each day for the last seven days. A more common question though was to ask how many cigarettes were smoked in the past week.

The final pattern to discuss is specific cannabis preparations that involve tobacco. Work outlined in section 2.1.3 (Bélanger et al., 2011; Burns et al., 2000; Humfleet & Haas, 2004; Leatherdale & McDonald, 2006) highlights that young people using tobacco for joints but not tobacco-for-cigarettes may avoid using the label smoker and this work hints at the need to be as explicit as possible in questioning young people about their smoking behaviours. There are very few instruments available to clearly distinguish between tobacco products for tobacco consumption and tobacco products for cannabis consumption (e.g. in cannabis joints) in these national surveys or in wider research (Baggio et al., 2014). However, whilst surveys running internationally, e.g. ESPAD (Hibell et al., 2012) and HBSC (Currie et al., 2010), required participating countries to ask a set of mandatory questions, individual countries are permitted to add their own questioning to meet their own research or monitoring agendas. Researchers in Switzerland requested questioning on mixing tobacco and cannabis together in the 2007 wave of ESPAD and results are reported by Bélanger et al (2011) who asked cannabis users how often tobacco was added to their cannabis joints. Unfortunately, Switzerland did not participate in the 2011 ESPAD wave and aside from this single version of the questionnaire, at the time of searching, there were no available publications to suggest any other countries were routinely assessing tobacco-for-cannabis joint use.

The review of data collections on tobacco and cannabis among young people reveals that it is possible to examine a limited range of co-use patterns. Using participant’s responses to questions about each substance, it is possible to identify those who concurrently use cannabis and tobacco (e.g. ever or current co-use, co-use regularly) in many of the national instruments available to researchers. However, at present, it is not possible to identify specific cannabis preparations that involve tobacco for young people in the UK.

### 3.1.2 Eliciting honest and reliable accounts of tobacco and cannabis use

The previous section outlined the current state of surveillance for cannabis and tobacco co-use behaviours. However, it is also important to consider that adolescents may make special efforts to conceal some deviant or socially unacceptable experiences; particularly if those experiences are not in keeping with the identity they want others to observe, particularly their parents (Scott, 2000). It is therefore imperative to consider the way in which the questions are posed, in addition to the questions themselves when designing
survey instruments to capture use. The literature suggests a number of techniques for addressing this in both quantitative surveys as well as in interview situations which may pose additional challenges for open disclosure and I discuss these in this subsection.

Pudney (2006) examined misreporting of substance use, including self-contradiction (e.g. indicating tobacco use at one survey question and then later recanting, saying they do not use tobacco at another, and vice versa) in UK panel and cohort surveys and suggested that under-reporting is much more common than over-reporting of use for tobacco and for cannabis. The explicit demonstration of anonymity to participants can improve the validity of reporting of socially sensitive behaviours and reduce the number of incomplete survey responses (Durant, Carey, & Schroder, 2002; EMCDDA 2002). Flicker et al. (2008) also suggest that researchers should use youth appropriate vernacular such as privacy rather than anonymity and confidentiality when communicating with younger potential participants to avoid confusion.

As discussed in section 2.4.1, though, young people may be willing to report that they have some experience with tobacco, and to a lesser extent cannabis, but may avoid reporting being a proper smoker (MacFadyen et al., 2003). There is also evidence that young people who take part in longitudinal research (i.e. their behaviours are followed over the course of a number of surveys) may later retract admissions of cigarette, alcohol and cannabis use (Shillington & Clapp, 2000). Retractions have been proposed to result from participants amending historical accounts of behaviour to match their current behaviours and the social identity that is most salient for them at the time of responding (Engels, Knibbe, & Drop, 1997; Percy, McAlister, Higgins, McCrystal, & Thornton, 2005; Shillington & Clapp, 2000).

Fendrich (2005) suggests that questions requesting specific details about use experiences such as timing, the number of occasions of use and the amounts used may improve the accuracy of reporting. This suggests that certain questioning such as ‘have you ever…’ or ‘which statement best describes your smoking status’, often used as screening questions or for categorising users from non-users may be insufficient on their own to capture accurate smoking patterns of young people. Moreover, by asking additional questions to those young people who report some experience of tobacco use, it appears possible to identify hidden use. The SDD survey (Fuller & Hawkins, 2014) for example, asks participants initially if they have any experience of tobacco use and those who say they do are asked further questions including the past week diary question. If a participant said they were not currently smoking but reported elsewhere that they had smoked in the past seven days, they were reclassified as current smokers. Fuller and Hawkins (2014) report that an
additional 1% of participants are reclassified as current tobacco users every year in the SDD survey. This may appear insignificant but when we consider that in the latest wave of the SDD, 7% of young people were identified as current smokers, it is imperative to include all hidden users. As such, this is an important lesson for the current work on co-use and advocates the use of multiple questions to identify those people who currently use tobacco but may be reluctant to say so. This is particularly salient for identifying those who use tobacco-for-cannabis but may not report tobacco use in surveys asking about smoking more generally.

In addition to asking young people to self-report substance use on a questionnaire, where they have time to consider their responses, researchers may ask young people to explain or describe their experiences of tobacco and cannabis use verbally, in interviews or focus group settings. These research methods may discourage young people from giving honest accounts if they feel more accountable for their admissions, and less anonymous, because the interviewer can see them face to face. However, it may be also possible to utilise lessons learnt from quantitative surveying to encourage honest and more vivid accounts of smoking behaviour. For example, an interviewer may be able to ask participants to clarify their smoking experiences at different points in the interview and document any variations in responses according to the way the question is asked. The flexibility of interviews over questionnaires may also aid in capturing accurate reports as the interviewer can check that the question is understood clearly by participants; an important component of capturing specific tobacco-for-cannabis behaviours.

Moreover, some researchers have discussed the efficacy of including more than one young person in an interview in order to support honest accounting as it helps to create a safe and supportive social context for engaging with sensitive questioning about drug use (Hight, 2003a; Leyshon, 2002). Having two or more members of the same friendship group can also help to build vivid pictures of substance use encounters and may facilitate greater recall of shared past experiences as individual participants discuss different parts of the same events (Conradson, 2005). Importantly for the discussion on eliciting honest accounts, researchers interviewing young people in groups (Hight, 2003a; Hyde, Howlett, Brady, & Drennan, 2005) observed that in cases where individual participants exaggerated their experiences, other members of the interview would challenge them either with disparaging laughter or by direct correction of the seemingly falsified account. Of course, there may be situations where all group members wish to talk up their experiences with substance use. Hight recognises this and acknowledges that it may say something about young people’s beliefs about the importance of substance use in itself. Nonetheless,
involving more than one participant in a single interview may optimise the chance of
honest narratives of use.

This subsection has discussed the potential for young people to give inaccurate responses,
either due to over-reporting use, recanting previous admissions of use, or otherwise under-
reporting use. However, there are strategies to address this which include, asking for
specific details about encounters and asking similar questions at multiple points throughout
the survey. These strategies may help to uncover hidden smoking as evidenced in
nationally representative youth smoking surveys in the UK. This has important relevance
for the current work where there is suggestion that tobacco-for-cannabis is not considered
to be ‘smoking’ and is accordingly not reported in surveys. Issues of eliciting honest
accounts of substance use are compounded in interview research where participants may
feel less anonymous than in surveys and are put on the spot to give responses without time
to consider fabricating experiences.

3.1.3 Responsibilities of disclosure

Now that appropriate questions and techniques for eliciting accounts of tobacco and
cannabis, have been established, it is important to consider what must be done with
disclosures of harmful and illegal behaviours, including drug use as well as drug dealing.
Moreover, an ultimate goal of health-related behaviour research is arguably to reduce the
uptake of health damaging behaviours but what can, and should, researchers do to provide
support? In clinical research with young people, the identification of problem substance
use often prompts appropriate treatment referral (Moolchan & Mermelstein, 2002) although
ensuring anonymity and confidentiality is integral to providing a comfortable and
safe environment that encourages young people to disclose their behaviours (Durant et al.,
2002). Participants may take part because a research setting offers them a neutral setting
for them to consider or discuss issues surrounding their behaviours, and they may not want
to be coerced into stopping or seeking treatment for these behaviours. It would be unethical
to contact a participant to offer targeted support, unless the participant has explicitly given
consent for this to happen, prior to the study taking place. Furthermore, if a participant did
give consent for this to happen it would be necessary to have some form of identification
such as the participants name and contact details attached to their responses, which would
make anonymity impossible and may deter participants from taking part or giving honest
responses.

Codes of conduct from the British Psychological Society (2009, 2011) and the British
Society of Criminology (2006) indicate researchers should make any obligations to report
disclosures clear to participants and further that participants have the right to stop answering questions at any time. However, researchers in the UK have no legal obligation to report illicit activity that they observe or learn about through their research to relevant authorities unless it relates to specific legal proceedings or an investigation that is underway (Corti, Day, & Backhouse, 2000; The Crown Prosecution Service, 2014; UK Data Archive, 2012). There are circumstances, in line with UK case law, when the researcher may have a legal obligation to report a disclosure of illegal activity; particularly when there is a possibility of harm to individuals (British Psychological Society, 2011). For example, a researcher would be required to report a disclosure of activity related to terrorism or treason as well as any allegations of abuse or immediate threats of harm (mental or physical) towards vulnerable adults or children. The ability to conduct research without the obligation to report cannabis use though will benefit the researcher in encouraging potential participants who are concerned about any consequences of talking about substance use. Highet (2003b) faced a similar dilemma when studying young people’s cannabis use in Scotland and made the decision to offer strict confidentiality with an explanation of legal obligations to report the above disclosures.

With anonymity and confidentiality advocated as integral to achieving valid data collection, and the legal responsibilities now clarified, it is important to consider what researchers should do from an ethical standpoint to protect participants from harm and to support the young people that take part in cannabis and tobacco use research. One method of ensuring that participants receive the opportunity to get support is to give contact details of relevant services to all participants as part of the debriefing stage of their participation. Whilst the researcher cannot offer targeted support, this blanket approach could be worded to encourage participants to use these services if they want to. An alternative method of providing support to those who report particular behaviours is to provide information or resources targeted at the group level. The ability to do this is dependent upon the design of the survey but if responses are linked to indicators such as age, sex and even classes within a particular school then it may be possible to highlight to appropriate bodies where there is a need to respond. It is necessary to inform the participant of the intention to use the results in this way and to obtain consent from them but this approach protects the anonymity of participant whilst ensuring that the young people who take part are given all the support available.
3.2 Getting the data: researching young populations

In this section I explore the research literature relating to young people’s participation in research on their tobacco and cannabis use, focusing particularly on issues of the capacity for giving informed consent. One pertinent issue, that forms a substantial portion of this section, addresses parental involvement in children’s decisions to take part in research on the topic of substance use. The majority of the literature focuses on research with children in school settings rather than youth clubs. Despite this, there are important lessons for the project as a whole and which translate across schools and other environments. Where this is not the case, I note implications for research in youth clubs.

3.2.1 Who can and should give informed consent?

The age at which a young person can consent to taking part in research is a contentious point and there are very few legal documents addressing participation in research specifically (Santelli et al., 2003). Whilst the UK has no law governing the age of consent for research participation (Berger, 2012), the Code of Human Research Ethics (British Psychological Society, 2011), maintains that children under 16 years of age constitute a vulnerable group and that research with this population inherently involves more than minimal risk. In the USA, Part 46 of the 2009 Code of Federal Regulations (Department of Health and Human Services, 2009) defines children as ‘persons who have not attained the legal age for consent for treatments or procedures involved in the research’.

Competency among children and adolescents has been arguably underestimated as researchers increasingly observe that young children are able to demonstrate competency to provide valid consent for research on their own (Alderson, Sutcliffe, & Curtis, 2006; Coyne, 2010). Bruzzese and Fisher (2003) warn however that whilst understanding of the key elements of informed consent, those up to the age of 12 years old may struggle to fully understand what they are told about confidentiality and they may need additional support in ensuring they fully understand their rights. This is particularly important for the work presented here, considering the topic of study as young people may make decisions of whether they should take part based on their understanding of the consequences of admitting drug use in confidence to the researcher.

A position paper for the Society for Adolescent Medicine (Santelli et al., 2003) argues that the roles of parents for protecting young people as participants should be respected alongside a recognition of the increasing adolescent autonomy and capacity. Indeed, the recently updated USA Code of Federal Regulations (Department of Health and Human Services, 2009) asserts that where they are deemed to be capable, using standards set
usually by a research ethics committee, a young person may be asked to give consent to take part following a parent granting permission. It is important to note the use of the terminology permission rather than parental consent to emphasise that agreement from the parent does not necessarily constitute consent for the young person to participate. It is important to emphasise that young people have their own say about taking part as Goodenough et al (2003) have noted that young people may be inclined to agree to take part if they know that their parents have agreed already, not wanting to challenge parental decisions.

Another issue which should be considered in the decision to seek consent from the participant and their parent is the public opinion on research on substance use with children. For example, the majority of parents believe the requirement to seek parental permission is necessary prior to asking adolescents to take part in research (Pasternak, Geller, Parrish, & Cheng, 2006). Interestingly, Pasternak et al (2006) found that parents who believed their children had not engaged in risky behaviour were less likely to perceive this need although unfortunately the authors did not address how the perception of the requirement for asking parental permission related to whether or not the parents would grant permission for a survey to take place.

There is evidence to suggest that excluding parents from the decision can have adverse effects on relationship between the parents and staff within a school. An extreme example of this is a court case brought by a group of parents in New Jersey, USA, against a secondary school conducting a risk behaviour survey with pupils (CN v Ridgewood Board of Education, 2004). The case was filed because the school conducted a survey, albeit on a voluntary, anonymous and confidential basis, which asked about sexual intercourse and substance use, without seeking parental consent on the grounds that comprised an unreasonable intrusion into the household and that it contravened their parental right to raise their children as they saw fit (CN v Ridgewood Board of Education, 2004). The case was dismissed although its presence brought about considerable anxiety among researchers fearing similar legal action and led to legislative changes in the state of New Jersey which increased restrictions on adolescent research. Whilst these concerns are secondary to the safety and comfort of participants, it is an important issue to consider because involving parents in the consent process clearly has implications for the image of the school, its relationship with parents, and may influence the willingness of organisations such as schools to support research.

In this section I have discussed that the complexity involved in assessing the capacity of young people to give informed consent has led the majority of official guidance, in the UK
and elsewhere, to assert that parents or guardians are required to give permission for their children to take part in research. Although young people can demonstrate competencies to give informed consent to take part in research before the age of 16, it is important for a number of reasons to involve both young people and their parents in the decision making process. Following a review of the literature presented here, it is advocated within the current works that informed consent should be sought from young people in conjunction with seeking permission from parents to allow their children to take part in research on substance use. It is important to note that the way in which parental permission is sought can have a major influence on research samples and this will be discussed next.

3.2.2 Does the method of seeking parental permission harm research on cannabis and tobacco use?

Parental permission can be sought in two ways. The first is the opt-in or active permission approach which requires that parents give written, signed agreement for their child to participate. If a parent does not respond, it is considered that they refuse for their child to take part in the study. Opt-out or ‘passive’ permission on the other hand is an approach whereby permission can be inferred so long as parents are sent information regarding the study and are given the opportunity to withdraw their child. The emphasis here is on the parent responding if they do not want their child to take part. There is little difference in the effort required to refuse permission in either approach as they both require that parents return a form to the researcher. However, the effort required to give permission is substantially greater in opt-in consent studies. There are also considerable differences in reported achievable sample response rates between the two mechanisms with opt-in consent achieving response rates of around 30-60% compared to upwards of 90% for opt-out consent (Tigges, 2003). Furthermore, studies that require opt-in permission from parents are thought to result in a selection bias towards lower prevalence samples (Dent et al., 1993; Rojas, Sherrit, Harris, & Knight, 2008; Tigges, 2003).

Whilst seeking written parental permission has been seen as a well-intentioned safeguard to protect children (Coyne, 2010), there are situations where this level of parental involvement in decision making can negatively affect the progression of research. This is particularly so if it may result in children being excluded from research when they express a desire to participate and can demonstrate competencies involved in decision making (Goodenough et al., 2003) simply because parents did not return written permission slips.

Due to the low response rate achieved by asking parents to return a permission slip, research has focused on identifying any differences in groups who do not respond to
requests because they refuse to give permission and those who simply do not return the slip but otherwise would be happy for their child to take part. One study (Baker, Yardley, & McCaul, 2001) suggested there was no difference in the characteristics of parents (e.g. age, education, marital status, number of adults in the home) who do not respond to requests to allow their child to take part in research compared to those who did respond or refused to let their child take part. However, Unger et al. (2004) revealed that boys, poorly achieving students, and students who smoked were those most likely to have parents who did not respond to requests for permission for their child to take part in research. The exclusion of these young people could lead to an underestimation of smoking prevalence and adversely bias the generalizability of research on youth substance use.

Some authors have demonstrated that it is possible to obtain more representative samples using opt-in mechanisms but at a cost of significant effort and resources. Pokorny et al. (2001) reported that opt-in measures can be modified to elicit participation rates comparable to opt-out consent by asking parents to add their signature to their child’s report card which a parent would expect to see and return to school. However, some school administrators’ perceived opt-in consent as too much of a burden as they already had difficulty in obtaining feedback and signatures from parents for other activities. More recently, Secor-Turner et al. (2010) taking the burden away from schools, indicated that enlisting student support for returning forms, directly telephoning parents as well as offering school incentives to cover administration costs can raise response rates. However, the authors calculated that for each case, approximately $11 (£6.50) and 25 minutes of researcher time was required. Other authors suggest repeated follow-up phone calls and sending multiple information packs to encourage responses can cost around $25 (£15) per respondent (Tigges, 2003) and in a study recruiting school pupils from five sites (Esbensen, Miller, Taylor, He, & Freng, 1999) costs were in the region of $50,000 (£30,000). Although design decisions should be based on sound methodological grounds rather than on an operational cost basis, the resources required to improve opt-in consent rates may often be unobtainable for researchers conducting doctoral projects and must be considered.

This section has illustrated that there are two distinct approaches to seeking parental permission; opt-in consent and opt-out consent. The former requires parents to return a permission slip (or otherwise confirm permission) before a young person can be approached to give consent and the latter requires parents to return the form (or otherwise contact the researcher) if they do not give permission. Requiring parents to respond using opt-in methods can result in lower prevalence samples which may be biased towards
certain groups of young people. The low responses are also advocated to be the result of latent consent (e.g. simply not returning the slip) rather than a refusal of permission. Raising response rates of opt-in mechanisms can be costly for researchers to implement and so the use of opt-out consent is increasingly advocated. In many cases opt-out parental permission may be the most appropriate design for research on substance use. Despite the allure of the benefits of using opt-out permission approaches, that researchers can infer permission if they do not hear back from a parent, there is a concern that non-response from using opt-out consent is the result of parents not actually receiving study information and having no opportunity to refuse permission. Two separate school based studies (Ellickson & Hawes, 1989; and Esbensen et al., 1999) examined the differential sample rates achieved by projects using opt-in and opt-out parental consent methods. Both papers concluded that the non-response of parents to opt-out permission conferred conscious parental approval, as intended, but non-response to opt-in requests reflected latent consent rather than refusal.

3.3 Conclusion

This chapter began by examining the possibility of utilising existing data collections for the study of cannabis and tobacco co-consumption. A review of eight data collections in the UK and Europe revealed that the concurrent use of tobacco and cannabis can be identified in population representative surveys. However, as there is evidence to suggest that those who use tobacco-for-cannabis (in cannabis joints) may not be identified as co-users unless they use tobacco in cigarettes, there is a need for more specific questioning of co-use behaviours. Just one of the eight population studies reviewed asked about cannabis joint use specifically and there is currently no prevalence data in the UK for this specific cannabis consumption method.

Secondly, following an exploration of the content of the questions, issues of consistent and honest reporting of substance use among young people were highlighted. Steps to increase the validity of survey and interview responses centre on asking explicit questions about specific behaviours and asking about smoking at several points in the survey or interview. The focus then turned to the responsibilities of researchers to handle the cannabis and tobacco data they collect. Questions were raised regarding whether researchers have a responsibility to intervene when a young person admits cannabis or tobacco use and the literature advocates the provision of information and support to all young people taking part to use if they wish rather than targeting just those who report use. There is also concern for the legal responsibility to disclose admissions of use as this has implications for recruiting young people to take part who may be reluctant to if they believe they could...
get into trouble for admitting their use of drugs. There appears to be no legal obligation for researchers to disclose information unless asked by the police if it relates to a specific ongoing criminal case.

Whilst section 3.1 focused on tobacco and cannabis, section 3.2 focused attention on collecting data on adolescents more generally. Discussion began by studying issues of informed consent, particularly who the consent should be sought from (i.e. the participant or their parent/guardian). Ethical codes, across disciplines, maintain that those under the age of 16 years constitute a vulnerable population and that parents are required to give permission for their children to take part in a study. Several researchers have advocated, however, that children can demonstrate a capacity to give informed consent on their own and further that the requirement to seek written parental permission has a detrimental effect on achievable samples sizes. The literature illustrates that it is not beneficial, for relations between the researcher and the public among other things, to exclude parents from the consent process. Moreover, many parents can and do play an important role in supporting children to make decisions about taking part in research and it appears that an opt-out method of seeking parental permission (e.g. giving information about the research and to a parent/guardian and assuming that consent is given unless they contact the researcher), can achieve meaningful and less biased samples so long as steps are taken to ensure that parents receive the information.

This chapter sought to identify overarching issues for the study of cannabis and tobacco co-use among young people. The following two chapters outline the specific methods surrounding data collection for understanding the prevalence of tobacco and cannabis use (research question 1) as well as exploring narratives of co-use (research questions 2-4). Each study was given a favourable opinion following a departmental and faculty level ethical review at the University of Portsmouth (a letter of approval and declaration of ethical conduct is included as Appendix B) and what follows in Chapters Four and Five is a discussion of the design of the work that was shaped by items addressed in the ethics application and in the literature outlined in this chapter. For example, prevalence will be sought using survey questions guided by the critical review of existing survey instruments reviewed above. Ethical and moral guidance discussed in this chapter also steers the way in which the interviews are conducted to elicit valid and candid experiences of co-consumption.

Before discussing the methods employed in this multi-study thesis it is important to include a note on the timing of each study. Although different research questions were addressed on the whole using either the quantitative school survey or the qualitative youth
club study, the sequencing of data collection is not unimportant. The time pressures of conducting a mixed methods doctoral programme of work and the anticipated difficulty in accessing participants (as identified within the literature review) meant that the qualitative and quantitative studies were designed simultaneously, for planning the wider work and for establishing ethical approval and this resulted in some overlap in collecting data. The school survey study was conducted first because of the expected difficulty in recruiting schools and fitting in data collection within school terms and timetables. There was consideration for surveying school children in upper age groups particularly around exam times and so recruitment was focused on the beginning of the academic year in 2012. The youth clubs did not operate strictly around school terms and so could be more flexibly undertaken. Having said this, analysis of the school survey data continued as the youth clubs were approached and I spent time building rapport with young people. Although the topic guide was established before the school survey results were analysed, the results surrounding identity in the school survey could have influenced my specific lines of questioning and analysis of narratives in the interviews. Finally, as the studies were intended to contribute collectively to the overall work and so any interaction and influence of the sequencing is an advantage to the thesis.
Chapter Four:
Defining patterns of co-consumption in a school-study

In this chapter I outline a cross-sectional online survey on substance use with secondary school-aged pupils. The results from this study will primarily contribute to the answering of research question one (What are the individual and contextual patterns of tobacco and cannabis co-consumption among school-aged children?) but will also contribute to the understanding of the narratives in the qualitative study and to aspects of the other three research questions. The chapter begins by discussing the design of the survey to capture tobacco and cannabis use among young people, and the variables studied in order to address the above research question.

The challenges of recruiting participants and the administering of the questionnaire is outlined in section 4.2 along with the strategy for analysis and the respondent characteristics from the sample achieved. The survey was conducted in 12 schools across two counties, Hampshire and Surrey, in the south of England. The choice of locations used in the survey were largely due to convenience of surveying local schools as being able to travel to schools in person to recruit participants, as well as liaising with local tobacco control workers was paramount in negotiating access to sufficient samples. The design decisions are largely guided by the literature outlined in Chapter Three although where appropriate additional school-specific literature has been consulted to support the methodology described here.

4.1 Survey design

Chapters Two and Three illustrated that there is currently a gap in our understanding of co-use prevalence and that a hidden population of tobacco and cannabis co-users may be missed unless questions ask about co-consumption in sufficient detail (e.g. cannabis joint use) as tobacco use may be underreported among co-users who do not use tobacco cigarettes. Although this led to the collection of primary data (e.g. conducting an original survey) for the current work, it is important to create a survey that is close to those that are routinely administered in school settings so that it is easier to implement relevant questions in future population surveys and to make the task of interpreting results easier within the context of existing research. As such, the current study builds on an existing questionnaire which has been recently used in the south of England by a local smoking cessation organisation that replicates much of the content of the surveys reviewed earlier. As will be argued in the following section of this chapter, the support of local organisations in facilitating access to school participants is crucial to the success of gaining access to
prevalence data on young people’s co-use of cannabis and tobacco. Although the goal of the work was to study a random sample which is representative of the wider population of school-aged children, a number of issues surrounding the recruitment of schools and negotiating with adult gatekeepers rendered this approach impracticable for the current PhD research. As will be discussed in the final part of section 4.1, although schools were selected to represent the local population of school children, it was necessary to rely on a convenience sample to gather participants from schools which were willing to take part in the survey.

4.1.1 The questionnaire (studying cannabis and tobacco use)

The questionnaire used in the current study builds on a survey conducted in 2010 by Smoke Free Hampshire and Isle of Wight, an anti-tobacco alliance of local government, health service and armed forces organisations (Preece, 2011a). The original questionnaire aimed to establish the prevalence of tobacco smoking, clarify motivations for tobacco use and report patterns of alcohol and drug use to identify how these may relate to tobacco use (Preece, 2011b). There were 33 questions in the original survey and the tobacco questions assessed, among other things; prevalence of cigarette/tobacco smoking, access to tobacco, knowledge of harms, and intentions to quit. The alcohol questions asked about consumption patterns, access to drink and locations of drinking. There were also a limited number of questions on illicit drug use, capturing how often, if at all, participants used solvents, cannabis or other drugs. The Smoke Free group were expecting to run a follow up survey with this questionnaire in 2012/13 and this provided a valuable opportunity to conduct the current research with the support of a public health organisation.

There are limitations of using a ready-made survey and negotiating with the authors of the original survey, to decide which additional questions were appropriate. The original questionnaire had 33 questions and so any additional questions would add to an already large questionnaire. However, the benefits of working with and having support from an organisation to administer the survey is integral to successful recruitment of schools, particularly if these organisations have existing relationships with schools and are already in schools conducting survey research (Sturgis, Smith, & Hughes, 2006). Using the literature review in Chapter Two and the question review in Chapter Three, I proposed several new questions which reflected specific patterns of cannabis use (e.g. cannabis joint use), as well as questions surrounding the identification as a tobacco smoker and several risk factors of use. The final questionnaire schedule was reviewed by staff at Smoke Free Hampshire and Isle of Wight as well as piloted with a small group of school children in
one of the schools that had taken part in the 2010 Smoke Free survey. In this study the focus is on current behaviour, as discussed in section 3.1.1, as it may be difficult to identify concurrent use (i.e. in the same time period) of both tobacco and cannabis from measures of ‘ever-use’. Tobacco smoking was measured at several points in the survey using multiple questions (which are given in Box 4.1). A copy of the final questionnaire is available as Appendix C.

Box 4.1 - Tobacco use questioning

<table>
<thead>
<tr>
<th>Initial question (question 6 in the survey)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco has a few different names and is sometimes called <strong>baccy, ciggies, fags, rollies, roll-ups or smokes</strong>.</td>
</tr>
<tr>
<td>The next question is about your use of tobacco in either cigarettes or roll-ups.</td>
</tr>
<tr>
<td>Which sentence describes you best?</td>
</tr>
<tr>
<td>□ I have never smoked, not even a puff</td>
</tr>
<tr>
<td>□ I have tried smoking once or twice, but do not smoke now</td>
</tr>
<tr>
<td>□ I used to smoke, but don’t now</td>
</tr>
<tr>
<td>□ I smoke every now and then (less than one cigarette a week)</td>
</tr>
<tr>
<td>□ I often smoke (one or more cigarettes a week)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Follow up question (for current or ex-smokers) (question 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roughly how many cigarettes (including roll-ups) have you smoked in the last 7 days?</td>
</tr>
</tbody>
</table>

Smoking cannabis and tobacco at different times

As before, on the next few screens you will see different statements and you are asked to say whether the statement is true or false for you (or that you only smoke cannabis mixed with tobacco):

*I smoke cigarettes/roll-ups when I don’t have any cannabis left* (question 55)

*I smoke cigarettes/roll-ups when I am in a place where I cannot smoke cannabis* (question 56)

*I tend to smoke mainly cigarettes or roll-ups and just smoke cannabis occasionally* (question 57)

Participants who reported any kind of experience of tobacco use (current or ex-use) on the initial question were asked to report how many cigarettes they had smoked in the past seven days. Any participants who reported smoking one or more cigarettes in the follow up question but said they were not current smokers (e.g. if they did not select ‘I smoke every now and then’ or ‘I often smoke’) were reclassified as current smokers. In a third question addressing tobacco use, cannabis joint users were asked how often they smoked tobacco cigarettes at other times. This question was asked to anyone who reported cannabis joint use regardless of whether or not the participant had previously reported tobacco use to identify additional hidden smokers.

Cannabis use questioning is given in Box 4.2. Cannabis smoking was assessed initially with a question asking participants to identify with one of five statements regarding their
cannabis use. Those who reported any cannabis use (current or ex-use) were asked to indicate how often they currently used cannabis ‘without adding tobacco’ and then in a separate question ‘with tobacco’. Additional questioning was added on the perceived availability of cannabis, an extension of questioning in the original survey which asked about how easy participants thought it would be to get hold of tobacco in their local area.

**Box 4.2 - Cannabis use questioning**

<table>
<thead>
<tr>
<th>Initial question (question 42 in the survey)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabis has a few different names and is sometimes called <strong>weed, spliff, marijuana, hash, ganja, skunk</strong> or <strong>whacky baccy</strong>.</td>
</tr>
</tbody>
</table>

Which sentence describes you best about smoking cannabis?
- [ ] I have never smoked, not even a puff
- [ ] I have tried smoking once or twice, but do not smoke now
- [ ] I used to smoke, but don’t now
- [ ] I smoke every now and then (less than once a week)
- [ ] I often smoke (once or more a week)

**Follow up questions (for current or ex-smokers)**

<table>
<thead>
<tr>
<th>How often do you use cannabis in a joint/spliff or pipe/bucket on its own (WITHOUT ADDING TOBACCO)? (question 45)</th>
</tr>
</thead>
<tbody>
<tr>
<td>never □ occasionally □ regularly □</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How often do you use cannabis but not by smoking it (e.g. in food) (question 47)</th>
</tr>
</thead>
<tbody>
<tr>
<td>never □ occasionally □ regularly □</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How often do you use cannabis in a joint/spliff MIXED with tobacco (from a cigarette or roll-up) (question 48)</th>
</tr>
</thead>
<tbody>
<tr>
<td>never □ occasionally □ regularly □</td>
</tr>
</tbody>
</table>

Question 47 concerns use of cannabis but not by smoking it (e.g. when it is added to food preparations). As the thesis concerns the co-use of smoked cannabis and tobacco it was not included in the coding of participants as cannabis users.

Research on co-consumption (discussed in section 2.4) suggests a number of reasons why young people might mix cannabis and tobacco and also that tobacco may be used to substitute cannabis use in certain situations. As such, the questionnaire gave participants a series of statements, given in Box 4.3, and participants were asked to say whether each statement is true or false.
Box 4.3 - Cannabis joint use questioning

For those who mix cannabis and tobacco together
You told us that you have used cannabis and tobacco mixed together. The next few questions are about the reasons why you smoke cannabis and tobacco together.

You will see a number of different statements on the next few screens and you are asked to say whether each statement is true or false about you.

- I smoke cannabis and tobacco mixed together because it’s cheaper than smoking cannabis on its own (question 49)
- I smoke cannabis and tobacco mixed together because it burns smoother than smoking cannabis on its own (question 50)
- I smoke cannabis and tobacco mixed together because makes the cannabis last longer (question 51)
- I smoke cannabis and tobacco mixed together because cannabis is too strong on its own (question 52)
- I smoke cannabis and tobacco mixed together because smoking them together makes you ‘higher’ (question 53)

Participants were also able to add other reasons for mixing and substituting in a separate box but these were often close to the reasons provided in the statements and were recoded into one of options given in questions 49-53. Finally, questions used in assessing tobacco use (i.e. in the smoking status statements listed above or tobacco use in the past seven days) may not reflect whether a young person considers themselves to be a smoker. Thus, I explicitly asked ‘do you consider yourself to be a smoker?’ (question 6) so that I could examine self-identification against a number of tobacco and cannabis use behaviours.

To facilitate the rapid collection of data across multiple schools and to avoid any errors in entering the responses of paper surveys, the questions were asked online using the software Survey Monkey (Survey Monkey Inc, 2014). The piloting of the questionnaire identified that including too many questions, particularly on cannabis use, on the same screen could be confusing to participants in lower year groups, or those who did not use cannabis. Therefore, the layout of questionnaire was amended so that participants would only see one question at a time. Moreover, as the questions were to be presented on a computer screen, it was possible to show specific questions about cannabis use only to participants who reported using cannabis based on their responses to earlier questioning. If, for example, a pupil answered: ‘I have never used cannabis’ to the initial question regarding cannabis use, the survey would automatically skip the associated cannabis questions and route the pupil
to the next section of the questionnaire. This automatic routing was used for questioning on tobacco, alcohol, and cannabis. Piloting indicated that if participants answered all questions, the expected completion time was 15 minutes. Finally, the use of an on-line survey also meant that each survey could be easily tailored to the specific school taking part and information regarding local services for pupils (e.g. smoking cessation services and helplines), and details of specific support staff and teachers could be given in the debriefing information at the end of the survey. The provision of this information is important for conducting ethically sensitive research, as discussed in section 3.1.3.

4.1.2 The co-consumption outcome

As discussed in section 3.1.1, it is not useful to classify participants as co-consumers if they report ever using tobacco and ever using cannabis as these people may have simply experimented with one of the substances or switched between them and as such are not necessarily using both substances at the same time; rendering it difficult to unpick interactions between the two practices (tobacco cigarette use and cannabis use). In this thesis, therefore, we are concerned with identifying concurrent co-consumption behaviours and as such our co-consumers are defined as those who report occasional or regular tobacco cigarette use and those who occasionally or regularly smoke cannabis (with or without adding tobacco). A full breakdown of how this classification is achieved using the responses to multiple questions was given earlier in this chapter, in box 4.1 for tobacco use 4.2 for cannabis use respectively, although it is important here to emphasise that we are concerned with the consumption of these substances through smoking and not through other methods of consumption (e.g. through oral consumption).

Although the rationale for studying the specific link between tobacco and cannabis is clear from the literature reviewed earlier it is important to note the intricate relationship to other substances. Section 2.2 revealed that there is a well-established link between the use of one substance and the co-occurrence of others although the trajectory of substance use (which one comes first) has not been confirmed (see Degenhardt et al., 2010; Hall & Lynskey, 2005 and Olszewski et al., 2009). There has been a body of work that suggests that along with tobacco and cannabis use, alcohol consumption may contribute to a generalised risk of progression to sustained or harder drug use (e.g. Palmer et al., 2009). However, as this thesis considers the importance of cannabis and tobacco use in the smoked form and the practice of mixing tobacco and cannabis together in cigarette papers, the use of other substances were added to the model as confounders rather than added to the outcome variable. In particular alcohol use is measured in two questions that were used in the 2010
survey. The first asked pupils if they had ever had an alcoholic drink. The second asked how many times in the last four weeks the participant had been drunk. As the second question did not explicitly capture current alcohol use (as young people may drink alcohol but not perceive themselves to be drunk), both questions were included in the analysis as separate confounders with the second question considered to capture heavier drinking behaviours than the first.

The use of substances other than alcohol, tobacco and cannabis, was also measured in the 2010 survey using questioning that asks participants to say how often if at all they use solvents or other drugs such as ecstasy, speed or cocaine. Respondents could choose ‘never’, ‘occasionally (less than once a week)’ or ‘regularly (once a week or more). Participants were classified as current users of other drugs if they reported occasional or regular use of these substances. This section has described the substance use variables included in the school-survey study. In the next section, the contextual variables included in the modelling are described.

**4.1.3 Additional contextual variables**

The review presented in Chapter Two revealed a host of individual and contextual variables that may be important for the co-consumption of cannabis and tobacco. Furthermore, as discussed above, I devised a survey which enabled me to capture as many of the key risk factors within these clusters as possible. However, with the number of existing questions, it was not possible to add questioning for every risk factor identified and so careful consideration had to be given to which variables were most important to allow us to answer the research question. For example, family member and peer use of tobacco and cannabis is thought to influence the use of both of these substances among adolescents and the base questionnaire asked participants if the significant others (parents, siblings, best friends and boy/girlfriends) currently smoked tobacco. However, the questionnaire did not ask about whether these people also used cannabis and the decision was made not to add additional questioning here because previous literature (Li et al., 2002) has demonstrated that parental, sibling and peer tobacco smoking is related to both tobacco and cannabis use and as such it may be appropriate to simply ask about tobacco use among these significant others. Moreover, it was felt important to keep the questioning the same across the original survey and the new survey wherever possible. Another compromise was the lack of a self-reported ethnicity variable at the individual level. Ethnicity was not included in the original survey and, as the survey was already asking for date of birth and sex and a request for a postcode, it was decided that an additional
question on ethnicity may compromise overall response rates or response rates to some of these individual questions.

Data on the respondent’s area deprivation context can be determined using the Department of Community and Local Government’s 2010 English Indices of Multiple Deprivation (English IMD, McLennan, Barnes, Noble, Davies, & Garratt, 2011). The English IMD is a composite measure of deprivation capturing seven individual domains: income, employment, health and disability, education, skills and training, barriers to housing and services, the living environment and crime. Of particular interest for the current investigation is a subscale of the income domain, the Income Deprivation Affecting Children Index (IDACI), which represents the proportion of children aged 0-15 years, living in income deprived households (McLennan et al., 2011). The IDACI scores are provided at the level of lower layer super output area (hereafter LSOA). The scores were attached to the dataset for each participant based on their residential postcode, using an online tool for matching postcode geographies to LSOAs (GeoConvert, UK Data Service, 2013).

Another variable included in the analysis is the perception of the availability of substances in the local environment. In the original 2010 survey, participants were asked to say whether they thought it was easy or difficult for young people to buy cigarettes/tobacco from shops in their area. In the current questionnaire I extended the questioning to ask about access to tobacco/cigarettes from sources other than shops as well as access to cannabis in the local area. These variables could arguably relate to a higher level geography, whilst captured at the individual (perception) level, as they may be capturing something about the micro geography or environment surrounding the individual. However, the question is inherently ambiguous in that it does not specify what the area is; it could be the local shop at the end of the road, or the local neighbourhood or even a close-by town. In attempt to keep the questionnaire as close to the previous version as possible (to allow for comparison across the cohorts) it was not possible to elaborate on or

---

2 The questionnaire asked participants to type their postcode into a free text box. Some participants displayed confusion surrounding anonymity by writing comments such as ‘I thought this was an anonymous survey’.

3 LSOAs are geographical areas covering between 400 and 1,200 households (between 1,000 NS 3,000 individuals) and these are often used in the reporting of health statistics so as to describe characteristics of a localised population without compromising the identity of individual residents, which may be possible if postcode units are used.
operationalise what was meant from this question. Moreover, it has been suggested in the literature (e.g. Cummins et al., 2007) that demarcating areas as discretely bound spatial units that can be operationalised universally serves to ignore the inherent relational nature of an individual’s engagement with place that is unique to that individual and different to any other. What the spatial environment is in itself is not the primary concern of the measure but that it (an easily accessible source of tobacco or cannabis) is in the local geography of the individual is what is important here. As a result, the questions surrounding ease of access were added to the dataset as level 1 effect despite its connection to the participants’ context.

In addition to the above measure of area deprivation, I attached a number of variables relating to each school (prior to stripping school names from the dataset) using publicly available records published by the Department for Education (2013). The first two were indicator variables denoting whether the school had an above or below county average percentage of pupils with English not as a first language and whether the school had an above county average of pupils eligible for free school meals; measures used by Fuller and Hawkins (2014) in the SDD survey to denote school-level ethnicity and deprivation characteristics respectively. Suris et al (2007) suggested that co-consumers were more likely to be disengaged with and perform worse at school. School league tables also provide data on the type of school (academy, community or foundation school) to capture the diversification of schooling approaches, noted as important for school-based research (Bonell et al., 2012).

Schools were used as a level 2 variable to reduce the bias in estimation within the model and to allow for the natural clustering within the dataset (that individual pupils (level 1) in one school may be different to pupils in other schools. There were no other natural clusters in the dataset. One approach could be to cluster participants by class, although this was not possible in the current study because some schools surveyed participants opportunistically during break times and not in whole class settings (and the class of pupil was not recorded in the survey (for anonymity reasons, we thought postcode and age and school was sufficient to conduct the analysis and that it would not pose any threat (perceived threat) to participant anonymity). Alternatively we could have clustered schools at a higher geography (e.g. Local Authority or county) however as the next section will illustrate, there were too few schools taking part to reliably and robustly include these clusters in any modelling.
4.2 Data collection

The remainder of the chapter details the procedures for recruiting participants and preparing the responses for analysis. It shows that even with the support of external public health partners, there is great difficulty in achieving a large representative sample of school-aged participants.

4.2.1 Recruiting participants

Recruiting pupils to take part in the survey is precluded by the difficulty of convincing adult gate-keepers such as schools senior management to allow the survey to take place and this is notoriously challenging, even for large national population surveys. The national smoking, drinking and drug use survey series has reported that the number of schools agreeing to participate in the project declined every year between 2003 and 2011. Although there was an increased school response rate of 49% of the schools approached in 2012 (Fuller, 2013), this declined in 2013 to 44% (n = 174) of the schools invited to take part (Fuller & Hawkins, 2014). The Young Persons’ Attitudes and Behaviours Survey for Northern Ireland (Central Survey Unit, 2013) achieved a response rate of 42% among schools invited to take part. The Europe wide ESPAD survey in 2011 was offered to all UK secondary schools although the uptake was just 6% (Atkinson et al., 2012). This suggests that even large scale, national and international, well-resourced survey projects struggle to obtain high response rates across schools. It is often difficult to ascertain specific reasons schools have for not wishing to take part. Schools, for example, may not have the time or the inclination to answer communications from researchers. From those who did respond, reasons for not taking part reported from these studies include increasing demands on the school curriculum and the sheer number of requests to take part in surveys. Even when schools are willing to participate in a research project, the requirement of timetabling surveys to be completed within the school day and a host of other logistical issues make it difficult for a large number of schools to take part (Sturgis et al., 2006). Moreover, there may be apprehension from some schools to engage in activities which may potentially harm relations with parents (who may feel that if a school needs to conduct a survey then it might have a drug problem).

The Tellus4 survey (Chamberlain et al., 2010) outlined several strategies to improve response rates which included moving the survey from summer to autumn term, giving
schools and local authorities opportunities to add questions, providing feedback to schools and giving schools tools to analyse their own data. For this reason, schools that participated in the study were offered an individual report\textsuperscript{4} in addition to the overall report of the data analysis. These individual reports compared the school’s results, at year group level, with the aggregated results from other schools across the whole dataset (Hampshire, not at the local authority level). Each individual report was only available to the specific school in question and no other schools had access to these reports. In addition, this enabled me to highlight any high levels of substance use within particular schools; addressing the moral obligation to respond to reports of substance use outlined in section 3.1.3.

Despite the documentation of these difficulties, there is little literature to support researchers in approaching schools (Madge et al., 2012), particularly so for postgraduate and early career research projects where researchers have limited resources (see Tyler & Davies, 2013). In the 2013 article, I noted the challenges in reaching the appropriate staff within the organisation of a school, and framing the requests to get the highest response rate possible across two similar but independent research projects. For the remainder of this section, I focus solely on the decisions made for the current project.

At the outset of the project, it was decided to approach a representative sample of schools in the South East of England. However, in the three Unitary Authorities in Hampshire (Portsmouth, Southampton and Isle of Wight), separate health behaviour surveys were being implemented at the time of data collection and it was felt that pupils and schools in these areas could be burdened by over-surveying. As such, these schools were not asked to take part in this study. The initial strategy was to generate a sample of schools across Hampshire representing the least and most deprived schools in addition to surveying schools which took part in the 2010 survey. Residential deprivation from the Indices of Multiple Deprivation was chosen as an indicator because of its widespread use among researchers in population health (e.g.) and because of the availability of the measure at a small geographical level (LSOA). The school boundaries for Hampshire secondary schools, obtained from the county council authority, were used to identify which LSOAs were covered by each school. The population weighted centroid of the LSOA was used to determine which school it should be assigned to because catchment boundaries were not always coterminous. The boundaries showed mutually exclusive catchments which were

\textsuperscript{4} These largely descriptive reports were not part of the analysis for the thesis but instead formed a ‘goodwill’ gesture in return for the school agreeing to take part.
not verified with individual schools. As schools may take in pupils from outside of the
catchment in exceptional circumstances, the boundaries may not reflect all pupils that
attended the school. Three schools from each of the 11 local authorities within Hampshire
were targeted based on the average deprivation score for LSOAs in the catchment (the
school with the lowest average deprivation score and the two schools with the most
deprived school catchments were selected). In some local authorities the schools taking
part in the 2010 study also met the criteria described above but where this was not the case,
the three schools identified using the average deprivation score were invited to participate
in addition to the schools that had previously taken part. The total number of schools
initially approached was 35 and this represented half of the secondary schools in
Hampshire (n = 70).

Following several follow-up contacts from myself and from the Smoke Free Alliance team,
it was apparent that few schools were willing to take part from the initial selection of
schools. As a result, all secondary schools in Hampshire were invited to take part and later
all schools in Surrey were also invited to take part. The final sampling strategy, therefore,
was a non-probability, convenience sampling technique. Whilst this technique
disadvantages our ability to generalise results to wider populations of school-aged children,
it was not possible to replicate the stratification in sampling that is achieved in larger and
more representative surveys such as the Smoking Drinking, and Drug Use survey.

Two strategies were employed to encourage schools to engage with the survey used in this
thesis. Firstly, letters were sent to the Head Teachers as well as staff responsible for
citizenship or physical, social, health and economic education in each school to maximise
the likelihood of getting a response from schools. The letter (available as Appendix D) was
addressed from the University of Portsmouth and from representatives of the NHS Smoke
Free service and Hampshire County Council. Secondly, framing the research to explicitly
highlight the benefits of taking part was integral to achieving any success in recruiting.
Participating schools were offered confidential and anonymised reports of their pupils’
responses by year group and sex. It is imperative to assure confidentiality for the
facilitation of honest accounts of substance use from pupils, but it is also imperative to
make similar assurances to the schools, such that the school itself would remain
anonymous and taking part could not influence their public ‘image’. This is sometimes
problematic when there is a need to inform parents that the surveys are taking place, and
one school approached in the current survey declined to take part because they were
concerned with how parents of their pupils would react. For those schools that did accept
the invitation to take part, a template letter (available as Appendix E) was given to schools
to send to parents or guardians explaining the nature of the research and offering the opportunity for parents or guardians to voice their concerns and prevent their child from being approached to take part in the study. Permission was assumed unless parents responded and alerted the school staff to their refusal of permission.

I relied on individual schools to ensure delivery of letters, and management of responses from parents to withdraw their child from taking part. One of the major criticisms levelled at opt-out permission mechanisms is that it is not possible to confirm that letters reached parents (as would be the case with opt-in permission mechanisms). As such, we sought guidance from individual schools as to how to reduce the likelihood that letters would not reach parents and, in most cases, this entailed using the communication channels already established between school staff and parents for each school. E-mail systems, such as ‘parentmail’, are an alternative to sending paper letters home, and this is one way that the schools can ensure the content of the letters reaches the parents’ e-mail inbox. Some schools also had newsletters mailed out to parents on a weekly, fortnightly or monthly basis, or information was made available online on the school’s website. As such, if parents did miss the initial letter then they would find out about the survey in the newsletter which they would be expecting to receive if this was common practice for their child’s school. One school opted to use a text messaging system to inform parents that the survey was taking place and directed parents to a page on the school’s website where information on the survey could be found, including details of how to decline permission. Offering schools flexibility in how they informed parents was paramount in negotiating access to study participants for this study. Regardless of the mechanism used in individual schools for seeking parental permission, it was important to note that permission from parents (by lack of dissent) did not supersede dissent from participants, and it was made clear that the young people would not be expected to respond to the questionnaire unless they wanted to.

Even with a wider eligible population of 123 schools, it became clear that many of the invited schools were unable or were unwilling to take part due to other commitments or because of concerns about taking part in a survey of illicit substance use and the impact this would have on their public relations with parents. This was despite the anticipation of this barrier as discussed in Chapter Three. It appeared that the problem was not necessarily always convincing the schools of the worth of the study, but reaching the right members of staff to get a foot in the door; once a relationship had been built it was much easier to progress with recruitment. This section has discussed the process and challenges of
recruiting a sample for the school study and in the following section I discuss the characteristics of the final sample achieved.

4.2.2 Administering the questionnaire

Schools were asked to administer the surveys as and when opportunities arose in their timetabling. This usually resulted in asking a small number of pupils to complete the surveys each day during form tutor/registration time or in IT/computer-based lessons, although many schools were reluctant to utilise subject time. Schools were required to administer the surveys during the school day and use internet-enabled computers located on the school premises. Teachers or other school staff facilitated data collection and were present in the computer rooms but were asked not to position themselves near the computer screens of participants. As a result of the data collection being facilitated by school staff, there was no contact between myself and participants although my contact details were available on the participant information sheets and on the survey webpages. School staff were encouraged to forward any comments and questions on to me. At the beginning of each session, pupils were given information regarding the survey (Appendix F). The study details were presented in paper form and delivered verbally by the teacher/session leader. This ensured that pupils had the opportunity to ask questions and this facilitated a deeper understanding of the study than might have been possible by simply handing them a paper copy of the details. Pupils were then asked to sit at a computer if they were happy to take part. As schools were largely responsible for conducting the surveys it was important to create a checklist (Appendix G) for myself and for the schools detailing the stages of setting up the study in order to maintain transparency and consistency of the recruitment process for each school.

The website of the survey was preloaded on to the computers and on the first web page of the survey, pupils were asked to confirm that they understood what the survey was about and what the results would be used for. Pupils were only able to proceed to the questions if they agreed to take part. All questions in the survey were mandatory and participants could not progress onto the next question without giving a response to the present question, even if that response was one of the available options worded as ‘I don’t want to say’. For parental, sibling and peer tobacco smoking, participants were given the opportunity to decline giving an answer. At the end of the survey, participants were thanked for taking part and were given the details of resources and services to use if they wanted to discuss any of the topics further or to get help stopping smoking. The questionnaire responses were held on a secure server and collated into an overall master dataset for analysis. Authorised
staff members from partnering Smoke Free organisations were also given access to the anonymised data file (with postcode data aggregated to lower level super output area code and stripped from the data set – see section 4.2.1 for a discussion of these data items) for use in activities related to preventing smoking among young people. Although NHS Smoke Free and trading standards agencies had access to school names for purposes related to intelligence gathering, reporting permissions were set so that no information that could lead to the identification of schools or individual pupils would be reported in the public domain.

4.2.3 Data analysis

The next section addresses the strategy for analysing the survey responses as well as the selection of contextual variables to link to the dataset. It should be noted here that the recruitment issues and missing values outlined above prohibited the development of a methodologically robust and comprehensive analysis that could have been achieved with a stronger sample.

A descriptive analysis using IBM SPSS Version 22.0 (IBM Corp., 2013) was employed to delineate co-use patterns. Following this, the analysis turns to investigate the different individual and contextual associations of three groups of young people based on their cannabis and tobacco use; co-consumers of tobacco and cannabis, tobacco-only consumers and non-smokers. I use a multinomial logistic regression modelling approach to investigate the individual and contextual risk factors associated with these groups of cannabis and tobacco smokers. The multinomial logistic model is an extension of a binary logistic regression but predicts the odds of an individual being either a tobacco only user (compared to a non-user) or a co-consumer (again compared to a non-user) within the same model (Field, Miles, & Field, 2012). The dataset included a denominator for identifying which of the 12 schools a participant attended and so I use this variable to create a multilevel model to control for the hierarchical structure of participants who came from the same school, specifying the school as a second level in a multilevel model (Snijders & Bosker, 2012). It is necessary to consider whether there are enough higher level classes to generate sufficient power to be achieved within a multilevel analysis although the criteria, or more appropriately rules of thumb, are complex (Moerbeck, Van Breukelen, & Berger, 2008). Generally, the more schools included, the more confident we can be that there is sufficient power to draw conclusions from the results about the wider population. With only 12 schools, any multilevel modelling results should be interpreted with caution. The multinomial multilevel logistic regression model was computed within the specialist
software MlwiN v2.30 (Rasbash, Charlton, Browne, Healy, & Cameron, 2014), following steps outlined by Rasbash et al. (2014) for using multinomial logistic models for unordered categorical responses.

4.2.4 Respondent characteristics, missing data and dealing with inconsistencies

A total of 5,676 individuals provided a return for the school survey. These individuals were drawn from 12 schools who agreed to participate and who returned results during the study period; representing 10% of the schools invited to take part. A small number of education centres and sixth form pupils were also approached but the response rate across these centres was so low (16 participants from three centres) that these respondents were not included in the data analysis. Whilst the whole of the student body within each school was eligible and invited to take part in the survey, five schools decided to sample either two or three year groups or other subgroups within the school. In other cases, pupils were surveyed opportunistically. This meant that recording response rates based on the total student body of the school was not always appropriate and for this reason are not presented.

Of the cases downloaded, 228 (4%) did not contain any responses and these were dropped from the dataset. Cases were also excluded from the dataset where data was missing for either cannabis or tobacco use. The first tobacco status question was answered by 5,401 participants (47 cases were missing for this variable). For cannabis use, a total of 896 participants (16.4% of cases with at least some valid data) did not answer the initial cannabis smoking status question. Therefore, the final dataset for analysing co-use behaviours is based on the effective sample (hereafter termed ‘sample’) of 4,552 cases.

For some questions the level of non-response was relatively high. This was particularly so for the request for valid postcode of residence. This was unavailable for 27.9% \((n =1,272)\) of participants and therefore the area deprivation score (IDACI) could not be attached to these responses. It is important to note that from the cases where postcode, and therefore deprivation data was available, the pupils sampled are predominantly residing in less income deprived areas. This may, however, reflect that those in more deprived areas may be unwilling or unable to give their postcode. The percentage of children in an area
residing in income deprived households was 11.9% overall in the current dataset and this is much lower than the percentage for all LSOAs in England (20.4%)\(^5\).

Graham (2009) suggests investigating any variable with more than 5% of cases missing and exploring any patterning among those who answered the question compared to those who did not. As the proportion of missing postcodes was much higher than the 5% threshold, an analysis of patterning was undertaken. There was statistically significant patterning for the missing postcode data when compared to the respondent’s sex \((\chi^2 = 7.872, p = .005)\), with more boys \((n = 674, 29.8\%)\) not reporting data compared to girls \((n = 598, 26.1\%)\). Significant differences in non-response were also found for year group \((\chi^2 = 17.75, p < .01)\) with 27.3% \((n = 194)\) of year 7 participants not providing complete data, 28.7% \((n = 213)\) in year 8, 22.6% \((n = 212)\) of those in year 9, 28.9% \((n = 332)\) of year 10s and finally 31.6% of year 11 pupils failed to return a postcode \((n = 320)\). Rates of postcode reporting were also significantly different across schools \((\chi^2 = 751.697, p < .001)\). Whilst one school had around 6.1% \((n = 45)\) missing postcode data, three schools had at least 50% missing data for postcode with the highest at 61.3% \((n = 269)\). From an analysis of the missing cases, it appeared that the postcode data was not missing at random and this should be taken into consideration when interpreting results.

Some authors have demonstrated the acceptability of using statistical modelling such as multiple imputation as a way of predicting large proportions of missing values but this technique relies on the presence of other ecological variables in the dataset that may be associated with deprivation to facilitate the approach (e.g. Levin et al., 2014). However, there were no ecological variables attached to the individual in the current dataset (e.g. proportions of pupils eligible for free school meals and proportion of pupils with English not as a first language are associated with the school identification number rather than the respondent) and so it was considered inappropriate to use multiple-imputations for the missing IDACI data. Instead, missing values were coded as a separate category within the deprivation variable and included as a dummy variable in the modelling. This allowed examination of any potential association between co-consumption and failing to provide valid postcode data.

\(^5\) According to the IMD 2010 data (available at http://data.gov.uk/dataset/index-of-multiple-deprivation) Hampshire and Surrey rank 11\(^{th}\) and 3\(^{rd}\) (respectively) least deprived (overall) counties in England (out of 149 counties).
Finally, inconsistency, (i.e. respondents providing contradictory answers) is a common feature of multi-item self-reporting of substance use. Researchers have to decide whether to drop inconsistent cases, which subsequently reduces the sample size, or deal with the responses in some other way. Excluding inconsistent cases may bias results and underestimate the true prevalence of smoking (Bauer & Johnson, 2000; Lam, Rolle, Shin, & Ah, 2013). As I wanted to keep as many cases as possible, the decision was made to include all inconsistent cases although this raises the question of which response (e.g. smoker or non-smoker) to treat as the true response in analyses. Options for dealing with inconsistent responses include; treating each response as the truth within separate analyses, treating the first response as the truth and subsequent responses as missing, or evaluating inconsistent response cases and identifying the most appropriate response within the inconsistencies. Amending inconsistent data is a practice that has been adopted in the major surveys such as the ESPAD (Hibell et al., 2012) as well as the UK’s own SDD survey (Fuller, 2013) and is a reasonable decision to improve data quality so long as the process of data editing is made transparent.

In the current study I manually screened the dataset, looking at patterns of unexpected responses to identify inconsistent and potentially fabricated responses. For example, in the preliminary analysis it became apparent that an unexpectedly high number of 11 year olds were reporting frequent and heavy tobacco use. On closer inspection many of these participants reported that they were in year 11 as well as being age 11. For most cases the inconsistencies were resolved using either the timestamp of the response\(^6\) or the date of birth provided by the participant to verify their age. However, it was not possible to validate all cases and so some fabricated cases may remain in the dataset.

**4.3 Conclusion**

Chapter Four began by discussing the survey questions that support the identification of co-consumption prevalence. The core survey is from a previously used survey on young people’s tobacco and other substance use in the local area and was adapted to include new questions on co-use following the review of the literature in Chapters Two and Three. Section 4.1.2 outlined the co-consumption outcome, including the study of substances

\(^6\) It was possible to resolve anomalies by looking at other cases from the school who responded within the same time period. However, not all participants took part in groups and one school did not ask the date of birth question and 12 participants from other schools provided a date of birth that was invalid.
other than tobacco and cannabis. Section 4.1.3 outlined the selection of additional variables to link to the data set. These included indicators on ethnicity, deprivation and school characteristics that were not possible to assess within the questionnaire itself.

Section 4.2 illustrated the difficulty in achieving high response rates from secondary schools invited to take part and the strategies employed to encourage participation. These included providing schools with individualised confidential reports of the prevalence of substance use in their school, offering flexibility in the administration of surveys, offering schools the opportunity to add their own questions and framing the invitations to highlight the benefits of taking part. Schools who agreed to take part administered the surveys themselves, from sending out letters to allocating time for pupils to complete the survey.

The online survey gave flexibility to schools to administer the survey at a convenient point of the school time-table and it was also possible to customise each survey to include additional questions that were relevant to their own agendas and information about contact details of services specific to each school or local area. The online data collection also meant that I did not need to be present during the data collection and so a wider geographical reach of schools was possible within a short period of time although overseeing the data collection was important to ensure that all schools followed the same procedure in administering the survey. Survey responses were held on a secure online server and were downloaded at the end of an agreed time period. Next, a modelling strategy was discussed to reveal the individual and contextual covariates associated with tobacco and cannabis (co)use and finally, participant characteristics and the preparation of data ready for analysis was discussed in section 4.2.4.
Chapter Five:
Narratives of co-consumption practices from a youth club interview study

In this methods chapter I outline the qualitative study of the project; a semi-structured interview case-study in two youth clubs. The objective of this study was to unpack young people’s narratives of co-consumption; exploring the perspectives of young people in relation to making decisions about tobacco and cannabis use and their experiences of using these substances. The interview method, as opposed to self-report surveys, allows the researcher to capture the unexpected and to elicit more elaborate and nuanced responses to questioning which can be missed in surveys (Scott, 2000). In particular, the data garnered in this study was expected to shed light on the differences and similarities between cannabis and tobacco use as well as their combined use and answer research questions two (How do belief systems surrounding the relationship between tobacco and cannabis influence their co-use?), three (How are smoking identities negotiated in relation to tobacco-for-cigarettes and tobacco-for-cannabis use?), and four (How do cannabis consumption practices interact with and contribute to tobacco consumption practices?). In this chapter I outline the development of the topic guide, recruiting participants, conducting the interviews, and analysing the data.

5.1 Data collection

In this study I utilised semi-structured interviewing; a conversational interview method, in which the researcher usually prepares some questions around key themes that are believed to be essential to ensure that there is sufficient data to answer the research questions (Longhurst, 2010) but largely the direction and content of the interview can be flexible in exploring what is important to participants. The next section outlines the preparation of a loose topic schedule to guide the interviews as well as issues with recruiting young people to the study and concerns surrounding informed consent.

5.1.1 The interviews

The literature reviewed in Chapter Two highlighted the dearth of research in several key areas related to co-consumption explicitly, but also more subtly with links to co-use coming out of narratives of using each substance. The key themes identified in Chapter Two (section 2.6) formed the basis of the topic schedule for the interviews and this is given in full as Appendix H. Participants did not have to have experience of tobacco or cannabis use to take part in the interviews and in cases where the young people did not have
experience, or did not want to talk about their own experiences, they were asked to think about times when they were around other people who were smoking either substance.

The relationship between cannabis and tobacco, and the contribution that each substance makes to their combined use, is a fairly complex topic to unpick and is perhaps something that participants have not considered before. As such, I wanted participants to consider the substances separately to begin with and over the course of the interview develop a focus on how experiences overlapped. Indeed, I began the interviews by establishing a base of what the young people knew about tobacco and cannabis, considering what each substance was as well as health implications and the legality of getting hold of and using tobacco and cannabis. I particularly focused on the sources of information that young people had for these beliefs; what was trusted and where they would go if they wanted more information.

If participants said they had experience of tobacco or cannabis, they were asked to describe that experience; for example, when they started and how often they smoked. The next key theme was the types of smoking identities and here I wanted to explore what it meant to be a social, regular, heavy or other type of smoker and if there were similar distinctions of types of cannabis smokers. The next prominent component of the topic guide explored the places where young people encountered cannabis and tobacco. I often began this line of questioning by asking participants to think about where tobacco use (and later in the interview, cannabis use) was accepted and where it was not allowed. I also asked about interactions with others, both peers and adults (including parents and strangers), and here I asked whether young people needed to behave (with regards to their smoking) differently around different people. I then asked about young people’s access to the substances, including where they (or other young people) usually obtained their tobacco and cannabis, the number of sources they had and experiences of trying to obtain cannabis and tobacco that were successful and unsuccessful.

Throughout the interviews I asked participants to compare tobacco and cannabis and to elaborate on why they thought that there were differences or similarities between the two substances. These comparisons allowed me to draw insights about co-consumption that emerged from narratives of each substance in a nuanced way and also allowed the interview to build up to a focus on the explicit issue of co-consumption once participants were more at ease with the interview and in the flow of discussion. I began this section by asking about the use of cannabis joints (i.e. adding tobacco to cannabis). I asked if there were any particular reasons for mixing the substances and if there were any consequences, drawing on participant’s earlier responses about health harms, of using the two substances
together. I asked if participants had considered the link between cannabis and tobacco and whether they agreed with the statement that one substance leads to the other and vice versa. Finally, I asked participants to consider the implications of trying to stop smoking tobacco and/or cannabis. This question was often posed in an abstract way (i.e. do you think it would be difficult for someone to stop one without the other), rather than asking participants to describe their own cessation attempts because many of the participants had limited experiences of stopping smoking.

The majority of the interviews were conducted with young people in pairs or in threes. Conducting research where participants interact with other participants in their discussions raises unique challenges for the researcher in managing the interviews. The use of paired interviews, as discussed in Chapter Three (section 3.1.2), has been advocated as a useful tool in eliciting honest experiences of smoking and drug use. Interviewing groups of participants may entice discussions around shared experiences and this also adds a further layer to the analysis whereby the researcher can consider how narratives evolve as multiple participants contribute to discussions (Conradson, 2005). Being interviewed with others also encourages quieter or more despondent participants to share their opinions and experiences (Kitzinger, 1994) particularly as the pairs or groups are self-selected by the young people. The multi-person nature of the interviews also allows for dialogues between participants that encourage theorising about practices they have little experience of. Finally, affording participants the volition to choose how they take part, and make decisions as active participants operates as a way for the researcher to share power with the participant (Christensen, 2004; Kirby, 2004; Mack, Giarelli, & Bernhardt, 2009). Active participation may also encourage positive outcomes of the interview experience such as increased confidence, self-efficacy, a feeling of their opinion being worth something and a feeling of being listened to (Shaw, Brady, & Davey, 2011). Participants chose whether to take part in an interview, or over a series of interviews, on a one-to-one basis or with small groups of young people.

### 5.1.2 Recruiting young people

Participants for this study were recruited from youth clubs, rather than schools, although all of the young people were also attending schools. The use of youth clubs as a source of participants is primarily because taking part in an interview, with the topics outlined above, involves the discussion of sensitive and personal experiences and I wanted to make sure that I had a good rapport with the young people so that participants would feel comfortable in disclosing these experiences. The school environment, and the requirements of the
curriculum, is not conducive for a researcher to spend unstructured time slowly getting to know the young people, becoming a familiar face and building the necessary rapport with them. Furthermore, attending school is a compulsory activity and so there may be more of an implied requirement for the young people to agree to take part (e.g. that they need to say yes) whereas young people often use youth club facilities voluntarily and they may feel more volition in saying yes or no (Highet, 2003b; McCormick et al., 1999). This does mean that the pool of participants from youth club settings is likely to consist of those who are engaged in their youth club, and who publically socialise with their peers, rather than those who spend their leisure time in private settings with perhaps one or two others that were disengaged from the communities that used the youth club. However, it is these socialisations within the communities that I am interested in so it is a necessary compromise to recruit participants from youth clubs.

Access to youth clubs was facilitated initially through a call for participants forwarded by staff at Hampshire County Council to the youth support service managers in all eight of the Hampshire local authorities. From the initial call for participants, two youth clubs came forward. As both of these clubs operated on more than one night per week, I anticipated reaching a sufficient number of young people to conduct in-depth interviews with. The first youth club served the same groups of young people across multiple sites and was located in a semi-rural town in the north of Hampshire. The second youth club two was located in the south Hampshire conurbation area and operates primarily from a building located at the edge of a school site. This club operates a themed session on health and wellbeing and provided the majority of participants through these sessions. Both clubs provided materials, as part of their services, on tobacco and drug use so it is possible that these young people, compared to the general population, were more knowledgeable of tobacco and cannabis harms. After discussing the project with the youth club leaders in each club I arranged to start attending the weekly sessions as an observer (three nights and one afternoon session per week across the two clubs).

The recruitment phase for the participants has some similarities with ethnographic techniques in which the researcher immerses his/herself in the environments that the study population inhabit (Hammersley & Atkinson, 2007) although I was in these environments for only a relatively short period of time (12 weeks). Leyshon (2002) documents the process of adopting a hybrid identity of researcher and volunteer when approaching young people for his community based research in the South of England. For Leyshon it was necessary for him to interact with, rather than passively observe, the young people and in
the current works I had to take on a similar role, although I was always accompanied by certified youth workers.

My positionality as an adult in this setting meant that the young attendees sometimes looked to me for approval (e.g. asking for permission to go into a particular room or to do a particular activity). However, it was important to maintain my presence as a researcher so that I was not mistaken for a volunteer youth worker and whenever people asked me who I was, I explained that I was there to do some research and conduct interviews. In practice, I had to retain an acute awareness of the barriers between youth worker and researcher, particularly during turbulent and eventful times; when the youth clubs on occasion became chaotic, mostly due to verbal arguments with the occasional physical escalation. Largely though, my role during the recruitment and rapport building stage was reduced to playing sports, making tea and providing food; which proved instrumental in gaining trust and rapport with these young people.

Once I became settled in the youth clubs, and young people no longer asked who I was, I approached potential participants to take part in the study. I worked closely with the youth club workers who often had in mind people that they thought would be perfect for the interviews but I was resistant to approaching just the people who were perceived as the type who used tobacco or cannabis and I ensured that I was attending the club long enough to enable any young person who wanted to take part to do so. There is potentially less contact with parents in youth clubs than is the case in school environments, and it became clear that obtaining parental/guardian permission would be impracticable as the club operated on a drop in basis and there were few structured communication platforms between staff and parents of those young people who attended. It became apparent that the young people made use of these services as they pleased, and they did not always wish to inform their parents that they spent time within the clubs. Indeed, the drop in and out nature of the youth club environment facilitates a location of empowerment for young people as they control, within reason, their own experience and they are not compelled to attend like they are for school education. The requirement to seek parental permission may undermine the empowerment of volition that young people might expect in these settings.

As a result, I sought a waiver of the requirement to seek parental permission from the ethics committee that originally reviewed the project. A position paper by the Society of Adolescent Medicine (Santelli et al., 2003) advocates that ethics committees can waive the requirement to seek parental permission so long as the waiver will not adversely affect rights and welfare of participants, if the research could not be carried out practicably
without the waiver and, where appropriate, additional information is provided to participants after they have taken part (Santelli et al., 2003). It is important to consider that when a waiver of parental permission is granted on the basis that a child can demonstrate competency, someone is responsible for assessing this competency. The expertise of the researcher does not necessarily confer the qualification to assess the competency of a subject about to participate in their research. There is also inevitable concern for bias or impartiality in giving the decision of whether a child has capacity to the researcher, who may be motivated to achieve the highest sample rate possible.

This is an important consideration for this part of the research, to ensure that participation in research is not coerced by any single party with a vested interest in achieving a high sample; the young person must be fully aware of their right to participate and to say no in conjunction with permission given by a responsible adult. The literature indicates the worth of involving teaching staff and certified youth workers who have experience engaging with the young people in question (Donaghy et al., 2013; Esbensen et al., 1999; Testa & Coleman, 2006) in the process of assessing the competencies of potential participants.

The staff at the youth club worked ‘in loco parentis’ to establish when a young person could demonstrate the capacity to give informed consent and I adopted a developmental approach to assessing the suitability and capacity of participants to take part. By asking hypothetical questions (e.g. “what do you plan to do when you are older?”) during conversation it was possible to make a judgement informally about an adolescent’s level of cognitive development and the capacity of the participant to give informed consent (Berkowitz, 2005). The breadth in ages within the target sample (11 to 19 years) meant that participants may have different understandings of the phenomena of cannabis and tobacco use, as well as the requirements of taking part in interview research. It is advocated within this wider research project that so long as the information provided to the participant is understood and that they can comprehend the consequences of taking part then they have the capacity to offer voluntary informed consent. When the youth leaders and I were satisfied that comprehension of the research was achievable, I gave potential participants a paper copy of the study information (Appendix I) and discussed the study with them. I encouraged them to consider carefully whether they wanted to involve their parents in the decision to take part in the study and I prepared a letter (Appendix J) for them to take to their parents or guardians. Very few decided to do this (three of the fifty-one participants) and the majority wanted to take part there and then.
As outlined in Chapter Three, ensuring confidentiality is integral to enticing participants to give frank and honest disclosures. If participants are given to believe that any disclosure will result in parents, teachers or police being told, then there is likely to be very little ‘data’ to work from. For this reason, and in line with Highet’s (2003a) methodological guidance, I explained to participants before the interviews that they could discuss anything they wanted to and that I did not have any legal obligation to, nor would I, report any illicit behaviour such as drug taking or drug dealing. For one-to-one interviews, this was easy to manage although herein lies a potential challenge when conducting interviews with more than one participant. I explained the importance of confidentiality and asked participants to agree not to share any disclosures that other participants make during the interview, outside of the interview setting. In order to further cement the importance of this, at the beginning of the interviews the group (including myself) discussed a list of ground rules for the interviews (Appendix K) and participants were able to add any rules they wanted to for their group. The ground rules also allowed me to pre-emptively address common issues in group interviews such as participants talking over each other and quieter participants not being given the chance to speak (Conradson, 2005; Millward, 2012). I asked participants to agree that only one person could speak at a time and that everyone gets the chance to speak. The rules also stated that participants only had to say what they wanted to and what is said in the room should stay in the room and not be shared with others.

Finally, it was felt that if participants were presented with a paper consent form and were required to write and sign their name then they may become suspicious that what they said would be traced back to them. As discussed in Chapter Three, this may lead to participants becoming distressed or withdrawn and may reduce their readiness to disclose information. The interviews were to be audio recorded and later transcribed and as such, participants were asked to give consent to taking part in the study at the beginning of the audio recording instead of signing a paper-based consent form. An advantage of the audio consent approach was that it eliminated any paper trail that could potentially identify participants; making participants further assured that anonymity was achievable.

5.1.3 Youth club sites – participants

A total of 51 young people aged 12-19 took part in semi-structured interviews in two youth club settings (identified as YC1 and YC2 respectively in tables). There was no pre-determined sample size goal for this study and the depth of data that can be garnered from a single interview meant that recruitment continued until myself and my supervisors were
satisfied that we had reached a saturation point whereby no new material was emerging from the interviews rather than when I had conducted a specific number of interviews.

The demographic information of participants is given in Table 5.1. Participant’s names were replaced with pseudonyms and these also reflect group membership; that is, all members of the same group have a pseudonym which starts with the same letter of the alphabet. For example, participants Adam, Aiden, Ash, and Andy all took part in the interview together. These pseudonyms are presented alongside the extracts in the results (in chapters 7, 8 and 9) to help the reader distinguish between the narratives of different participants and to link extracts from the same participants across the topics. I also noted participants’ age and sex in order to contextualise responses and to make sense of the narratives during analysis although these characteristics are not presented in the results section because making comparisons based on sex and age may be misleading because of the small number of participants and further it is not useful for the current, exploratory, work. Moreover, just one participant was aged 19 and one was twelve and so with only two youth clubs taking part, it may be possible for readers to identify these participants. To ensure that this was not possible, the participants aged 12 and 13, and 16-19 were grouped together.

Over half of the participants (n = 31) said they had some experience of tobacco use, and 17 reported some kind of cannabis use. Four cannabis users said they never smoked tobacco cigarettes but the rest had experience of using tobacco cigarettes and cannabis joints. There were 22 sets of participants and the majority of interviews were with pairs (n = 12) and three-member groups (n = 7). Only two of the interviews were conducted one-to-one, and there was just one group of four. I conducted the interviews on the youth club sites during their regular opening hours and used side rooms within the youth club buildings. Conradson (2005) outlines the importance of selecting an appropriate venue and anticipating potential interruptions and barriers to conducting interviews particularly when using audio recording devices.

For practical and safety reasons, the group leaders knew who was taking part in the research and staff members were present in the venue and had clear views into the interview room. On three occasions, the interview rooms were unavailable and so an alternative location was used. The alternative space was a larger communal area and as such, a member of staff was positioned near the entrance of the room to ensure the safety of participants and myself as well as to ensure that no other young people entered the area whilst interviews were taking place. I underestimated the potential for noise and
interruptions from other young people who were always very keen to know what was going on when I was conducting my interviews. Having support from the youth club staff was invaluable in this regard. The staff member was asked to complete other tasks and asked not to disclose anything outside of the room. In these cases participants were asked if they were happy to take part knowing that this was the case and if not, the interviews would have been postponed. All the young people in these instances were happy to continue. All but two of the interviews were completed in one sitting, with two paired interviews taking part over two consecutive weeks because we ran out of time in the first interview. The average length of interview was just under half an hour although one interview lasted 10 minutes and another lasted just over an hour. The endpoint of my data collection was pre-determined as an agreed cut-off point with the youth club staff that gave me plenty of time to engage with any young people that were interested in taking part.
Table 5.1 Youth club participant demographic information

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Age</th>
<th>Gender</th>
<th>Smoking status</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adam</td>
<td>16-19</td>
<td>Male</td>
<td>Co-user (uses joints and cigarettes)</td>
<td>YC1001</td>
</tr>
<tr>
<td>Aiden</td>
<td>15</td>
<td>Male</td>
<td>Co-user (uses joints and cigarettes)</td>
<td></td>
</tr>
<tr>
<td>Andy</td>
<td>16-19</td>
<td>Male</td>
<td>Joints only</td>
<td></td>
</tr>
<tr>
<td>Ash</td>
<td>16-19</td>
<td>Male</td>
<td>Co-user (uses joints and cigarettes)</td>
<td></td>
</tr>
<tr>
<td>Ben</td>
<td>12-13</td>
<td>Male</td>
<td>Never used either substance</td>
<td>YC1002</td>
</tr>
<tr>
<td>Bradley</td>
<td>12-13</td>
<td>Male</td>
<td>Never used either substance</td>
<td></td>
</tr>
<tr>
<td>Buster</td>
<td>12-13</td>
<td>Male</td>
<td>Never used either substance</td>
<td></td>
</tr>
<tr>
<td>Caiden</td>
<td>16-19</td>
<td>Male</td>
<td>Co-user (uses joints and cigarettes)</td>
<td>YC1003</td>
</tr>
<tr>
<td>Callum</td>
<td>16-19</td>
<td>Male</td>
<td>Co-user (uses joints and cigarettes)</td>
<td></td>
</tr>
<tr>
<td>Doug</td>
<td>15</td>
<td>Male</td>
<td>Never used either substance</td>
<td>YC1004</td>
</tr>
<tr>
<td>Ed</td>
<td>12-13</td>
<td>Male</td>
<td>Co-user (uses joints and cigarettes)</td>
<td>YC1005</td>
</tr>
<tr>
<td>Elliot</td>
<td>16-19</td>
<td>Male</td>
<td>Co-user (uses joints and cigarettes)</td>
<td></td>
</tr>
<tr>
<td>Ethan</td>
<td>16-19</td>
<td>Male</td>
<td>Co-user (uses joints and cigarettes)</td>
<td></td>
</tr>
<tr>
<td>Faith</td>
<td>14</td>
<td>Female</td>
<td>Cigarettes only</td>
<td>YC2001</td>
</tr>
<tr>
<td>Frankie</td>
<td>14</td>
<td>Female</td>
<td>Cigarettes only</td>
<td></td>
</tr>
<tr>
<td>Gemma</td>
<td>16-19</td>
<td>Female</td>
<td>Co-user (uses joints and cigarettes)</td>
<td>YC2002</td>
</tr>
<tr>
<td>Georgie</td>
<td>16-19</td>
<td>Female</td>
<td>Co-user (uses joints and cigarettes)</td>
<td></td>
</tr>
<tr>
<td>Harry</td>
<td>12-13</td>
<td>Male</td>
<td>Never used either substance</td>
<td>YC2003</td>
</tr>
<tr>
<td>Hugo</td>
<td>15</td>
<td>Male</td>
<td>Cigarettes only</td>
<td>YC1006</td>
</tr>
<tr>
<td>Imogen</td>
<td>15</td>
<td>Female</td>
<td>Cigarettes only</td>
<td></td>
</tr>
<tr>
<td>Izzy</td>
<td>15</td>
<td>Female</td>
<td>Cigarettes only</td>
<td></td>
</tr>
<tr>
<td>Jack</td>
<td>15</td>
<td>Male</td>
<td>Ex-tobacco user</td>
<td>YC1007</td>
</tr>
<tr>
<td>John</td>
<td>15</td>
<td>Male</td>
<td>Never used either substance</td>
<td>YC1008</td>
</tr>
<tr>
<td>Kat</td>
<td>14</td>
<td>Female</td>
<td>Never used either substance</td>
<td></td>
</tr>
<tr>
<td>Kevin</td>
<td>16-19</td>
<td>Male</td>
<td>Tried tobacco</td>
<td>YC1009</td>
</tr>
<tr>
<td>Kim</td>
<td>14</td>
<td>Female</td>
<td>Never used either substance</td>
<td></td>
</tr>
<tr>
<td>Liam</td>
<td>14</td>
<td>Male</td>
<td>Never used either substance</td>
<td></td>
</tr>
<tr>
<td>Luke</td>
<td>15</td>
<td>Male</td>
<td>Tried tobacco</td>
<td>YC1010</td>
</tr>
<tr>
<td>Max</td>
<td>16-19</td>
<td>Male</td>
<td>Tried tobacco</td>
<td></td>
</tr>
<tr>
<td>Mike</td>
<td>15</td>
<td>Male</td>
<td>Cigarettes only</td>
<td>YC1011</td>
</tr>
<tr>
<td>Nathan</td>
<td>15</td>
<td>Male</td>
<td>Never used either substance</td>
<td></td>
</tr>
<tr>
<td>Neil</td>
<td>15</td>
<td>Male</td>
<td>Never used either substance</td>
<td></td>
</tr>
<tr>
<td>Neville</td>
<td>15</td>
<td>Male</td>
<td>Never used either substance</td>
<td></td>
</tr>
<tr>
<td>Ola</td>
<td>16-19</td>
<td>Female</td>
<td>Cigarettes only</td>
<td>YC1012</td>
</tr>
<tr>
<td>Olive</td>
<td>16-19</td>
<td>Female</td>
<td>Cigarettes only</td>
<td></td>
</tr>
<tr>
<td>Oona</td>
<td>16-19</td>
<td>Female</td>
<td>Cigarettes only</td>
<td></td>
</tr>
<tr>
<td>Pete</td>
<td>14</td>
<td>Male</td>
<td>Ex-tobacco user</td>
<td>YC2004</td>
</tr>
<tr>
<td>Polly</td>
<td>14</td>
<td>Female</td>
<td>Tried tobacco</td>
<td></td>
</tr>
<tr>
<td>Queenie</td>
<td>15</td>
<td>Female</td>
<td>Never used either substance</td>
<td>YC2005</td>
</tr>
<tr>
<td>Quinn</td>
<td>15</td>
<td>Female</td>
<td>Never used either substance</td>
<td></td>
</tr>
<tr>
<td>Rhys</td>
<td>15</td>
<td>Male</td>
<td>Co-user (uses joints and cigarettes)</td>
<td>YC1013</td>
</tr>
<tr>
<td>Ricky</td>
<td>15</td>
<td>Male</td>
<td>Co-user (uses joints and cigarettes)</td>
<td></td>
</tr>
<tr>
<td>Rory</td>
<td>16-19</td>
<td>Male</td>
<td>Co-user (uses joints and cigarettes)</td>
<td></td>
</tr>
<tr>
<td>Steve</td>
<td>16-19</td>
<td>Male</td>
<td>Co-user (uses joints and cigarettes)</td>
<td>YC2007</td>
</tr>
<tr>
<td>Tammy</td>
<td>12-13</td>
<td>Female</td>
<td>Never used either substance</td>
<td>YC2008</td>
</tr>
<tr>
<td>Tania</td>
<td>15</td>
<td>Female</td>
<td>Tried tobacco</td>
<td></td>
</tr>
<tr>
<td>Ulrich</td>
<td>16-19</td>
<td>Male</td>
<td>Tried cannabis</td>
<td>YC1014</td>
</tr>
<tr>
<td>Uri</td>
<td>16-19</td>
<td>Male</td>
<td>Tried cannabis</td>
<td></td>
</tr>
<tr>
<td>Verity</td>
<td>16-19</td>
<td>Female</td>
<td>Never used either substance</td>
<td>YC1015</td>
</tr>
<tr>
<td>Veronica</td>
<td>15</td>
<td>Female</td>
<td>Never used either substance</td>
<td></td>
</tr>
<tr>
<td>Vicky</td>
<td>16-19</td>
<td>Female</td>
<td>Tried tobacco</td>
<td></td>
</tr>
</tbody>
</table>
5.2 Analysis

In this chapter so far, I have outlined the steps of recruiting for and conducting the interviews and next I present the steps for analysis. I am cautious, however, that the presentation of a set of steps portrays this qualitative study as a linear process with data collection preceding analysis. The time pressures of conducting a PhD project meant that data collection was an iterative process with analysing an initial set of interviews whilst simultaneously recruiting for the next. Moreover, analysis began almost as soon as the first question was asked as I began to interpret what was said. This is an inevitable part of qualitative research (Pope, Ziebland, & Mays, 2000) as the researcher cannot help beginning to process what is being said and refining questioning to follow lines of inquiry as they develop.

5.2.1 Preparing the interview data for analysis

As a relatively novice researcher, I decided to audio record the interviews and transcribe the data later so that I could focus on the discussion within the interview rather than write down the responses from participants. I kept a notepad with me so that I could make notes if a participant said something that I wanted to follow up later without interrupting the flow of their narratives. This was particularly useful for drawing on earlier responses when encouraging discussion around co-consumption later in the interviews.

I transcribed the data verbatim myself rather than outsourcing or using automated transcription services as I wanted to immerse myself in the interviews as early as possible. The level of detail needed in a transcript varies according to the purpose of the analysis (Braun & Clarke, 2006; Potter & Wetherell, 1987) and the goal of the current work was to examine the words used rather than consider intonation, hesitations and non-verbal cues (the hidden transcript) which although important in interpreting the narratives, was considered to be too time consuming for the current project. However, I did highlight raised voices and emphasis in the responses to add contextual cues for analysis (see Appendix L for transcription notation conventions). Any names of places were removed so that the locations of the clubs remained anonymous. Bird (2005) describes transcription as an interpretive act in itself rather than a means to prepare data.

After transcription, I listened back to the audio recordings as I read through the transcript to correct any errors. As a way of validating transcripts, it has been advocated that researchers should ask participants to read through and check the accuracy of the transcript. However, this can lead to participants self-censoring (e.g. removing anything
which may portray them in a negative way). Furthermore I did not collect any contact
details or names of participants, so matching transcripts to young people would have been
difficult, particularly when young people do not necessarily attend the club every week and
there may be a time lag in completing the transcription. The audio files will be kept in an
encrypted folder until the completion of the viva of the PhD project for validation
purposes, after which they will be deleted.

5.2.2 Addressing the research questions – underlying discourses

The contemporary and relatively under-researched topic of co-consumption requires the
groundwork of a primarily thematic approach to identify underlying assumptions within
talk about co-consumption. Answering the research questions described at the beginning of
this chapter requires moving beyond simple description of what is said, to interrogate
common uses of language (discourse) to confer meaning, and the consequences that arise
following particular choices of narratives (Singer & Hunter, 1999). As such, an abridged
version of thematic and discourse analysis is necessary here. Some writers, such as Braun
and Kitzinger (2001) have used the term thematic discourse analysis although others
(Smith, 2012) consider the approach to be a discursive thematic analysis. The
interchangeable terminology aside, approaches using abridged thematic and discursive
analysis techniques share a common objective which is to search for patterns across the
data set rather than within a particular narrative (Braun & Clarke, 2006) and as such offers
a suitable approach to addressing these research questions. There is no single method for
conducting a discursive thematic analysis although the analysis largely follows guidelines
outlined by Potter and Wetherell (1987) for discourse analysis and Braun and Clarke
(2006) for thematic analysis. An overview of the analysis process is given in Box 5.2.

The analysis began with familiarising myself with the data. I read the transcripts
repeatedly, starting with paper copies of the transcripts without making any notes or
markings. It is important to be familiar with the breadth of the dataset regardless of the
analytical approach taken (Braun & Clarke, 2006). On the second read through I began
reading more ‘actively’ through making notes. My notes comprised thoughts about the
interview or questions that I had. In some cases I wrote key words that I thought might
represent the response. Once I had annotated a transcript I wrote a short summary listing
the main annotations (see Appendix M for an example summary). From these annotations I
compiled a list of possible themes that I believed to be emerging from my readings. The
coding process served to create a reference of the breadth of the data for me to consider
how particular threads of discourses might relate to the wider narratives.
Box 5.2 - Analysis steps

1. First read through of whole transcripts (familiarisation of the dataset).
2. Second read through – annotating transcripts.
3. Create a summary of key annotations from first read through for each transcript.
4. List and discuss potential themes with others.
5. Third read through (clean, unannotated copies) - begin coding/chunking for themes (related to research questions).
6. Consider how potential codes/themes may be linked to wider overarching themes/categories.
7. Analyse the narratives within each theme using extracted chunks of transcripts - including an analysis of the discourses used to describe the two substances.
8. Fourth read through of whole transcripts to cross check and identify any additional or undetected ‘negative’ or contradictory cases for the identified themes.

I discussed these themes with my supervisory team periodically to ensure my focus and initial thoughts were appropriate and grounded in the text. I then went back to the transcripts to start pulling together (often referred to as coding or chunking) extracts relating to each of the identified themes. The initial thematic coding was driven ‘theoretically’ by each of the research questions in order to focus the analysis on co-use, an approach advocated by Potter and Wetherell (1987). For example, with regards to the research question on smoker identities, I coded all instances where there were explicit or latent references to identity and calling oneself a smoker. Once I had initially coded the interviews into the overarching themes for each research question I then searched within these to identify more specific patterns and inconsistencies. As per the recommendation in Braun and Clarke (2006), I coded inclusively (keeping some of the surrounded text to retain context).

Throughout the process I further refined the potential themes by creating new themes as well as collapsing multiple themes together and considering how themes may be linked to other themes within overarching categories. Appendix N contains a table of the preliminary themes (to illustrate hierarchical relationships between themes) based on the annotations and coding. At this point I had identified common stories relating to each theme; these were patterns that had emerged over several interviews to describe the theme in a particular way. I then interrogated the themes further to examine what was being achieved by portraying each substance or experience of use in particular ways. It is through this more detailed exploration of themes and underlying discourses that I was able to draw together the data for each substance individually and contemplate the implications for co-
consumption. My role here was to form propositions about what was achieved by a particular story or narrative and then consider if similar narratives, told by other participants in different situations achieved the same outcome (Potter & Wetherell, 1987).

At this point my analysis was very focused on specific aspects of narratives relating to particular themes and it was necessary to take a step back and re-read the wider transcripts to cross check and identify any additional or contradictory cases for the identified themes.

It should be noted that I conducted the interviews in two waves. In the first wave I conducted eight interviews before the school summer holidays at which point the youth clubs changed to an alternative programme for their attendees rather than the usual evening drop in sessions. This allowed a natural break for me to take stock of my data, discuss potential themes with my supervision team and ensure I was asking the right questions or if I needed to amend my design to meet the objectives of the research. For much of the process I utilised the computer software NVIVO (QSR International Pty Ltd, 2010) to support my qualitative analysis. Computer-assisted qualitative data analysis software (hereafter, CAQDAS) encompasses a range of software titles that function broadly to index textual data and provide the capability of rapid searching within the data (Webb, 1999). More recent versions offer automated ‘theorising’ components that propose to detect possible associations between codes using algorithms and key word searching (Fielding & Lee, 2002). The case for using CAQDAS is primarily the efficiency of ordering and processing material collected.

CAQDAS does not reduce the amount of time required to read, conceptualise and analyse data (Bringer, Johnston, & Brackenridge, 2004). However, because of the use of software for clerical tasks such as filing and retrieving codes, the researcher is afforded more time to spend analysing. A further benefit of utilising CAQDAS is that the analysis process has a full audit trail as annotations are time stamped. It is also possible to take snapshots of a particular analysis thread as it evolves so that I can step back and consult earlier thoughts. I can also view all extracts related to a particular theme and then almost instantly view individual extracts within the whole interview to check the context of a response. There were also practical benefits of being able to work on the analysis anywhere I had access to a computer, providing a portable analysis space, rather than being physically restricted to working near a filing cabinet full of sheets of paper.
5.3 Conclusion

This chapter outlines a qualitative study aimed to address three of the four research questions set for this thesis. The chapter began with a discussion of the topics to be covered within the interviews. Topics centred on what the young people knew about each substance and any effects of mixing tobacco and cannabis, their decisions and experiences of use and discussions of social identity management through the use of tobacco and cannabis. The interviews also asked participants to describe their place-based practices of co-consumption. The next section of the chapter considered the format of the interviews and the worth of interviewing young people in pairs or small groups to encourage honest responses. I discussed steps to ensure confidentiality within the group interviews. Attention turned to the recruitment of participants and this section highlighted that the youth club environment has unique challenges that require a different approach to that of recruiting young people in schools. For example, there is much more focus on the young person’s volition in a youth club setting as their participation in these settings is voluntary.

Access to the clubs was facilitated again through local authority organisations although once engaged in discussion with the club it was clear that there was much less hesitation from the youth clubs compared to schools in allowing the research to take place with participants under their charge. The section also highlighted another distinction that seeking parental permission may be impracticable for young people who attend youth clubs. A waiver was given for this requirement and the youth club leaders facilitated access to potential participants and acted in loco-parentis to decide when a young person could demonstrate capacity to give informed consent. Section 5.1.3 outlined the sample; 51 young people aged 12-19 across the two clubs, as well as the procedure for conducting the interviews. The last part of the chapter focused on the analysis of the interview data, the steps for transcription and strategies for addressing the research questions. Analysis utilised computer-assisted data analysis software was used to record annotations as part of a thematic discourse analysis interrogating the meaning of the narratives of participants.

The thesis now turns to the substantive results and each of the four following chapters corresponds to an individual research question. Chapter Six outlines the prevalence of tobacco and cannabis co-use. Chapter Seven focuses on young people’s awareness of co-use harms and their decisions with regards to using cannabis and tobacco. Chapter Eight examines categorisations of smoking and identifying as a smoker. Chapter Nine illustrates the connection of tobacco and cannabis practices and particularly the place-based practices of tobacco that facilitate cannabis use. The final chapter, Chapter 10 concludes the thesis with an overview and critical summary of the results presented in the next four chapters. I
also document the contribution of this investigation to the academic study of cannabis and tobacco co-consumption as well as clinical implications and avenues for future work.
Chapter Six:
Explaining patterns of tobacco and cannabis use:
evidence from the school survey

6.1 Introduction
This is the first of four results chapters and summarises findings from the school survey which was outlined in Chapter Four. This survey allows for individual and contextual patterns of tobacco, cannabis and co-consumption practices amongst the school children to be examined. The results discussed in Chapters Seven, Eight and Nine will then progress to a more detailed and nuanced examination of the complexities surrounding cannabis and tobacco smoking experiences. These will use information drawn largely from the interviews with young people in youth clubs. As in the other empirical chapters of this thesis the results are presented alongside discussion of how these findings sit within the wider literature.

The specific research question addressed in this chapter is: ‘What are the individual and contextual patterns of tobacco and cannabis co-consumption among school-aged children?’ The chapter first begins with a description of the patterns of tobacco use, cannabis use, and then co-consumption revealed in the results of the survey. Section 6.2 concludes by examining specific uses of tobacco, highlighting the need to distinguish tobacco-for-cigarettes and tobacco-for-cannabis use. In the final part (section 6.3) I focus attention on the co-use of tobacco and cannabis (smoking tobacco cigarettes in addition to smoking cannabis either with or without tobacco), building a model of the key risk factors identified in Chapter Two.

6.2 Prevalence of tobacco and cannabis use
In the following section I outline the descriptive results from the survey study and highlight the importance of appropriate questioning to capture all tobacco users. I begin with an examination of tobacco smoking before looking at cannabis smoking and finally tobacco-for-cannabis use as this may represent a hidden cohort of tobacco users that are missed in commonly used surveys of tobacco use.

6.2.1 Tobacco use
The initial part of the school survey was designed to capture baseline smoking status and we use the results from these questions to capture tobacco and cannabis use. However, previous research alerts us to the potential of missing recent or current tobacco use among young people if only a single smoking status question is used. Following the example of
Fuller & Hawkins (2014), the decision was made to classify any participant as a smoker if they reported current use at least once on any of the tobacco questions and similar reclassification techniques were used for cannabis reporting. Box 6.1 shows how responses to each question contributed to the final classification.

**Box 6.1 - Tobacco user classification breakdown**

<table>
<thead>
<tr>
<th>Tobacco classification question one (self-reported smoking status)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 368 participants (8.1% of the sample) reported either occasional or regular current use.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tobacco classification question two (number of cigarettes smoked in the past 7 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 117 participants (2.6% of the sample) reported smoking at least one cigarette in the past seven days but had not reported current use from their responses to question one.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tobacco classification question three (cannabis users who smoke cigarettes when they were not using cannabis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 57 participants (1.2% of the sample) who had not reported smoking tobacco cigarettes on question one or two said that they currently used cannabis joints.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Final classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Participants were classified as smokers if they reported either occasional or regular cigarette use in question one, or reported smoking at least one cigarette in the past seven days in question two, or reported smoking tobacco cigarettes at different times to using cannabis joints in question three.</td>
</tr>
</tbody>
</table>

The reclassification resulted in a total of 542 participants (11.9%) being identified as current tobacco smokers. There were marginal differences between girls and boys current tobacco use although boys had a slightly higher prevalence with 12% ($n = 272$) of boys reporting current use compared to 11.8% ($n = 270$) of girls and this difference is similar to the sample in the SDD survey for this period with 8% of girls and 7% of boys reporting current use. Figure 6.1 shows the percentage of current tobacco users by sex and year group.
It appears that reporting of current use increases as year group increases, starting with 2.5% ($n = 18$) in year 7 to over a quarter (25.3%, $n = 256$) of year 11 pupils. For boys, there appears to be more current smokers in year 7 than in year 8 but then increases with age tend to appear linear. For girls the increase appears to be linear across all years. Gender differentials are marginal across years 8 and 9 but in year 7 3.9% of boys report smoking compared to 1.1% of girls. In years 10 and 11 gender differences are present but in year 10 more girls report smoking (15.6%) compared to boys (12.9%) whereas more boys (26.4%) smoke than girls (24.1%) by year 11.

Whilst it is not appropriate to compare the national SDD survey directly to the much smaller regional survey carried out as part of this investigation because the SDD survey uses ages rather than year groups and does not incorporate tobacco-for-cannabis use in its questioning, it is worth noting the similarities and difference in the patterns of responses for boys and girls across age groups. For example, in the SDD survey slightly more boys report current use in lower age groups and then in upper years girls overtake boys. However, in the current survey, whilst girls overtake boys in years 8 to 10 the boys regain the higher prevalence rates in the oldest year group (year 11). The higher prevalence of male smokers in year 11 may reflect that unlike the SDD survey, this survey also includes those smokers who are cannabis users who might only smoke tobacco when they do not have cannabis. The higher prevalence of tobacco use among year 7 boys, may also be a result of fabricated responses, discussed in section 6.2, as a number of participants had
reported being in year 7, smoking regularly and smoking an exaggerated number of cigarettes in the past week (e.g. more than 100).

6.2.2 Cannabis use

Current cannabis use was reported by a total of 348 participants (7.6% of the working sample). Box 6.2 shows how the final classification was derived using the three cannabis use questions in the survey.

Figure 6.2 shows the final classification of current cannabis users by sex and year group. As with tobacco, use of cannabis increased as year group increased. Although similarly again to current tobacco use, there was an unexpectedly high number of boys from year 7 that reported currently using cannabis. The use of cannabis in year 7 was higher among boys (2.5%, n = 9) compared to girls (0.8%, n = 3) and in year 11 the prevalence of current cannabis smoking amongst boys (23.8%, n = 121) was nearly twice as high as prevalence amongst year 11 girls (12.2%, n = 61).

Box 6.2 – Cannabis user classification breakdown

<table>
<thead>
<tr>
<th>Cannabis question one (self-reported smoking status)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 239 participants (5.2% of sample) reported either occasional or regular current use.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cannabis question two (current use of cannabis in joints without adding tobacco)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 61 participants (1.3% of sample) who did not initially report current smoking.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cannabis question three (current use of cannabis in joints with tobacco)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 48 additional participants (1% of sample) reported current use on this question but did not report use on question one or two.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Final classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Participants were classified as smokers if they reported either occasional or regular cannabis use in question one, or reported currently using cannabis without tobacco in question two, or reported currently smoking cannabis joints (adding tobacco) in question three.</td>
</tr>
</tbody>
</table>
The prevalence of tobacco and cannabis use in the current sample appears to be higher overall than in the nationally representative SDD survey for the same period although this may reflect that in the current survey we employed techniques to identify those smokers who may not report smoking on self-report surveys and whose use may be hidden. More girls reported current tobacco use in years 8, 9 and 10 although in years 7 and 11, more boys report current use. For cannabis use, a linear rise in current use is apparent for both sexes, from year 9 onwards, with boys consistently reporting higher prevalence rates than girls in each year group. The differences are most prominent in years 10 and 11. The sex differences are similar to those reported in the SDD national sample for the same period with more boys (4.6%) reporting use of cannabis in the last month than girls (3.3%), but again caution should be taken when comparing the SDD results with the current study. It is worth noting that the current sample may therefore have a bias towards higher prevalence of cannabis and tobacco use, and this may be important for considering the generalizability of these results to other samples and populations.

6.2.3 Co-use patterns

Almost 1 in 10 of our participants (n = 450, 9.9%) reported using both cannabis and tobacco at some point in their lives, whilst 13.2% (n = 601) said they had only ever used tobacco and 1.4% (n = 62) said they only ever used cannabis. However, as discussed in section 3.1.1 it is unhelpful to use an ‘ever co-use’ definition because individuals may not have used tobacco and cannabis during the same time period. As such current co-consumption is a more useful measure. Current use of either tobacco or cannabis was reported by 6.6% of the sample (n = 300). Of these single substance users, 53 (1.2% of the
sample) reported currently using cannabis only and not currently using tobacco cigarettes. Current use of both cannabis and tobacco (regardless of whether they are used specifically mixed together in a cannabis joint) was reported by 295 participants (6.5% of the sample). A third of these current co-users ($n = 98$, representing 2.2% of the whole sample) reported smoking tobacco regularly (one or more tobacco cigarettes per week) and using cannabis once or more per week.

**Figure 6.3 Current co-use by sex and year group**

Among current tobacco smokers ($n = 542$) just over half (54.4%, $n = 295$) reported also currently using cannabis. However, these co-users represented well over three quarters (84.8%) of current cannabis users. It is important to make the distinction between tobacco used in cigarettes and tobacco added to joints as these may constitute different types of tobacco use and tobacco identity. Those who reported ever using cannabis ($n = 512$) were asked to indicate whether they currently added tobacco to their cannabis joints. Over half, (58.2%, $n = 298$) reported currently adding tobacco to their cannabis (e.g. using cannabis joints). These cannabis joint smokers represented 85.6% of current cannabis users with just 20 participants (5.8% of current users) reporting the use of cannabis without adding tobacco. Nearly all of those who never added tobacco to their cannabis were boys ($n = 18$). A further 30 participants (8.6% of ever users) did not answer this question on mixing, so we do not know whether or not these currently use cannabis and tobacco joints; although seven of these participants were identified as current cannabis users elsewhere in the survey. For the remainder of this section, I focus on the 298 participants identified as current cannabis joint smokers (those who add tobacco to their cannabis). Over two-thirds of the young cannabis joint smokers (68.8%, $n = 205$) reported current smoking on the
initial smoking status question although this number increases to 88.3% (n = 263) when including all three cigarette use questions. Among boys who smoked cannabis joints, 86.1% (n = 162) reported current tobacco cigarette use and a slightly higher proportion (91.9%, n = 102) of girls who smoke cannabis joints reported concurrent cigarette use. Overall, like in other samples, the results indicate that the majority of those who add tobacco to their cannabis also smoke tobacco cigarettes.

There is also evidence that some cannabis joint users, who use tobacco-for-cannabis but not tobacco cigarettes, do not consider themselves to be tobacco smokers (Burns et al., 2000; Humfleet & Haas, 2004). Of those who reported smoking cannabis joints as well as tobacco cigarettes at other times (n = 263), just under two thirds (60.8%, n =160) report that they would consider themselves to be tobacco users. However, whilst only 35 participants in the study reported using cannabis joints but not smoking tobacco cigarettes, only two of these (5.7%) said they would call themselves tobacco smokers.

In this section, I have outlined tobacco and cannabis use, as well as tobacco-for-cannabis as a distinct type of tobacco smoking. The results indicate that some cannabis users categorically do not consume tobacco, either in cigarettes or with cannabis. Of those who do add tobacco, few would consider themselves to be smokers. This survey highlights the importance of asking young people about specific tobacco and cannabis use practices, and importantly, at multiple points of a survey, to confidently determine those who use tobacco (or cannabis) and those who do not.

6.3 Modelling tobacco and cannabis co-use

In the following section I consider the individual and contextual risk factors of concurrently using cannabis and tobacco via the use of a multinomial, multilevel model. The goal here is not to identify what causes the co-use of tobacco and cannabis, but rather to highlight factors which have a strong relationship to cannabis and tobacco co-use such that future work can examine causal relationships. As discussed in section 4.2.2, for the purposes of the multinomial statistical model, those who currently only smoked tobacco (n = 247, 5.4% of the sample) were compared to participants who currently smoked both cannabis and tobacco (n = 295, 6.5%) and those who were not current smokers of either substance (3,957, 86.9%). The non-smokers represented the reference group. Those pupils

7 As a reminder, throughout this section concurrent use is defined as using tobacco cigarettes as well as cannabis in joints with or without tobacco.
who reported currently smoking cannabis but reported not currently smoking tobacco cigarettes \((n = 53)\) were removed from the dataset\(^8\). Therefore, the working sample for these models is 4,499.

All multinomial regression models were developed in a multilevel framework. This approach was used because the resultant dataset comprised 4,449 schoolchildren nested within 12 schools. Multilevel models take such clustering into account and standard errors of model coefficients are adjusted to acknowledge this spatial dependency. The multilevel approach will also allow the variation in tobacco and cannabis use across schools to be estimated and if significant variation is present, the degree to which individual and school characteristics explain that variation can be assessed.

**6.3.1 Model development**

Before selecting which variables should be included in the final models, it is important to consider the statistical assumptions that are inherent in running multinomial logistic regression. Logistic regression is a flexible technique and has fewer parametric assumptions compared to linear regression (Field et al., 2012). Whilst there is no requirement for normal distribution, outliers can be problematic and these were identified when each variable was screened during the data preparation stage (discussed in section 6.2). Categories with zero counts (e.g. all responses to a question are ‘no’ or ‘not applicable’ for a particular group of respondents) are almost inevitable when behaviours such as recent cannabis and tobacco use are usually reported by a small proportion (e.g. less than 10%) of young people (Fuller & Hawkins, 2014). For example, nearly half of the participants (46%, \(n = 2,094\)) said they did not have a boyfriend or girlfriend, or did not want to answer, on a question about smoking among their peers.

There are few prescribed methods for model building (e.g. selecting which variables from the candidate list should be included in the final model) although Hosmer et al (2013) suggest a comprehensive method of purposeful selection of covariates. This involves examining results of univariate analyses of the relationship between the outcome and any potential explanatory variables, then adding all related variables into a preliminary model.

\(^8\) It was not possible to replicate Suris et al’s (2007) analyses of co-users versus cannabis-only users as there were only 53 participants in the whole dataset who reported using cannabis-only and as such there was insufficient information about the breadth of predictors.
and eliminating non-significant factors one by one in a process of deleting, refitting and verifying the model against previous iterations until a final succinct model is achieved. This approach is akin to a backwards stepwise regression method, where decisions about variable inclusion are largely based on mathematical criteria and the presence of other variables in the model. The stepwise approach more generally has been criticised by researchers for taking the methodological decisions about model components largely out of the hands of the analyst (Field et al., 2012).

To simplify the modelling and reduce the proportion of categories with zero counts, three variables were derived which combined responses to questions where ‘not applicable’ was given as an option. Firstly, a variable was derived (close peer smoking) which combines the responses from the questions; do your best friends currently smoke and does your boyfriend/girlfriend currently smoke. A similar combined variable was used for smoking among older and younger siblings (‘any sibling smoking’) because of the high counts of participants who did not have younger siblings or older siblings. Finally, a variable for parent smoking was also derived which captured any current smoking among the respondents’ mother or father. Table 6.1 shows the variables considered for use in the multinomial multilevel logistic regression. All of the variables used were categorical.
Table 6.1 – Working sample predictor characteristics

<table>
<thead>
<tr>
<th>Risk factor cluster and key variables</th>
<th>%</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (base - Male)</td>
<td>49.3</td>
<td>2,218</td>
</tr>
<tr>
<td>Female</td>
<td>50.7</td>
<td>2,281</td>
</tr>
<tr>
<td><strong>Year Group</strong> (base - Year 7 or 8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 9</td>
<td>32.3</td>
<td>1,452</td>
</tr>
<tr>
<td>Year 10</td>
<td>20.7</td>
<td>933</td>
</tr>
<tr>
<td>Year 11</td>
<td>25.2</td>
<td>1,134</td>
</tr>
<tr>
<td><strong>Alcohol use</strong> (base - has never has an alcoholic drink)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drunk alcohol at least once</td>
<td>40.3</td>
<td>1,815</td>
</tr>
<tr>
<td><strong>Drunk in the last month</strong> (base - has not been drunk in the last month)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has been drunk in the last month</td>
<td>75.6</td>
<td>3,400</td>
</tr>
<tr>
<td><strong>Current use of other drugs</strong> (base - does not currently use other drugs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses other drugs</td>
<td>93.9</td>
<td>4,226</td>
</tr>
<tr>
<td><strong>Smoking behaviour of friends and family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents (base - neither parent smokes)</td>
<td>52.1</td>
<td>2,344</td>
</tr>
<tr>
<td>One or both</td>
<td>37.7</td>
<td>1,698</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>10.2</td>
<td>457</td>
</tr>
<tr>
<td>Siblings (base - sibling(s) does not smoke)</td>
<td>76.7</td>
<td>3,449</td>
</tr>
<tr>
<td>Sibling(s) smokes</td>
<td>18.8</td>
<td>847</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>4.5</td>
<td>203</td>
</tr>
<tr>
<td>Close friends (base - close friend(s) does not smoke)</td>
<td>67.3</td>
<td>3,027</td>
</tr>
<tr>
<td>Close friend(s) smokes</td>
<td>21.3</td>
<td>959</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>11.4</td>
<td>513</td>
</tr>
<tr>
<td>Regular visitors (base - regular visitors do not smoke)</td>
<td>46</td>
<td>2,071</td>
</tr>
<tr>
<td>Regular visitors smoke</td>
<td>39.3</td>
<td>1,770</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>14.6</td>
<td>658</td>
</tr>
<tr>
<td><strong>School and Neighbourhood factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English not as first language (base - proportion of pupils = below average)</td>
<td>87.8</td>
<td>3,912</td>
</tr>
<tr>
<td>Proportion of pupils = above county average</td>
<td>12.2</td>
<td>587</td>
</tr>
<tr>
<td><strong>Free school meals</strong> (base - proportion of pupils = below average)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of pupils = above county average</td>
<td>38.9</td>
<td>1,748</td>
</tr>
<tr>
<td><strong>School type</strong> (base - community school)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundation (includes voluntary aided) school</td>
<td>42.8</td>
<td>1,927</td>
</tr>
<tr>
<td>Academy</td>
<td>21.9</td>
<td>987</td>
</tr>
<tr>
<td>Academy</td>
<td>35.2</td>
<td>1,585</td>
</tr>
<tr>
<td><strong>Availability of tobacco from shops</strong> (base - difficult to get from shops)</td>
<td>60.9</td>
<td>2,742</td>
</tr>
<tr>
<td>Easy to get</td>
<td>39.1</td>
<td>1,757</td>
</tr>
<tr>
<td><strong>Availability of tobacco not from shops</strong> (base - difficult to get from shops)</td>
<td>80.1</td>
<td>3,171</td>
</tr>
<tr>
<td>Easy to get</td>
<td>19.9</td>
<td>1,328</td>
</tr>
<tr>
<td>Residential area income deprivation (base - lives in an area where 0-6% of children live in deprived households)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lives in an area where 7-14% of children live in deprived households</td>
<td>22.2</td>
<td>1,001</td>
</tr>
<tr>
<td>lives in an area where 15-63% of children live in deprived households</td>
<td>22.6</td>
<td>1,017</td>
</tr>
<tr>
<td>residential area income deprivation unknown</td>
<td>27.7</td>
<td>1,245</td>
</tr>
</tbody>
</table>
The modelling was undertaken in a number of stages, adding each risk cluster (denoted in Table 6.1 above) one at a time. In stage one individual characteristic were modelled. These included gender, year group (a proxy for age), alcohol use, and use of other drugs (as listed in Table 6.1). The second stage of modelling took into account the effects of smoking from people close to the young person and investigated the influence of smoking among parents, siblings, close peers and visitors to the young person’s home. The local environment capturing perceptions of the ease of access to tobacco and cannabis was added in the third and final stage as was residential deprivation affecting children, the proportion of pupils eligible for free school meals (a proxy measure of deprivation) and the proportion of pupils in the school whose first language is not English (a proxy measure of ethnicity).

The models were generated using a predictive quasi-likelihood (2nd order) estimation procedure (Browne, Charlton, Rasbash, Kelly, & Pillinger, 2014) using MLwiN 2.3.1 software (Rasbash, Charlton, et al., 2014). The results for the model coefficients after each stage of modelling are shown in Tables 6.2–6.4 respectively. The coefficients for each explanatory variable are expressed as logits alongside their standard errors, odds ratios and the 95% confidence interval around each odds ratio. Odds ratios greater than 1 indicate that the risk or chances of reporting the particular model outcome (either that the participant is a tobacco smoker or a co-consumer) compared to the base category (i.e. not currently using either tobacco or cannabis) are increased by that explanatory variable. Odds ratios less than one represent a decrease in such risk. School-level variance values are used to calculate the explanatory power of the independent variables at each level (given in Table 6.5) using the method outlined by Snijders and Bosker (2012, pp 305).

6.3.2 Stage 1: Individual factors affecting co-consumption

In the first stage of modelling, individual factors were added. For this model, the base participants were male, in year 7 or 8, had never consumed alcohol, and did not currently use other drugs. Table 6.2 gives the multinomial model coefficients for the first stage of modelling (i.e. a model containing the individual factors). The characteristics of each explanatory variable represented in the base category are given at the bottom of each table and described in the text. As the model was built, non-significant variables were removed from the model. When a variable was significant but some categories (such as a particular year group) were non-significant, then the non-significant categories were removed from the model and became part of the base category. Variables where a statistically significant different effect is shown across the two outcomes are shown in bold. The results show that
whilst there are many similarities in the ways in which micro contexts are associated with co-consumption and tobacco-only consumption, there are also important differences.

Table 6.2 - Results of model 1 - Individual characteristics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Current use of tobacco-only</th>
<th>Current use of tobacco cigarette AND cannabis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Logit SE OR 95% Confidence Interval</td>
<td>Logit SE OR 95% Confidence Interval</td>
</tr>
<tr>
<td>Constant</td>
<td>-5.57 0.32 1.14-1.99</td>
<td>-6.03 0.36 0.45-0.79</td>
</tr>
<tr>
<td>Girl</td>
<td>0.41 0.14 1.51</td>
<td>-0.52 0.14 0.59</td>
</tr>
<tr>
<td>Year 9</td>
<td>1.20 0.29 3.30 1.89-5.78</td>
<td>0.94 0.31 2.56 1.39-4.73</td>
</tr>
<tr>
<td>Year 10</td>
<td>1.28 0.27 3.58 2.11-6.09</td>
<td>1.72 0.28 5.59 3.25-9.62</td>
</tr>
<tr>
<td>Year 11</td>
<td>1.74 0.27 5.70 3.39-9.60</td>
<td>2.29 0.27 9.91 5.84-16.81</td>
</tr>
<tr>
<td>At least one alcoholic drink</td>
<td>0.88 0.26 2.42 1.46-4.01</td>
<td>0.85 0.32 2.34 1.25-4.37</td>
</tr>
<tr>
<td>Drunk in past month</td>
<td>1.51 0.16 4.54 3.33-6.19</td>
<td>2.13 0.18 8.41 5.92-11.95</td>
</tr>
<tr>
<td>Current other drug use</td>
<td>0.65 0.27 1.92 1.13-3.27</td>
<td>2.89 0.18 17.97 12.56-25.71</td>
</tr>
</tbody>
</table>

Base category: male, in year 7 or 8, has never had an alcoholic drink, and does not currently use other drugs.

All variables included in the model are significant at the \( p < .05 \) level, variables in bold denotes that the effect is significantly different across outcomes at, \( p < .05 \).

The results indicate that female gender has a significant effect on both outcomes although the effect is in different directions. The odds for females self-reporting as a current user of tobacco, compared to males is given as 1.51, suggesting that there is around a 50% increase in the risk of a female reporting current tobacco use than a male reporting tobacco use. The influence of sex on co-use has received mixed support in previous research although as with half of the studies identified in Ramo et al’s (2012) systematic review, the results indicate a significantly increased risk of being a co-consumer among boys. Indeed, being female reduces the likelihood of reporting the use of both tobacco and cannabis, by around 40% (OR = 0.59). Suris et al. (2007) indicated that age was related to the concurrent use of tobacco and cannabis such that co-users were significantly more likely to be older than tobacco cigarette only users. As such, we might expect that the effect of age (year group) would be stronger for co-users than tobacco-only users when both outcomes are modelled together.

In terms of year group, the odds show that the risk of being a tobacco-only user or a co-user increases across year 9, 10 and 11. Being in year 8, compared to year 7 was positively, but non-significantly related to either outcome. As a result of the non-significant effect, those participants in year 8 were taken out as an explanatory contrast and are therefore included in the base category with year 7. Whilst there was a positive association between year group and both outcomes, the risk for year 9 pupils of being a single substance user was greater than the risk of being a co-consumer, but the opposite is found for those in year 11.
10 and 11 (e.g. older pupils are more likely to be co-consumers than users of just tobacco). These year group differences across the model outcomes however were shown to be non-significant.

Ever having an alcoholic drink was associated with over a two-fold increase in risk of both outcomes but is slightly higher for tobacco-only use; again the difference across models is not significant. However, if the respondent reported being drunk in the past month, the risk of being a tobacco-only user was nearly five times greater than if they had not been drunk in the past month and the risk of being a co-user was almost eight and a half times greater. These results are in line with research on the co-occurrence of alcohol, tobacco and cannabis use in international samples of young people (EMCDDA 2009) which indicates that these behaviours are very often undertaken during the same periods of time. The difference in the risk for the two outcomes was significantly different. This finding is in line with previous research by O’Loughlin et al. (2009) who suggested experiences of being drunk were related to the initiation of tobacco smoking and progression to daily cigarette use and Perez et al. (2010) who reported that the risk of cannabis use was doubled among those who used alcohol.

Finally, the addition of a variable denoting current use of other drugs indicates a positive relationship to the outcomes. However, whilst the risk of being a tobacco-only smoker was almost doubled among those who currently use other drugs, the risk was statistically significantly larger for being a co-user, representing almost an 18 fold increase in risk. The confidence interval for this covariate is larger than any other (12.56-25.71) although the most conservative expected odds ratio indicates that there is a 12 fold increase in risk of being a co-consumer if a young person currently uses other illicit drugs. Olszewski et al. (2009) noted that in European countries, even though cannabis users were more likely to also use other drugs, the use of illicit drugs among cannabis users was often no more than 10%. Overall, 6.1% of the sample reported current use of other drugs. Among those who did not report current cannabis or tobacco use, 3.6% (n = 141) reported current use of other drugs. Those who used tobacco-only had a prevalence rate of 6.5% (n = 16). However, well over a third (39.3%, n = 116) of those who currently used cannabis as well as tobacco also currently used other drugs. This indicates that the prevalence of other drugs use is much greater among those who use tobacco and cannabis than we might expect. However, because of the small number of respondents who used cannabis but not tobacco this analysis did not examine the prevalence of other drug use among cannabis-only users and so it is unclear whether the effect is related purely to cannabis use or the combination of
tobacco and cannabis use. Nonetheless, the significant difference between the two outcome categories implies that there is a unique influence of other drug use on co-consumption.

The first model indicates that the strongest predictors of tobacco-only use are being in older year groups and drinking alcohol in the past month although using other drugs, ever drinking and being female also significantly increase the odds that a young person will report current smoking of tobacco compared to no current use. With the exception of being female, which had the opposite effect for co-use, these factors also significantly predict current use of both cannabis and tobacco. Moreover, the influence of current use of other drugs and being drunk in the past month on co-consumption was significantly stronger than the effect of these covariates on tobacco-only use.

6.3.3 Stage 2: The influence of friends and family

The factors entered in the model at this stage were smoking among close peers, parental smoking, sibling smoking and smoking among regular visitors to the house. The results of the model with non-significant factors removed are given in Table 6.3.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Current use of tobacco-only</th>
<th>Current use of tobacco cigarette AND cannabis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Logit SE OR 95% Confidence Interval</td>
<td>Logit SE OR 95% Confidence Interval</td>
</tr>
<tr>
<td>Constant</td>
<td>-5.41 0.28</td>
<td>-5.85 0.24</td>
</tr>
<tr>
<td>Girl</td>
<td>ns ns ns ns</td>
<td>-0.92 0.15 0.40 0.30-0.53</td>
</tr>
<tr>
<td>Year 9</td>
<td>0.88 0.29 2.41 1.38-4.22</td>
<td>ns ns ns ns</td>
</tr>
<tr>
<td>Year 10</td>
<td>0.97 0.27 2.64 1.56-4.49</td>
<td>0.94 0.21 2.56 1.69-3.87</td>
</tr>
<tr>
<td>Year 11</td>
<td>1.28 0.27 3.61 2.14-6.1</td>
<td>1.28 0.20 3.59 2.42-5.33</td>
</tr>
<tr>
<td>Drunk in past month</td>
<td>1.24 0.15 3.46 2.57-4.68</td>
<td>1.87 0.17 6.51 4.65-9.10</td>
</tr>
<tr>
<td>Current other drug use</td>
<td>ns ns ns ns</td>
<td>2.59 0.18 13.31 9.38-18.88</td>
</tr>
<tr>
<td>At least one parent smokes</td>
<td>0.36 0.14 1.43 1.09-1.89</td>
<td>ns ns ns ns</td>
</tr>
<tr>
<td>At least one sibling smokes</td>
<td>0.63 0.15 1.87 1.39-2.52</td>
<td>1.02 0.16 2.77 2.03-3.78</td>
</tr>
<tr>
<td>Did not want to answer if siblings smoke</td>
<td>ns ns ns ns</td>
<td>0.74 0.29 2.11 1.20-3.68</td>
</tr>
<tr>
<td>Close peers smoke</td>
<td>2.13 0.16 8.39 6.16-11.52</td>
<td>2.60 0.18 13.44 9.45-19.11</td>
</tr>
</tbody>
</table>

Base category for single substance user model: in year 7 or 8, has not been recently drunk or used other drugs, does not have a parent, sibling, or close peer who smokes tobacco.
Base category for co-user model: male, in year 7 or 8, has not been recently drunk or used other drugs, does not have a sibling, or close peer who smokes tobacco.
All variables included in the model are significant at the $p < .05$ level, variables in bold denotes that the effect is significantly different across outcomes at, $p < .05$. 

106
The model coefficients indicate that female gender, which was significantly related to an increase in the risk of being a tobacco user in the previous model, is no longer significant once risk factors relating to smoking among significant others are added. However, just as previous research has supported the link between male sex and co-consumption (e.g. Guxens et al. 2007; Penetar et al. 2005; Victoir et al. 2007) more clearly than the relationship of sex to tobacco use, the effect of being female is still significant for co-consumption in the second model. Specifically, the model indicates that the risk of being a co-user is 60% lower for girls than for boys.

The positive effect of being in year 9 for co-consumption is also no longer significant, but the effect of the two oldest year groups is still significant. The positive effect of the ever drinker variable is now no longer significant for either outcome although the effect of being drunk in the past month is still significant even though the odds ratio for each model has decreased. Currently using other drugs is no longer significantly related to the use of just tobacco when smoking among others is controlled for in the model but the strong positive effect for co-use is still apparent with a 13 fold increase in risk of being a co-user for those who use other drugs. Having regular visitors to the house who smoked tobacco had a positive effect but this failed to reach significance for either outcome.

Having a parent who smokes tobacco had a significant positive effect on tobacco-only use, although it was not significant for tobacco and cannabis use. This is perhaps contradictory to previous research suggesting that parental modelling of tobacco use may be important for the use of cannabis or alcohol (e.g. Li et al., 2002). However the small effect, and non-significant effect for co-use, may be an artefact of the inclusion of sibling and peer smoking, which Li et al. noted may be more important for adolescent tobacco and cannabis use than parental smoking. Indeed, having a sibling who smokes cigarettes represented a significant positive increase in risk for both outcomes. Although the increase in risk was greater for co-users (a 2.7 fold increase in risk) than for single substance users (1.8 fold increase), the difference in effect was not significantly different across the models. The survey also gave participants the option to say they did not want to answer this question or that they did not have a younger or older sibling. Those pupils who did not want to say if their sibling smokes, or who did not have siblings, had a two-fold increase in the likelihood of reporting use of tobacco and cannabis. This effect was non-significant for tobacco-only use.

Much like previous research has suggested (e.g. Branstetter et al., 2011), smoking among peers seems to have the strongest influence. Having a close peer who smokes tobacco represented just over an eight-fold increase in the odds of being a tobacco-only user,
compared to a non-user. For the co-use outcome, the risk was just over 13 times greater for those who reported having close peers who smoked.

6.3.4 Stage 3: Co-consumption, school and neighbourhood factors.

In the third model, school and neighbourhood factors were added. The school variables were pupil composition (e.g. proportion of pupils eligible for free school meals and pupils with English not as a first language) and school type (e.g. community, academy or foundation school). The neighbourhood risk factors related to beliefs about how easy the participant thought it was to get hold of tobacco. This included the ease at which tobacco could be bought in local shops or obtained from other sources and likewise how easy it was to obtain cannabis in the local area. The neighbourhood variables also included the percentage of young people in the local area who resided in income deprived households. Table 6.4 shows the results of the third model.

When stage three variables were added to the model, those variables included in previous stages were still significant. The changes in risk will be discussed in the final section (6.5) but here I detail only the factors specifically added to the model at this stage. The perceptions of easy access to tobacco in local shops as well as easy access to tobacco from sources other than shops were both non-significant predictors of co-consumption although there appeared to be a positive trend in effect. This non-significant effect may be explained by the substantial proportion (39.1%, n = 1,757) of the overall sample who believed tobacco was easy to access in shops and the overwhelming majority (80.1%, n = 3,171) who thought it was easy to get tobacco without going to shops. It may be that the widespread belief among smokers and non-smokers alike, that it is easy to buy cigarettes meant that it was not a driving factor of usage. Perceiving access to tobacco to be easy had a non-significant effect for either tobacco-only or co-use. The perceived ease of access to cannabis however, was a significant predictor for reporting current co-use and increased the odds by more than 50%.

The IDACI score, representing the percentage of young people in the local area (at LSOA level) that live in income deprived households, was categorised into quartiles and added to the model, with those in the least deprived areas added as the base category. There appeared to be a significant positive effect (a 1.8 fold increase) of living in an area with the highest proportion of income deprived households for co-consumption. A positive effect was also found for tobacco-only use but this was non-significant. It should be noted that there are a large number of pupils who were unwilling or unable to reveal their postcode of
residence in the survey and interestingly, this group of pupils exhibited increased odds for co-use.

**Table 6.4** Results of model 3 – Individual characteristics, smoking among close others, and school and neighbourhood factors

<table>
<thead>
<tr>
<th>Variable</th>
<th>Current use of tobacco-only Logit</th>
<th>SE</th>
<th>OR</th>
<th>95% Confidence Interval</th>
<th>Current use of tobacco AND cannabis Logit</th>
<th>SE</th>
<th>OR</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-5.45</td>
<td>0.28</td>
<td></td>
<td></td>
<td>-6.41</td>
<td>0.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girl</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>-0.84</td>
<td>0.15</td>
<td>0.43</td>
<td>0.32-0.58</td>
</tr>
<tr>
<td>Year 9</td>
<td>0.90</td>
<td>0.29</td>
<td>2.45</td>
<td>1.38-4.36</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Year 10</td>
<td>0.98</td>
<td>0.28</td>
<td>2.66</td>
<td>1.54-4.58</td>
<td>0.92</td>
<td>0.22</td>
<td>2.51</td>
<td>1.65-3.83</td>
</tr>
<tr>
<td>Year 11</td>
<td>1.27</td>
<td>0.27</td>
<td>3.58</td>
<td>2.09-6.12</td>
<td>1.22</td>
<td>0.20</td>
<td>3.39</td>
<td>2.26-5.09</td>
</tr>
<tr>
<td>Drunk in past month</td>
<td><strong>1.23</strong></td>
<td><strong>0.15</strong></td>
<td><strong>3.42</strong></td>
<td><strong>2.53-4.63</strong></td>
<td><strong>1.82</strong></td>
<td><strong>0.17</strong></td>
<td><strong>6.16</strong></td>
<td><strong>4.39-8.65</strong></td>
</tr>
<tr>
<td>Current other drug use</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>2.55</td>
<td>0.18</td>
<td>12.84</td>
<td>8.98-18.36</td>
</tr>
<tr>
<td>At least one parent smokes tobacco</td>
<td>0.38</td>
<td>0.14</td>
<td>1.47</td>
<td>1.11-1.94</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>At least one sibling smokes tobacco</td>
<td>0.59</td>
<td>0.15</td>
<td>1.81</td>
<td>1.34-2.44</td>
<td>0.91</td>
<td>0.16</td>
<td>2.49</td>
<td>1.82-3.41</td>
</tr>
<tr>
<td>Did not want to answer if siblings smoke</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>0.66</td>
<td>0.29</td>
<td>1.93</td>
<td>1.10-3.39</td>
</tr>
<tr>
<td>Close peers smoke tobacco</td>
<td>2.10</td>
<td>0.16</td>
<td>8.12</td>
<td>5.90-11.18</td>
<td>2.50</td>
<td>0.18</td>
<td>12.2</td>
<td>8.53-17.39</td>
</tr>
<tr>
<td>Belief that it is easy to get cannabis in the local area</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>IDACI fourth quartile (19%-63% income deprived households)</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Residential area income deprivation unknown</td>
<td>0.35</td>
<td>0.16</td>
<td>1.418</td>
<td>1.04-1.93</td>
<td>0.65</td>
<td>0.17</td>
<td>1.91</td>
<td>1.37-2.66</td>
</tr>
</tbody>
</table>

Base category for tobacco-only use model: in year 7 or 8, has not been drunk in the past month, does not have a parent, sibling or close peer who smokes, and where residential area income deprivation was known.

Base category for co-user model: male, in year 7, 8 or 9, has not been recently drunk or used other drugs, does not have a sibling or close peer who smokes, believes it is difficult to get hold of cannabis in the local area and lives in an area where less than 19% of the households are income deprived.

All variables included in the model are significant at the *p* < .05 level, variables in bold denotes that the effect is significantly different across outcomes at, *p* < .05.

Quartiles two and three were taken out of the model and added to the base category because they failed to reach significance but it is important to mention the trend that appeared in the model when the quartiles were added separately. Whilst the fourth quartile showed a positive effect, quartiles two and three showed a negative effect indicating that compared to those living in the least income deprived households, those who resided in slightly more deprived areas (quartiles two or three) were less likely to be tobacco-only users or co-users. However, those in the most deprived areas were more likely to be tobacco-only or co-users. Whilst the U-shaped curve was not significant, it is worth noting this potential relationship for future work. When added to the model, odds ratios for the proportion of pupils eligible for free school meals, proportion of pupils with English not as
a first language and school type (e.g. community, academy or foundation school) were very small and none reached significance levels. To explore if the school factor effects were explained by variables already in the model (e.g. cancelled out by neighbourhood effect) the school factors were also added to a null model but this also showed that the school factors had no effect on tobacco-only use or co-consumption. As a result, these factors were not included in the final model. Stage three represented the final cluster of risk factors to be added to the multinomial model and in the next section I discuss the overall results and their implications for future research and intervention.

### 6.4 Micro and macro contexts of tobacco and cannabis co-consumption

The multinomial, multilevel, modelling of tobacco and cannabis use among 4,499 pupils in 12 schools alerts us to the possibility of micro and macro contexts that are unique to co-users compared to tobacco-only users. Co-consumption appears to be important for boys more so than girls. The influence of sex on tobacco use was non-significant in model two and in the final model, indicating that sex may not be a useful identifier of tobacco use. The effect of being female in the co-use outcome, though, remained in the final model and was associated with a decrease in risk of reporting current co-consumption by around 60%. This indicates that co-consumption is more important for boys compared to girls. In the UK it has recently been acknowledged that the gender gap in smoking prevalence is shrinking (Fuller, 2013), but the results here suggest that significant differences still remain for tobacco and cannabis consumption, and public health workers need to acknowledge that published gender-specific smoking prevalence data may fail to recognise many male smokers who are co-consuming cannabis.

The risk of using tobacco as well as co-using tobacco and cannabis increases with age. In the final model, as year group increases, there is also an increased risk of tobacco use and co-consumption. The odds of reporting tobacco-only use was increased for those in years 9, 10 and 11; representing nearly a 3.6 fold increase for those in year 11 compared to pupils in years 7 and 8. For co-use there was an increase in odds for those in years 10 and 11 and the odds appear to be slightly smaller than for the tobacco-only users although there was no significant difference in effect of year group across the two outcomes.

There appears to be a significant effect of recent (past month) experiences of being drunk related to both outcomes. Reporting being drunk at least once in the past month was significantly related to a 3.4 fold increase in odds of reporting tobacco use and this effect was significantly larger for the reporting of current co-consumption (a 6.1 fold increase in risk for past month drinkers). The significance of this factor is perhaps expected given that
the co-occurrence of alcohol, tobacco and cannabis use has been implicated in international samples of young people (EMCDDA 2009). The most important factor for co-consumption, according to the final model, is the current use of other drugs. Current use of drugs other than tobacco, cannabis, or alcohol was significantly related to just under a 13 fold increase in the risk of being a co-consumer compared to a non-user of either tobacco or cannabis. It is noteworthy that whilst current use of other drugs was a significant predictor of tobacco-only use in the initial model, it became non-significant once tobacco smoking among others was added to the model. It would be useful to assess whether the effect is related to co-consumption generally or if it is related specifically to the use of cannabis. Unfortunately with the small number of cannabis-only users ($n=53$) it was not possible to explore this with the current dataset.

The relationship of smoking among significant others (e.g. parents, siblings and close-friends) for tobacco-only use remained in the final model. Having a parent who smoked was associated with a 46% increase in risk and having a sibling who smoked was associated with an 80% increase in risk. Having a parent who smoked was not a significant predictor for co-consumption although the effect of having at least one sibling who smoked was significantly related to just under a 2.5 times increase in odds of being a co-consumer. As in the previous iterations of the model, opting to not answer this question, or not having a sibling was also significantly positively associated with an increase in risk of reporting co-consumption. Previous authors have suggested that affiliation with users offers opportunities for socialisation into smoking subcultures and also opens up avenues for access to tobacco (and cannabis). Having a close peer (either a boy/girl friend or a best friend) who smokes also increased the odds of a respondent reporting tobacco-only use or co-consumption. This was the strongest predictor for tobacco-only use with an 8 fold increase in risk. For co-consumers, the effect was even greater with a 12 fold increase in odds if the participant reported close peer smoking. The effect was not significantly different across the two outcomes.

The strong connections with the behaviours of close peers and siblings suggest that tackling tobacco and cannabis consumption will fail if a purely individual approach is taken. The results shown here and elsewhere in the literature provide evidence that projects based around social norms and wider peer networks (McAlaney, Bewick, & Bauerle, 2010) may be more likely to succeed. Interestingly, increased odds of both tobacco smoking and tobacco added cannabis smoking were reported for those unwilling to say whether siblings smoked and it may be that adolescents may feel uncomfortable answering these questions when they themselves are tobacco or cannabis users.
Perceived local access to cannabis was important for co-consumers suggesting that interventions to disrupt the supply of cannabis should be made visible and successes of these interventions should be publicised in the local area. Equally, perceptions of tobacco access in shops were unrelated to either outcome and this may be an artefact of a widespread belief that it is easy to access. Publicising successful operations to tackle illicit tobacco supply to underage young people may also help to reduce the perceived availability of tobacco. Residing in a neighbourhood where there are more income deprived households was associated with an increase in risk of using tobacco and cannabis, although this effect is not present for tobacco-only. Despite reassurances about anonymity and confidentiality, over a quarter of participants did not provide valid postcodes with which to assess their residential area deprivation. Participants may have felt uneasy about supplying this information and this may have been particularly so for those who revealed that they were tobacco or cannabis users. It is, of course, possible that some participants simply did not know their postcode. There appears to be no effect for school deprivation and ethnicity status using the free school meal and English not as a first language indicators, nor was the variable denoting school type. The lack of effect here may be an artefact of the small number of schools taking part or reflect other contextual factors that may be more important than these school wide factors.

This modelling was undertaken in a number of stages to identify potentially important risk factor groups. The results indicate that specific risk factors within these groups of characteristics (e.g. recent experience with alcohol and other drugs in stage one, as well as peer involvement with tobacco in stage two) are important for co-use. Table 6.5 shows the amount of variance explained by each stage of the modelling. Using the method described by Snijder and Bosker (2012, pp 305), the amount of variance explained by a model with just individual characteristics included was 20.97%. The second model represented a modest improvement in explanatory power with 25.82% of the variance being explained by individual characteristics plus smoking among family and friends. The overall, final model incorporating individual characteristics, family and friend’s smoking and neighbourhood factors explained 26.8% of the variance in the outcome variables. This indicates that there is still a large majority (just under three quarters) of the variance still unaccounted for and may be related to other factors not considered in the current analysis.

Finally, as mentioned above, school was used as a level in the multinominal multilevel models to account for the clustering of data. However, at all stages of modelling apart from in the null model, the variance at this school level was non-significant (see Table 6.5).
Table 6.5 Explained variance (including school level variance) for co-use models

<table>
<thead>
<tr>
<th>Model</th>
<th>Explained variance</th>
<th>School variance (Tobacco-only outcome*)</th>
<th>School variance (Co-user outcome)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null model</td>
<td>10.94%</td>
<td>0.194 (0.105)</td>
<td>0.319 (0.153)**</td>
</tr>
<tr>
<td>Model 1 (Individual factors)</td>
<td>20.97%</td>
<td>0.13 (0.080)</td>
<td>0.050 (0.046)</td>
</tr>
<tr>
<td>Model 2 (Model 1 + the influence of friends and family)</td>
<td>25.82%</td>
<td>0.115 (0.075)</td>
<td>0.008 (0.020)</td>
</tr>
<tr>
<td>Model 3 (Model 2 + School and neighbourhood factors)</td>
<td>26.80%</td>
<td>0.110 (0.073)</td>
<td>0.036 (0.003)</td>
</tr>
</tbody>
</table>

* Figures in brackets denote the standard error for the variance.
** denotes a significant difference ($p < 0.05$) in school effect for outcome and model.

The lack of support for neighbourhood and school factors, as well as a difference across schools, may be related to the issues of sample size and bias inherent in the dataset. Despite the small sample size, the school survey study has alerted us to some of the potential risk factors for co-consumption; particularly around gender, age, involvement with alcohol and other drugs and peer involvement with tobacco.

6.5 Concluding comments – examining tobacco-for-cannabis use

In this chapter, I have established a broad-brush picture of co-consumption among young people aged 11-15 in 12 secondary schools. Descriptive analyses and a multinomial multilevel logistic regression model were used to unpack the prevalence of tobacco and cannabis use among young people and to identify whether key risk factors associated with tobacco and cannabis influence the co-consumption of these substances differently to the use of tobacco-only. The results of this quantitative analysis will be valuable in attempts to monitor cannabis and tobacco use as it has suggested that clear and specific wording is necessary to elicit full accounts of tobacco and cannabis use. Specifically, the descriptive results indicate that some cannabis users categorically do not consume tobacco, either in cigarettes or with cannabis. Of those who do add tobacco, few would consider themselves to be smokers and this highlights the importance of asking young people about specific tobacco and cannabis use practices to confidently determine those who use tobacco (or cannabis) and those who do not. The modelling results tell us that there may be significant differences in how individual, micro and macro contexts are associated with tobacco and co-consumption behaviours and this will be useful in supporting future intervention work that focuses on co-users rather than tobacco-only users.

Over the next three chapters I will also draw on narratives of young people to explore further the linkages between tobacco and cannabis for young people. The importance of asking about specific tobacco and cannabis practices is explored further in Chapter Seven
where I focus on a discussion of what makes a smoker; how tobacco use is identified and how different categories of smoker are described by young people. I also explore how tobacco-for-cannabis use influences young people’s conceptions of their tobacco use as ‘smoking’. In Chapter Eight I discuss the awareness of tobacco and cannabis harms and specific reasons young people give for mixing tobacco and cannabis together. In particular I consider the benefits of using tobacco-for-cannabis consumption. In the final results chapter (Chapter Nine) I address the settings of co-use and the influence of tobacco and cannabis practices in obtaining the substances and using them in public. These chapters will enable us to consider the nuanced interplay of cannabis and tobacco practices.
Chapter Seven: What makes a smoker?

Having established that patterns of tobacco-for-cigarettes and tobacco-for-cannabis may be different, attention now turns to exploring the phenomenon of calling oneself a smoker. In this chapter I examine reasoning behind the identities of smoking. Specifically I attempt to address the research question; How are smoking identities negotiated in relation to tobacco-for-cigarettes and tobacco-for-cannabis use? I draw mostly on findings from the youth club interview study to consider these experiences and discourses in detail, although some of the school study results are also useful to consider. I begin by examining the narratives around categorisation of tobacco and cannabis use practices. Throughout the chapter, I explore the strategies that young people use to qualify their categorisations of tobacco and cannabis smoking as well as differences in categorisations of each substance.

7.1 Adopting the tobacco user identity

The literature review in Chapter Three (section 3.1.1 - detecting smoking), as well as the results in the previous chapter suggest young people’s understanding of what constitutes tobacco smoking and the different types of tobacco smoker may be different to how smokers are categorised by researchers in surveys. Specifically, it was not until multiple questioning was asked around tobacco use in the past seven days and use of tobacco in joints that a hidden cohort of tobacco users became identified in the current work. The simple questioning around smoking status where young people who smoke tobacco are expected to identify with the statement ‘I smoke now and again’ or ‘I often smoke’ was insufficient in capturing all of the current tobacco smokers. As such, there may be alternative ways in which young people define their smoking status. I asked participants, regardless of their smoking experiences to tell me whether there were different types of smoker and to describe what constituted tobacco smoking. The narratives of participants revealed that there were no rigid rules for how tobacco use was defined among young people and in the following subsections I explore three themes accounting for avoiding and embracing smoker identities.
7.1.1 Smoking but not a smoker

Whilst this chapter primarily focuses on results of the qualitative study, the results from the school study (with a different sample of participants) may help to introduce the discussion of identifying as a smoker as the results are illustrative of the argument that the frequency and quantity of cigarettes needed to be consumed before young people consider themselves to be smokers is complex. Figure 7.1 shows the identification as a smoker by smoking status reported in the self-report questionnaire by sex.

**Figure 7.1** Self-reported smoking status and identifying as a smoker, school survey

![Figure 7.1](image)

Almost nine in ten pupils (89.5%, n = 213) said they were smokers if they reported regular use of tobacco, that is smoking one or more cigarettes per week. However, less than two in ten pupils who reported occasionally smoking cigarettes (e.g. sharing or inhaling smoke from someone else’s cigarettes, but less than one whole cigarette a week) said that they would consider themselves to be smokers. Interestingly over 10% of those (n = 15) who report ex-use of tobacco said they were smokers and a minority (1.5%, n = 8) said they were smokers even though they reported only trying tobacco in the past. This may be a result of inconsistent or fabricated reporting or it may be that, for some, the identity as a smoker is desirable and young people can claim this identity without the need to display current tobacco smoking behaviours. Importantly though, a large proportion (more than three quarters) of those who do currently smoke but smoke less than once a week seem to dismiss their identities as smokers. The quantitative data helps to illustrate that the mismatch between tobacco use and being a smoker exists but it is only through further exploration of the narrative data that we can begin to understand this nuanced process and ask young smokers to describe in their own words, what makes a smoker.
It became apparent from the interviews that having a cigarette with friends did not automatically constitute the adoption of the smoker identity. Luke, who has tried tobacco once or twice, suggests that there may be a distinct pattern of smoking for proper smokers which entails possessing a supply of or at least an access route to cigarettes; ‘you've got sort of like social so like if they're out with friends who are doing it they will have a bit and not like, for fully smokers they have their own and they get access to them’ (Luke, tried tobacco). Thus fully smoking is different to those who smoke other people’s cigarettes in social situations; which constitutes a sort of semi-committed ‘occasional’ smoker. An example of this also comes from Rhys, who uses both cannabis and tobacco, particularly with friends but he still distances himself from being a 'full' smoker;

| Int | Ok um so can you tell me a bit about your your tobacco experience, what kind of smokers are you? |
| Rhys | Like I didn't I didn't like full on I sometimes buy it (tobacco) for myself but |
| Int | Right |
| Rhys | Like I don't do it over and over again |
| Ricky | Yeh like |
| Rhys | Stop laughing Rory |
| Ricky | As I said I started socially so I would just get it off other people every now and then but then I got into it and then I had my own |

**Rhys (co-user) and Ricky (co-user)**

Rhys is keen to assert that he is not a full smoker, although he buys his own cigarettes occasionally. He originally stated that he was an ex-smoker, but his friends laughed and contested this and as a result Rhys’s account of his current encounters with tobacco is rather vague; he sometimes smokes, every now and then, but he does not do it over and over again. Ricky also emphasises that his brief, and non-committal, encounters with tobacco involved ‘just’ getting them from other people and this was a step away from fully smoking. This is not a particularly novel finding in itself as others (e.g. Johnson, Lovato, et al., 2003; MacFadyen et al., 2003) have reported that social and sporadic tobacco use may be beneficial to young people’s social identities but frequent tobacco use (which is associated with a smoker identity) is not. However, what is illustrated by the accounts in the current study is how the young people justify these identity decisions and avoidance of the transition from social smoker to smoker.

Not all of the young people who smoked cigarettes avoided committing to a smoker identity and participants such as Ola, who smokes around 20 cigarettes each day, discussed how her smoking was different to other young people who were social smokers;
Social smokers are not smokers, according to these participants, and Ola distances herself and her friends from these non-smokers by noting that smokers, like themselves, smoke the whole time. Ola also made the link between buying cigarettes and the committed identity. For the most part though, young tobacco users were able to avoid identifying themselves as fully committed smokers by emphasising that they did not need tobacco. In the next extract Georgie indicates that if you can go without smoking tobacco then you can legitimately call yourself a non-smoker, even if you use tobacco.

The process of becoming a smoker therefore entails feeling like you need a cigarette more and more frequently and resisting the need to smoke was a powerful tool in negotiating a non-smoker identity. This is similar to previous research (e.g. Bottorff et al., 2004; Johnson, Bottorff, et al., 2003), in which young people emphasised their ability of resisting the need to smoke as a strategy to allow them to selectively use the smoker identity. This is also in line with previous research by Johnson, Lovato et al. (2003) in Canada who identified that many young people who used tobacco often indicated that they were non-smokers who happened to smoke in certain social circumstances but crucially they resist the smoker ‘proper’ identity because they could go without tobacco.
7.1.2 When you must be a smoker

An important facet of the transition to smoker status was that people could be non-smokers up to a point based on the number of cigarettes they smoked. ‘I think between 30 and 50 (a week), you'd be a smoker’ (Tania, tried tobacco). The narratives in the current study bear resemblance to work by previous authors (e.g. MacFadyen et al., 2003; Janne Scheffels & Schou, 2007) who indicate that young people tend not to consider themselves to be tobacco smokers unless they smoke large quantities of cigarettes and regularly. Some narratives in the present study demonstrate that people are free to avoid the label of smoker even if they smoke daily; ‘I think say more than like three a day I'd say, you can not call yourself a smoker if you did that’ (Neville, never used either substance). Neville says that people who smoke less than three a day have the option to call themselves smokers if they want to but they did not need to. The number and frequency of cigarettes necessary to require the tobacco smoker identify was somewhat arbitrary as some participants said a pack a week was the amount needed to be a smoker, whilst others said 50 cigarettes a week. However, for some young people, particularly those who did not use tobacco at all, it seemed more difficult to see a rationale for avoiding the tobacco user identity; as far as they were concerned, if you smoke, you are a smoker. This can be seen in the following extract, as a disagreement takes place between Tammy and Tania;

Tania  Yeh it wasn't uh it wasn't really addicted or anything just having fun with my friends
Int    Ok so how long do you think that you were smoking for, was it like six months or a year or?
Tania  No it was just like I dunno like I dunno just on and off
Int    Ok so would you say that you were a smoker?
Tania  No
Int    Ok
Tania  It's like if you're like addicted then aren't ya
Int    If you so if you're a smoker, you're addicted?
Tania  Yeh
Int    Yeh? And do you agree with that? (to Tammy)
Tammy Mm no because if you smoked it means you smoke
Tania  Yeh but if you're a smoker you do it all the time don't ya?
Tammy Yeh I agree with that

Tania believed her limited experience of tobacco use meant she was not required to say she was a tobacco smoker but Tammy challenged this saying if you smoke, you smoke. Although Tammy then agreed that a smoker smoked all of the time, the discrepancy in
beliefs was apparent in other narratives. Kevin, a non-smoker who has tried cigarettes once or twice, believes that although smokers may claim to be social smokers, they are inevitably smokers;

Kevin: I mean even if they smoke every other day it's like, you're a smoker at the end of the day that's what I personally think'

Int: Right, do you think that they think they're a smoker so somebody that smokes not every day but like every other day do you think they would consider themselves to be a smoker?

Kim: No

Int: No? Kat: No because they wouldn't want to admit it really

Kim: Yeh yeh they wouldn't would they

Kevin: They would probably class themselves as social smokers

Kat (never used either substance), Kevin (tried tobacco), and Kim (never used either substance)

Perhaps for Tammy who had never smoked and Kevin who had tried tobacco once or twice but had decided not to smoke again, there was little need to negotiate a social or full smoker boundary. There is empathy, or at least understanding, that smokers would not be keen to admit being smokers, as Kat suggests, and it appears that identifying as a special class of smoker allows them to partially distance themselves from being a full smoker.

It appears from the results so far in this chapter that young people who use tobacco can draw on the strategy of loosely defining what counts as a smoker so that they can avoid a full, committed smoker identity. This ambiguity may be important in itself as it indicates that young tobacco users have volition, and some fluidity, in negotiating their own transitions to being a smoker. It is important to note that not all young people in the study avoided calling themselves smokers, and some even embraced their smoker identities. There is therefore flexibility inherent in adopting a tobacco user identity. If experimental or light users want to call themselves smokers they can but they do not have to, however once users reach the threshold then they have no alternative but to say they are smokers. Furthermore, aspects of volition and agency also permeated the acceptance of full smoker identities. I turn now to examine narratives of those who appear to embrace their tobacco smoking identities

### 7.1.3 Embracing the smoker identity

A handful of participants seemed to acknowledge their frequent smoking and embraced the fact that they could not go without smoking tobacco for long periods of time; ‘they only do
it like at parties or gatherings it's just for socialising but they wouldn't smoke out like normally whereas we would smoke the whole time’ (Ola, cigarettes only). For Ola, this was about being a proper smoker and she distanced herself from those who were not fully embracing the smoker identity. One other participant who has embraced the smoker identity is Steve, who uses both tobacco cigarettes and cannabis joints. In contrast to those who resign themselves to being unable to resist tobacco, it appears that Steve has made a conscious decision to accept that he is a smoker and argues that young people are responsible for their own uptake of the label rather than being forced to adopt the label by other people.

Steve Yeh, um I would class a smoker as somebody who actually knows what they are getting themselves into
Int Right
Steve Who smokes more than just once or twice to try it and you know will smoke on a regular occasion or far apart but they will do it again in the future sort of thing
Int Ok so it's that kind of intention to smoke again that makes you a smoker
Steve Yeh

Steve (co-user)

Steve offers an explanation of the process regarding adopting the identity which is inherently volitional as the smoker decides to claim the identity only after holding experience of tobacco use and becoming aware of the risks; weighing up whether smoking is for them. Steve embraced the identity of being a smoker and discussed at length that his experience with tobacco meant there was no doubt he was a smoker. This is important because it serves to position Steve, not as no longer in control, but rather that he chose to become a full smoker.

The discussion so far in this chapter has surrounded identities of smoking related to tobacco cigarette use and the results illustrate that tobacco smoker identities are complex with those who use tobacco frequently, even daily, able to resist identifying as a smoker. It is important to consider whether tobacco used for cannabis joint smoking is also subject to the same sort of strategies which allow users to negate their smoking.
7.2 Cannabis use identities: more clear cut?

In the following section I explore how participants describe their cannabis use and the impact that cannabis joint use practices have for tobacco smoker identities. First it is important to consider whether being a cannabis user is subject to the same rules as tobacco for identity management and whether consumers of cannabis attempt to negate their identities as cannabis smokers.

7.2.1 I am a cannabis smoker

Some participants indicated that similarly to tobacco use, there may be a distinction between recreational cannabis use and heavier addicted use; ‘It’s kind of like the same, someone who does it all the time and someone who does it now and again at parties’ Ola (cigarettes only). Whilst participants often made a distinction between heavier, addicted use, and less frequent, recreational smoking of cannabis, there appeared to be a single definition of the cannabis smoker identity for users; ‘it’s there are less people that smoke cannabis so the people who do are more ‘I smoke cannabis’ sort of thing’ (Steve, co-user).

Steve says there are less people that smoke cannabis, perhaps suggesting that there is less diversity among users, and so it is clearer in contrast to tobacco smoking.

In section 7.1 I highlighted strategies used by participants whereby (unless they smoked tobacco often and were addicted) they could avoid calling themselves smokers if they noted sporadic and social use. Similarly, some non-smokers of cannabis were empathetic to the potential avoidance of a cannabis smoker identity; ‘Because I don't know, I don't think that they would consider themselves (cannabis) smokers because they don't do it, they might not do it every single day they might do it once a week or something’ Veronica (never used either substance). It appears that the infrequency of opportunities to use cannabis though, may make it difficult for cannabis users to attain an identity akin to being a full tobacco smoker.

<table>
<thead>
<tr>
<th>Int</th>
<th>Ok and is it the same kind of thing like would people say they are social cannabis smokers or</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olive</td>
<td>I dunno</td>
</tr>
<tr>
<td>Oona</td>
<td>They don't say it</td>
</tr>
<tr>
<td>Ola</td>
<td>They don't really name that</td>
</tr>
<tr>
<td>Int</td>
<td>Right</td>
</tr>
<tr>
<td>Ola</td>
<td>They just say like they smoke it at only at parties like they don't say social smokers of it</td>
</tr>
</tbody>
</table>

Ola (cigarettes only), Olive (cigarettes only), and Oona (cigarettes only)
Importantly for cannabis use, is that social and recreational use is implied as the usual and expected practice (and what presumably constitutes being a cannabis smoker) rather than needing to be specified as a specific identity like the social smoker identity for tobacco use. Moreover, for most participants, with the exception of one or two young people like Veronica above, cannabis smoker identities can be claimed even if encounters with cannabis are infrequent. This highlights an important similarity between tobacco and cannabis; the use of ambiguity and uncertainty in defining the categories of smoking behaviours so that users can negotiate their identities as necessary. I turn now to discuss the depictions of tobacco-for-cannabis use, as this may be a further avenue for young people to use tobacco but avoid calling themselves tobacco smokers.

7.2.2 A (tobacco) cigarette makes a smoker; a joint is different

As discussed above, tobacco users can avoid the smoker identity if they use tobacco infrequently. Therefore, the fact that encounters with cannabis are usually social and infrequent may be important for young people’s negotiations and justifications of avoiding a tobacco smoker identity (Haines-Saah et al., 2014). Haines-Saah et al (2014) found that those participants who used cannabis joints were not usually negative towards tobacco use, although they often self-identified as non-smokers or social-smokers. The belief that young people do not see joints as smoking tobacco appeared to surface in several interviews in the current study. In the next extract I ask participants about smoker identities for cannabis joint smokers:

Int …you're not um current tobacco smokers (to Ed and Ethan), but you smoke cannabis with tobacco, would you consider yourselves to be smokers?

Ethan Yeh
Ed Yeh probably
Int Yeh?
Ethan Well, (hesitates) I wouldn't
Elliot Well, I've got a friend who only smokes weed and doesn't smoke tobacco and he tells people he doesn't smoke
Int Ok, and he doesn't mix it?
Elliot Yeh he mixes it
Int He mixes it right? but he wouldn't consider himself a smoker despite mixing?
Elliot No

Ed (co-user), Elliot (co-user), and Ethan (co-user)

There is a hesitation in Ethan’s account as he initially says he is a smoker but then changes his mind before Elliot interjects with an account of a friend who smokes tobacco in joints
but says he is not a smoker because he does not smoke tobacco at other times. Most of these accounts of someone refuting their tobacco smoker identity were about friends rather than participants themselves arguing against their smoking involvement; ‘I know someone that um doesn't smoke at all but they still put baccy in their joints’ (Georgie, co-user). However, some participants gave their own account of refuting the smoker identity. In the following extract Andy claims that he is not a tobacco smoker despite using tobacco in his joints;

Int    So Andy, you said that you you don't really use tobacco
Andy   Nah, but... I like smokin weed.
Int    Right ok so do you use tobacco when you're smoking weed?
Andy   Yeh
Int    Right and you still wouldn't say you're a smoker?
Andy   No, cos like I'm mixing it with weed so it's not as bad
Adam   And people don't get like cannabis that much [Andy: Yeh] so maybe once a month so
Adam    (co-user) and Andy (joints only)

Andy rationalises this decision not to call himself a smoker because he believes that mixing tobacco with cannabis is not as bad, presumably in terms of health effects, as smoking tobacco on its own. Perhaps, for Andy, acknowledging that he is a tobacco smoker would mean acknowledging that he is susceptible to the health risks of tobacco use and this is the motivation behind his decision to use the identity of a non-smoker. For these boys, you have to smoke cigarettes to be a smoker.

Andy    Yeh I'd say like a smoker is someone who smokes cigarettes
Adam    But then I'd say I would class them as a smoker
Int     You would?
Adam    But not in the same like league
Int     Ok
Andy    Yeh like two different categories
Adam    (co-user) and Andy (joints only)

Adam indicates some contention here in that he admits that cannabis joint users are smokers, but they are distinct from users of cigarettes; they are in different leagues. Andy also seems to concede that although tobacco-for-cannabis is smoking, it is not the same as tobacco-for-cigarettes. Other participants distinguished tobacco-for-cannabis as a unique form of tobacco use with its own identity.
For these participants, using tobacco-only for cannabis use meant that the consumer would not identify as a smoker because cigarette use constitutes smoking. The specific practice was neither cannabis nor tobacco smoking but instead it was a ‘hybrid’ (Neville, never used either substance). Neville coined the term hybrid to describe cannabis and tobacco preparations and emphasised that the combination meant that users did not have to identify their joints as either cannabis smoking or tobacco smoking; ‘Like a bit of both [Int: Right] neither here nor there’ Another example of the difference between tobacco-for-cannabis and tobacco-for-cigarette use comes from a group of co-users who are adamant that only those who use tobacco cigarettes should call themselves smokers.

<table>
<thead>
<tr>
<th>Int</th>
<th>Ok so those people that like don't smoke cigarettes but put tobacco in their cannabis joints, do they see themselves as smokers or not?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ricky</td>
<td>Mmm no</td>
</tr>
<tr>
<td>Rory</td>
<td>They just like the wannabe ones like the</td>
</tr>
<tr>
<td>Int</td>
<td>They're just the wannabe ones?</td>
</tr>
<tr>
<td>Rory</td>
<td>Yeh they just wanna be hard, it's stupid</td>
</tr>
<tr>
<td>Int</td>
<td>So why do you think they don't say they are like tobacco smokers?</td>
</tr>
<tr>
<td>Rhys</td>
<td>Cos they don't see it as smoking tobacco they see it as smoking weed</td>
</tr>
</tbody>
</table>

_Rhys (co-user), Ricky (co-user), and Rory (co-user)_

Rory (co-user), like others who acknowledge their own smoker identities, appears to distance himself from what he terms are ‘wannabe’ smokers who do not smoke tobacco cigarettes but want to portray the image of being tough. Importantly, the ‘wannabes’ would rather identify as weed (cannabis) smokers instead of tobacco smokers. This illustrates that for those who are using a display of smoking to construct their desired social image, being a cannabis smoker may be more desirable as an identity than tobacco smoking.

These narratives, from both users and non-users, illustrate that tobacco-for-cigarettes and tobacco-for-cannabis are separate practices and particularly that a tobacco smoker is someone who uses tobacco specifically for cigarettes. The strategy to identify as a tobacco-for-cannabis user allowed the young people to negate their involvement with tobacco.

### 7.2.3 Tobacco is not the focus of cannabis use

In addition to accounts that tobacco-for-cannabis was a unique form of tobacco smoking, a prominent theme in the narratives was that young people negated this type of tobacco use by suggesting that tobacco was not the focus of, or the reason for their cannabis consumption; ‘you don't really notice the tobacco when you're having a joint, you mainly just notice the...marijuana’ (Georgie, co-user). In the next extract, Ola speaks of a friend...
who avoids the tobacco smoker identity and emphasises that her friend is strongly against smoking tobacco, despite using it for cannabis.

Ola    I don't understand it at all
Int    Ok do you two have any thoughts about why that might be?
Olive  I suppose because they probably don't see it as smoking?
Ola    No one really does
Olive  That's just a substance to add to what they actually want I guess
Ola    Cos they are not doing it for the tobacco
Olive  The thrill of smoking yeh
Int    Right
Olive  They are not wanting to get like what you get out of smoking they want what you get out of weed but then they are just using that as a substance to add into that to make it taste better I think?

Ola (cigarettes only) and Olive (cigarettes only)

The girls say that cannabis users ignore the tobacco because they are not using it for what they get out of tobacco use; they only want the effects of the cannabis. Perhaps this is why they ignore the tobacco. When I asked the girls why this person did not consider their tobacco-for-cannabis use to be smoking they suggested that no one really sees this form of tobacco use as tobacco smoking. Importantly, tobacco is seen as a filler, only used to make the consumption of cannabis more pleasant (e.g. to taste or smoke better).

7.3 Concluding comments - Identifying smokers

In this chapter I have explored the complexity of the tobacco smoker identity for those who use tobacco cigarettes and the added complexity that surrounds the use of tobacco-for-cannabis. This latter use was depicted by users and non-users alike as a distinct form of tobacco use that does not constitute smoking. It appears from the results of both the survey and the interview studies that young people can be current tobacco users but resist claiming a full smoker identity as it is laden with the expectation that they cannot control their consumption of tobacco. Instead, many young smokers adopt a social or partial smoker identity as long as they believed they could stop if they wanted to and so long as they were not smoking too often. The exact cut off point at which tobacco use, and to a lesser extent cannabis use, becomes full smoking was vague, perhaps deliberately so, and this meant that young people could claim the identity for certain circumstances and resist it in others.

The subjectivity and volition inherent in this process is important for young people to be free to negotiate their identities but this rather complicates the work of researchers or practitioners who may attempt to target smokers with their interventions as many of the target audience may be unreceptive if they do not consider themselves to be smokers.
The chapter also highlights that smokers adopt several strategies to negate their tobacco smoking status and it seems that there is a different approach to negating tobacco-for-cigarettes and tobacco-for-cannabis. Tobacco cigarette smokers draw on strategies to loosely define the criteria at which they must adopt the smoker identity; they do not have to commit to the tobacco smoker identity until they smoke a lot, know what they are getting into and are sure they want to. This did not seem to be the case for cannabis that was, in regards to adopting a user identity, much clearer. Tobacco-for-cannabis use was distinguished as a different class of tobacco use, a hybrid and this helped them to distance themselves from adopting a tobacco smoker identity. Those denying tobacco smoking for cannabis described how tobacco was not the focus of the consumption and so it was ignored.
Chapter Eight: Co-consumption explanations

In this chapter I consider the explanations young people give for using cannabis and tobacco and what young people believe are the implications, particularly surrounding the effects of using the two substances together in cannabis joints. This has been identified as something that needs further exploration as some research has reported that young people believe their tobacco use is safe if it is consumed with cannabis (Hight, 2004). Knowing more about these beliefs is important for understanding why some young people add tobacco to their cannabis preparations whilst being ostensibly anti-tobacco. It may also support targeting interventions to deliver accurate information about the harms of mixing tobacco and cannabis. As such, I specifically focus on research question two; How do belief systems surrounding the relationship between tobacco and cannabis influence their co-use? and I explore this question using mostly the narratives of young participants in the youth club interview study, although I also draw upon results from the school survey later in the chapter. The goal of this chapter is not, primarily, to highlight the awareness of harms for each substance, but it is important to consider how cannabis beliefs intercept the choices to use tobacco. I therefore focus on narratives explaining the reasons for mixing tobacco and cannabis together.

8.1 Awareness of tobacco and cannabis use

Compared to tobacco use harms, there is little published research examining the quality of information given to young people about cannabis harms (Faulkner et al., 2009; Haines-Saah et al., 2014). There is even less research available on whether, and how, young people make comparisons of tobacco and cannabis harms. However, the qualitative literature outlined in Chapter Two (e.g. Hight 2003; Amos et al. 2004) indicates that many cannabis users are somewhat anti-tobacco. The young people in the youth club study were confident in their understanding of tobacco harms and similar to findings in the established literature, participants mostly favoured cannabis over tobacco. They acknowledged the tobacco harm messages whilst emphasising the lack of clear guidance from doctors or other health providers about the risks of using cannabis. In some ways the young participants used this lack of clarity to condone their own and their peer’s use of cannabis whilst there was a more prominent absence of tolerance towards tobacco use. Moreover, there was evidence in some of the narratives, of a trade-off in rationalising cannabis use as not as bad as tobacco; a lesser of two evils. In the following sub-sections I outline these two themes of questioning the harms of cannabis as well as emphasising the relative harms of tobacco.
8.1.1 The certain harms of tobacco and the uncertainty of cannabis

Nearly all of the young people in the current study, regardless of smoking experience, reported knowledge of at least some tobacco health harms in the interviews and this often amounted to a generalised expectation that in addition to causing specific diseases, it harms the body; 'Um it causes cancer, it can damage your lungs really badly with tar on them, it can just like really like damage you inside' (Rory, co-user). Most participants described the potential for nicotine addiction, and that besides cancer, tobacco has serious detrimental effects on physical fitness and increases stress, even though increases in stress were unexpected 'I swear it like increases your stress levels even though it's not meant like people use it for de-stress' (Ola, tobacco smoker). Interestingly, the negative health aspects were almost always the first responses to questions asking what they knew about tobacco, for both users and non-users alike. However when I asked about cannabis, for users at least, it was often the enjoyable psychoactive properties that came to the fore;

Ash    It gets you out of your box
Int    Gets?
Ash    You out of your box [Int: gets you out of your box?] out of your head
Int    Ok
Aiden   Illegal
Andy    Good init? (giggles)
Int    Illegal
Andy    It might be illegal but its(.) good.

Adam (co-user), Aiden (co-user), Andy (joints only), and Ash (co-user)

Ash talks about escaping with cannabis use; 'it gets you out of your box’ as a desirable outcome. Although there is an awareness of the illegality of cannabis, Andy notes the contention that it has good properties in spite of being illegal. Other participants, particularly those who had not experienced the high of cannabis use, describe what they see more negatively than users do; ‘It messes with your head, it makes you paranoid, I know that like it makes your eyes go red and stuff and you like you always like shaky sometimes when people come up to you and I don't know, I've seen lots of symptoms’ Izzy (cigarettes only). Izzy notes that it is easy to tell when someone has used cannabis because their behaviour changes and their eyes become bloodshot. Moreover, Izzy’s choice of words ‘it messes with your head’ implies that the cannabis is a force that alters the mind; it is not something you can control. This is important because it takes the responsibility of a person’s actions away from the individual if they are consuming cannabis.

For others, particularly those who used cannabis, the harms of cannabis were only something they should concern themselves with if they smoked a lot of cannabis. In
another interview, two female participants, who currently use both tobacco cigarettes and cannabis joints, discussed their understanding of the potential for cannabis to be an addictive substance. Georgie believes, and substantiates her claim with her own research, that cannabis is not addictive but Gemma disagrees although finds it difficult to contend with Georgie’s research evidence;

Georgie: Yeh um I think it’s not a, I've been told and looked up that’s it’s not an addictive drug
Int: Ok
Gemma: But then I got told, not looked up but I got told that it was an addictive drug but it is something in it that you can get addicted to(.) I don't actually know what it is but you can like get addicted to it and its apparently really hard to get off it cos you always want it all the time

Georgie emphasises that her knowledge of cannabis as not addictive comes from two sources, one of which was a friend and the other was her own research. This substantiates her beliefs and perhaps permits her to rationalise her usage. Gemma on the other hand, is much vaguer about her sources of information. There might be something in cannabis, although she has not verified this by looking into it herself, that you can get addicted to.

For cannabis users in the current study, there appears to be a rationalisation of their consumption by undertaking their own study of cannabis harms, or connecting with peers who have done the research already. This is similar to arguments offered by Järvinen and Demant (2011) and Dermota et al (2013), that rather than being ignorant of health harms, substance users are often well-informed about risks and usually know more than non-users. However, to support their use, the young people in the study did not necessarily need to draw on definitive evidence that cannabis use was okay but rather they seemed to rationalise their use by drawing on a lack of definitive evidence that their cannabis use was not okay. Two participants, Caiden and Callum, appear to be unperturbed by any risks of using cannabis although they do acknowledge that if cannabis was used all day every day it ‘probably’ makes the user slow;
Int ... I think this is probably the first time in our interview that you've mentioned the health implications of cannabis use are you aware of anything to do with health?=

Caiden =Nah if you smoke a lot, all day every day, it probably makes you a bit slow but

Int Right?

Callum It probably does do a lot of=

Caiden =In the head

Callum Like if someone smoked it once a week, I don't think it would have any effect on you, like one of our friends *Phil* he [Caiden; Mmmm] does so much research into it it’s unbelievable

Caiden (co-user) and Callum (co-user)

Callum, however, is uncertain about the risks, declaring that cannabis probably influences the mind. However, he renounces his risk by stating his friend does a lot of research; which suggests that they feel protected; that if there were risks, they would hear about them from their friend. Callum (a co-user) compares the publicity that surrounds tobacco use against the absence of reporting of cannabis use harms but he notes that this may be due to the relatively higher number of tobacco users; ‘It's so much more publicised like you always get adverts about how bad smoking is for you cos mo much more people smoke cann sorry tobacco [Caiden; tobacco] than they do cannabis’. The contrasting message, and the implication of this for co-consumption, is evidenced in the next extract;

Rhys You just don't think it's (cannabis) worse

Rory Like it's like a proper dilemma between the two because cannabis I don't think it’s like as bad for you and I think it should be like, I I personally think it should be legalised but for the like certain type of like, with rules and that but then smoking (tobacco) is like really bad for you but it doesn't do anything to you, mentally [Int: Ok?] but it does do stuff physically so I think that (tobacco) should be banned and that (cannabis) should be brought in

Rhys (co-user) and Rory (co-user)

It is often hard to keep track of which substance the young people are discussing but it is clear that Rory has ideas about how the current laws on cannabis and tobacco use may be counter intuitive. Importantly, Rory is not advocating totally unrestricted use of cannabis and notes the potential for harms to mental health; he suggests that the way restrictions are calculated, should be on physical harms, of which tobacco has far more. Rhys further expresses concern that the harms for tobacco are much greater but hints that this could be because harms for cannabis are not as well publicised;
Ricky: You never hear, you always hear on the news people dying from smoking and drinking, you never hear it about cannabis like it's always just hidden away.

Rhys: Did you know that only one person died from cannabis? And it wasn't smoking it was in a car and there was like three grand's worth of it in big packages and it crashed and it squashed him (boys laugh) literally.

**Ricky** (co-user) and **Rory** (co-user)

Ricky emphasises the visibility of tobacco harms; that news about serious risks (death) resulting from tobacco and alcohol use overshadows news about cannabis risks. This is not to say that they were aware of no harms as Ricky then says that news about cannabis is ‘hidden away’. Rhys qualifies his belief in the safety of cannabis use by drawing on the rhetorical device of a tale, stated as fact; ‘did you know…’ that no one has died directly from the use of cannabis. The uncertainty and inaccuracy of knowledge regarding cannabis use extends to beliefs surrounding legitimate access to cannabis. Many of the young participants recognised that cannabis is illegal in the UK, but also believed that prescribed use was available; ‘It's illegal to everyone... Except for people that are prescribed' [Elliot: prescribed] prescribed with it for medication’ (Ethan, co-user). This expectation may stem from media coverage of the increasingly prevalent access to medicinal cannabis across the USA (USA Today, 2014). Unsurprisingly, none of the young people drew from personal experience of obtaining cannabis in this way although some suggested they knew people who were able to get cannabis from a doctor;

Int: Right ok, and do you know if the if there are any laws about smoking cannabis?

Ola: Yeh you're not allowed to

Oona: But I think you can get prescribed it

Ola: Yeh if you're

Oona: Cos you can have like difficulty sleeping or something

Ola: Yeh

Int: Ok so do you know someone who has that?

Ola: Yeh

Oona: I know someone who's got that

Oona: I can't remember who, who is it?

Ola: It's someone’s nan

Oona: I think it's someone’s yeh someone’s nan

**Ola** (cigarettes only), **Olive** (cigarettes only) and **Oona** (cigarettes only)

Giving a vague account, of a friend or someone they know, can serve to distance the speaker from taking responsibility for what is said and this is particularly useful if what is said could be controversial or if they cannot back up this belief with evidence. It is not
clear if this is the case here although it appears that these young people believe cannabis is available in some cases. It was never described as available for recreational use but Ola and Oona said they knew of a real example of cannabis as a prescribed therapy. Obviously, this example is almost certainly fabricated as cannabis is currently not recognised as a therapeutic medicine in the UK (Release, 2014) and possession and use is illegal. However, it is important to note that this sort of belief is circulating amongst some young people, at least in this study; ‘Yeh that’s what I was about to say, can’t you get it prescribed if you're ill so you are allowed to smoke it and sometimes some people say if you're ill it makes you better’ (Gemma, co-user). The implications of this belief are unclear but images of permissible medical uses legitimise cannabis consumption and when young people encounter cannabis, they may be encouraged to believe that their possession of cannabis is legitimate and not in contravention of law.

In this section I have explored young people’s descriptions of cannabis harms; particularly focusing on the uncertainty of awareness surrounding cannabis use compared to the undisputed harm information available regarding the smoking of tobacco. The extent or quality of the evidence found by independent research is obviously a concern with much of the knowledge stemming from own experiences or the tales transmitted by friends or unknown users either online or during conversations about drug use. However, drawing on sketchily defined stories of cannabis harms echoes what other authors have proposed (e.g. Nutt, 2012; Peretti-Watel, 2006), that in the face of uncertain knowledge about harms, young people dispute the harms to rationalise their choice to use cannabis. I talk about how beliefs influence choices to use the substances later in the chapter (8.2) but it is important to emphasise here that young people use cannabis despite the ambiguity inherent in their awareness of risks. This is not to suggest that young people’s use is founded on ignorance, but rather it seems that the young people take advantage of the lack of concrete evidence for the warnings about using cannabis as it almost gives them a green light to use it.

The narratives presented in this section so far focus largely on the harms of using tobacco or cannabis separately. Tobacco and cannabis are contrasting substances in the eyes of the young users who on the one hand acknowledge the harms of tobacco use but dispute cannabis harms on the grounds that there is much less proof and visibility of the dangers of using cannabis. However, a key gap in our understanding of co-consumption is what young people believe are the implications of specific cannabis consumption methods which involve tobacco. The limited evidence available hints that young people may believe that tobacco used for cannabis may not be as harmful as tobacco used in cigarettes (Highet, 2004) and this is the topic which is addressed in the following section.
8.1.2 Tobacco is the harmful part of cannabis joints

Although the research relating to harms of the combined use of tobacco and cannabis is limited, previous research indicates an erroneous view that smoking tobacco with cannabis alleviates some of the harms of smoking tobacco. This has been reported, for example, as a belief among young cannabis users in Scotland (Highet 2004). In the current interviews I asked participants to consider the harms of using cannabis joints specifically and participants tended to respond to this questioning by discussing the two constituent parts and often comparing joints to tobacco cigarettes; ‘I would definitely say that it’s a lot more healthier to smoke tobacco in a joint than tobacco because of the medicinal elements of cannabis so they are present when you’re smoking the two together whereas it’s just the dangerous chemicals from cigarettes which you’re smoking when it’s on its own’ (Steve, co-user). It is ‘healthier’, according to Steve, to smoke cannabis joints compared to smoking tobacco cigarettes. Steve argues that because cannabis joints contain less tobacco, than 100% tobacco cigarettes, that the risks are lower;

Steve: I would say there was a little bit less of a risk because they are not having as much tobacco [Int: Ok] cos there’s the other element in it as well
Int: Yeh ok um and does it, I mean there's some research that suggests that young people believe that cannabis kind of counteracts the bad things about tobacco, do you think that's possible or?
Steve: I don't think it counteracts them I think it's just they the medicinal compounds are there so instead of like an antidote to tobacco it's just you're basically drinking the poison and the antidote at the same time

Steve (co-user)

Although Steve recognises the therapeutic qualities of cannabis he was, like other participants, reluctant to suggest that cannabis counteracted tobacco harms. Instead, the medicinal properties of cannabis being present when smoking joints meant that there were simultaneously good and bad effects when smoking joints. This results in a description of cannabis as risk free and that tobacco is the harmful aspect of cannabis joint smoking.

Steve also recognises that cannabis joint use could lead to smoking tobacco cigarettes; ‘Um I would assume so because there is the addictive element of tobacco in that joint at that time so I would say it leads onto smoking’. Again, the addictive element to the joint was from the tobacco in a cannabis joint, not the cannabis itself. For other users, tobacco carried all of the risks, and smoking cannabis did not pose an additional threat;
Ok, um and are there any health risks of smoking cannabis mixed with tobacco?

Not which we're not already doing by smoking a cigarette

I'd say you'd mix the weed with tobacco and it makes it better than just smoking it by itself

Nah it doesn't cos smoking it pure, you've taken all the nicotine, all the tar out... it's more a healthier option

Ok so it's healthier?

To smoke just weed

Healthier than what?

Smoking tobacco with it

Ed (co-user), Elliot (co-user) and Ethan (co-user)

For Ethan, mixing tobacco and cannabis was better, perhaps in terms of taste at least, than smoking cannabis on its own but Elliot says by taking out the tobacco, the user is not exposing them self to nicotine and tar, which makes pure cannabis a ‘healthier option’.

Other participants theorised that because there was less tobacco, there might be less negative effects but admitted that the unique harms of mixing are unknown. Kevin, who does not use cannabis, admits his ignorance; ‘I mean you could say it’s less harmful because there is less tobacco content which is more harmful but I don’t know if mixing together has like more health like problems itself.’ (Kevin, tried tobacco). It may be important to note that Kevin has never used cannabis and as such may not be motivated to refute any harm information.

Haines-Saah et al (2014) demonstrated that when discussing harms of co-consuming tobacco and cannabis, young co-users tend to focus on harms of tobacco use and often excuse their ignorance of cannabis harms, choosing to estimate that cannabis must be safer than tobacco use and any ill effects are related to the tobacco added to joints. These conclusions tend to resonate with the findings in this thesis. However, the belief that tobacco was the harmful part of cannabis was not as easily accepted by participants who did not use cannabis. The following extract showcases the belief that users of cannabis might get addicted to something but whether it is the cannabis or tobacco itself or an addiction to the combined substance is unknown;
Olive’s immediate thought is that cannabis users might get addicted to the tobacco they add to their joints. However, on reflection she and Ola are not sure. It is worth noting that these participants are users of tobacco and so they may have motivation to defend the use of tobacco. Their responses to questioning about their awareness of tobacco use harms suggests however this may not be the case as Ola’s first response to questioning about the implications of using tobacco was; ‘It (tobacco) can cause lung cancer, and mouth cancer’ and Oona suggested that there were more immediate harms of use ‘it (tobacco) makes you unfit and everything’ (Oona). It appeared then, that although cannabis users were eager to dismiss the risks of using cannabis, users of tobacco were more accepting of the harms of tobacco use. Adam, a co-user describes tobacco as the dangerous part of cannabis use despite his continued use of tobacco cigarettes;

Adam **Mo Most people** think about weed I think that like they think that tobacco is the bad bit about it.. [Int: Right?] like people get addicted to cigarettes through like weed aint like you smoke it all the time [Int: Ok] and like there’s never been research to prove that its killed anyone [Int: Right] like fags is like all over the telly like it'll kill you it'll kill you

Adam **You gotta stick to purees**

Andy **Yeh**

Int **Right? (group sniggers)**

Adam **No bacey just**

Int **So a pureee is**

Andy **Straight spliff**

Int **Right ok so straight spliff (Ash and Andy laugh)**

**Adam** (co-user) and **Andy** (joints only)

Adam and Andy are discussing their use of cannabis joints and they are keen to assert that they do not believe cannabis can kill. Adam notes that there is a distinct absence in such research; perhaps to indicate that until this is the case he would not accept harms of
cannabis. The boys advocate the use of ‘purees’ (i.e. smoking cannabis-only, without adding tobacco) which would be the gold standard over joints. Another integral part of their description of cannabis is that recreational use is sporadic; ‘Yeh like we're not addicted, like we, we would just buy it for parties or if we have spare money, but if I was short of money I wouldn't go out and buy weed, cos I'm not addicted to it’ (Andy, joints only). Haines-Saah et al (2014) described similar practices, among their adolescent participants in Canada, in which users strategically kept their cannabis use sporadic so as to protect themselves against any possibility of becoming addicted. Adam and Andy distanced themselves from addicted cannabis users who consume cannabis as a part of their daily life.

Andy  But people that do it (cannabis) as part of routine and they're like 'I need it'
Int    Right
Adam   Cos it’s like part of their daily life
Int    Um
Adam   But that could just be like the nicotine like in the fags like what they're smoking

Adam (co-user) and Andy (joints only)

The more frequent consumption of cannabis, according to Adam, could be attributed to their addiction to nicotine in the cigarettes they smoke which results in their increased cannabis consumption in order to satiate their addiction; it is not the cannabis itself that is addictive. This supports the findings of Bélanger et al. (2013) who reported that cigarette smokers used cannabis more frequently than those who just smoked joints.

Section 8.1 outlined the comparative beliefs towards cannabis and tobacco. The cannabis using participants generally supported cannabis use and (similar to other groups of young people (e.g. Amos et al., 2004; Suris et al., 2007)) were, anti-tobacco. In light of the contrasting beliefs surrounding tobacco and cannabis, with many speaking more positively of cannabis, it might be expected that users would choose pure cannabis over adding tobacco if they had the choice. However, smoking cannabis with tobacco appears to be the main method for using cannabis (Bélanger et al., 2011) and in the next section of this chapter I examine accounts of the reasons behind mixing tobacco and cannabis.
8.2 Mixing cannabis and tobacco: choices and compromises

Participants in the current study, tending to favour cannabis over tobacco, describe tobacco as the harmful part of a cannabis joint. They suggest that users would rather use pure cannabis instead of cannabis preparations which include tobacco if they could. However, all of the participants in the youth club study who smoked cannabis ($n = 17$) primarily used cannabis joints. Moreover, in the school survey joint smokers represented 85.6% of current cannabis users ($n = 298$) with only 5.7% ($n = 20$) of current users reporting smoking cannabis without adding tobacco. Although this is primarily a qualitative results chapter, it is useful to begin this section by examining the results of the school survey as a context with which to discuss the narratives.

The survey asked those who reported currently smoking cannabis and tobacco together to give their reasons for mixing (see Box 4.3, page 54 for details of the questioning). Quantitative analysis of the school survey revealed endorsement of multiple reasons for using cannabis and tobacco mixed together. The first rationale for mixing was to conserve cannabis and this appeared to be more important for boys, with 57.8% ($n = 107$) saying this was a reason why they mixed, whilst less than half of girls (45.9%, $n = 50$) agreed that this was a reason. Fewer participants said that they mixed cannabis with tobacco to make smoking cannabis less expensive, with less than half of the current joint smokers in the survey (44.1%, $n = 131$) reporting they mixed for this reason. Young people in previous research (e.g. Akre et al., 2010; Amos et al., 2004) have proposed other motives for mixing which surround adding tobacco to make it easier and more pleasant to smoke cannabis. Many more boys (72%, $n = 134$), and girls (63.3%, $n = 69$) reported that they smoked cannabis joints because the smoke produced was smoother than pure cannabis smoke. Finally, the addition of tobacco is thought to potentially increase the high because of the higher temperature at which tobacco burns which leads to more of the psychoactive compounds in cannabis being absorbed (Lee & Hancox, 2011; Van der Kooy et al., 2009). The participants in the school survey did not appear to be overly influenced by this, or at least they did not have this expectation of mixing tobacco and cannabis; just under a third of participants said this was a reason for mixing. Slightly more boys (33%, $n = 61$) compared to girls (29.6%, $n = 32$) mixed cannabis because they believed it increased the high associated with cannabis.

Although the participants for the survey and the interview study are not from the same schools, it is worth considering these trends as context for understanding the rationalisation
behind decisions to add tobacco. In the next part of this chapter, I explore two explanations (conserving cannabis and controlling the high) for smoking joints in more detail.

8.2.1 Conserving cannabis with tobacco

The first explanation centres on the use of tobacco in joints to conserve cannabis. More often than not, when describing their usual cannabis practices, participants followed their responses with a justification or excuse for using tobacco; ‘Usually yeh, only cause I can't afford to smoke it pure’ (Elliot, co-user). Using joints was also something that many participants believed was primarily a youthful activity. If these young people had a surplus of money they would try to use pure cannabis, in a water pipe for example, but this was a rare activity and reserved for special occasions. Reflecting the desire to conserve, Caiden almost always smokes joints and would not want to smoke cannabis on its own because it would feel like wasting it.

```
Int    Ok um brilliant thanks for that then so moving on again to the kind of crux of the research which is cannabis and tobacco together um. I should ask, uh how do you use cannabis? do you smoke it with tobacco all the time or are there other way you use cannabis?
Caiden I usually always smoke it with tobacco cos I don't really cos I can't afford to buy loads of it.
Int    Yeh?
Caiden I feel like I'm wasting it if I put it all into one
Int    Ok right? and is that the same for you (to Callum)
Callum Same
Int    Same yeh and uh is there do you use cannabis when you don't have tobacco, I know you say you wouldn't like to but?
Callum Nah I don't think no one does that in our group
Caiden No
Int    You don't smoke it in anything like a bong or a pipe?
Caiden Nah, if I can afford it then yeh (Callum laughs)
Int    Ok um so. So in that sense, tobacco is just so that it makes it cheaper?
Caiden Yeh. Yeh definitely

Caiden (co-user) and Callum (co-user)
```

Smoking pure cannabis for Caiden as well as other participants seemed like a waste as they were able to still get high if they rationed cannabis with tobacco; ‘Then they break it up with tobacco then that way they still get a buzz and don't waste it all’ (Faith, cigarettes only). This indicates that tobacco helps to conserve cannabis for future consumption.
8.2.3 Controlling the high with tobacco

The second explanation for adding tobacco to cannabis was the user’s ability to control the high they wanted by adding more or less tobacco. By adding tobacco the user can choose to limit the high they get. Alternatively if they wanted to get more intoxicated they might consume cannabis on its own or consume it orally in food;

Int …do you think there's different times um that you might, if you're a cannabis smoker, you might smoke it with tobacco but not tobacco at other times?
Elliot Yeh when you got loads of it and when
Int Ok
Elliot Or if you just wanna get a little bit, so like say if you're goin to work and you'd only put a little bit (cannabis) in
Int Ok, so you kind of um
Elliot Ration it
Int Ration it and you can make the high different can you? by adding different amounts?
Elliot Yeh you can make it more intense or like eatin it, it hits you a hundred per cent
Int Ok
Elliot But smoking it I only think hits you like half of what it does but eating it is more intense than the amount that you smoke

Elliot (co-user)

The use of tobacco with cannabis for Elliot depends on what the situation is and how high he wants to get. Elliot talks of situations when a user might have limited time for consuming cannabis and for sobering up and so they can still get high if they smoke only a small amount of cannabis mixed with more tobacco. Talking about situations where a user might have a limited amount of time or when they had to do something following cannabis use was rare as participants often thought carefully about when and where they would use cannabis (see section 9.2 for a discussion on typical cannabis use settings). For the most part, the addition of tobacco was down to personal preference and the mood they are in at the time of consumption.

Although this explanation intersects with an explanation of conserving cannabis as ‘purees’ are a waste, the following extract also highlights an important process of evolution within the user as they become more and more tolerant to small doses of cannabis (such as those achieved when tobacco is added).
Ricky: Mmm like it's different people like there’s people that prepare it prefer it with tobacco and then there's people that just always want purees

Int: Right

Rhys: Which is a waste like

Int: Why would they always want purees then?

Rory: Because they just want like

Rhys: It hits you harder

Rory: Yeh they just want a buzz out of it like cos they've been doing it for so long they don't really get that buzz anymore so they will always smoke it without tobacco to get the hit

**Rhys (co-user), Ricky (co-user), and Rory (co-user)**

Rory describes some users as having smoked cannabis for so long that they now need to smoke pure cannabis in order to get high. Importantly, some participants established that they wanted to experience a certain level of high that could only be achieved by mixing tobacco with cannabis. That they did not want to get too intoxicated is similar to what Dunlap et al. (2006) described as an etiquette for being safe in public environments particularly around other people. For Steve, cannabis joints were a conscious choice for any situation when he consumes cannabis;

**Int** Ok so what do you think is the I know you said putting tobacco is the best way of doing it and is that, is that the only way that you've ever had cannabis, have you had cannabis in other ways?

Steve: Um no, with just rolling it with tobacco is the only way I want to

**Int** Right

Steve: Because I prefer to just relax with it rather than just hit the deck with it sort of thing

**Int** Ok so you wouldn't have a a pure cannabis joint a blunt then?

Steve: No nothing like that

**Steve (co-user)**

Steve has been using cannabis for a few years and has perhaps discovered a level of intoxication that he enjoys, which does not involve smoking pure cannabis. Here, Steve notes that smoking cannabis on its own was too strong and so he adds tobacco to his cannabis in order to make it safer for him to use cannabis so he does not get too intoxicated and out of control. This in itself is an interesting finding because earlier (page 119) Steve spoke of tobacco as the poison of the cannabis joint. To use Steve’s vernacular here it appears to be that pure cannabis is a poison and tobacco is the beneficial ingredient or antidote, to cannabis. This finding highlights that in some cases either substance can be dangerous on their own but mixed together, they become sort of harmonised. This finding
however was not observed in many of the interviews and future research is needed to address the specific use of tobacco to control the high of cannabis use.

8.3 Concluding comments – contrasting and confused beliefs

In this chapter I have explored the expectations of harm for tobacco and cannabis as well as narratives around co-consumption. Throughout the chapter a theme has evolved which places cannabis in a favourable position over tobacco. The messaging of tobacco use harms appears to have been received, although messages about the harms and even the legality of cannabis are unclear. The young people in this study seem to use this uncertainty as a rationale to support their use of cannabis; often citing that because harms are not as publicised for cannabis as they are for tobacco, their use of cannabis is relatively safe.

Non-users were more sceptical about the safety of cannabis use than users of cannabis who focused mainly on the psychoactive effect of feeling high. Participants often drew on medicinal uses of cannabis which perhaps stem from anecdotes and media reports from other countries such as the USA, although some participants believed there were at least some legitimate access routes to cannabis from doctors in the UK. Users of joints also described that tobacco was the harmful part of cannabis use although whilst the tobacco in cannabis joints was considered healthier than smoking tobacco cigarettes, cannabis did not counteract the harmful effects of tobacco in joints. Despite these beliefs, cannabis users continued to use tobacco in their joints for its benefits to cannabis consumption and these reasons surrounded conservation as well as personal choice. Primarily, tobacco was used as a filler to conserve cannabis supplies. Moreover, the young people discussed being able to control how intoxicated they got by adding more or less tobacco and many participants observed restraint in wanting to avoid being too high or intoxicated.

This chapter highlights that there may be a need for specific messaging related to the use of tobacco in cigarettes and in cannabis joints. Messaging around the dangers of using each substance on its own appear to be used by young people to rationalise their use of joints and it seems that young people believe tobacco-for-joints is healthier than tobacco-for-cigarettes; these messages need to be debunked. Perhaps more importantly, the young people appear to be confident in the current state of confusion regarding cannabis use harms in scientific and public health messaging; they used the unclear cannabis advice to their advantage, suggesting that it cannot be dangerous as it has not been convincingly proven to be dangerous.
Chapter Nine:
Tobacco practices in place – facilitating cannabis use

The results chapters so far have illustrated how tobacco is used to aid cannabis use for, among other reasons, making cannabis consumption a more pleasant experience (e.g. by adding tobacco to cannabis) so that users are not too intoxicated. In this final results chapter I examine how tobacco use in specific social and physical contexts may support cannabis use by offering opportunities to access cannabis and also facilitate experiences of cannabis use in public settings. Exploring narratives of access may alert us to the conditions under which any potential substitution occurs; for example, if access to cannabis is not possible then young people turn to tobacco use (and vice versa) as has been suggested by previous research. The specific focus and research question I address in this chapter is: How do cannabis consumption practices interact with and contribute to tobacco consumption practices? As such, I concentrate this discussion on narratives of place-based practices, to examine micro-geographies of cannabis and tobacco use encompassing both the physical and social settings of use as well as behaviours leading up to consumption (e.g. obtaining the substances).

I begin this chapter by considering how tobacco users and cannabis users obtain their supplies. The contrast between cannabis and tobacco is illustrated in section 9.1 by examining narratives of circumventing access laws and relying on the complicity of other people (particularly older peers and parents). It appears that there are far fewer avenues of access for cannabis compared to tobacco and in section 9.1.3 I discuss how connections made through tobacco use encounters may facilitate cannabis use. Finally, in section 9.2, I discuss cannabis and tobacco use in semi-public spaces and the role of tobacco in consuming cannabis in these settings. This builds on the theme running through the results of this thesis that tobacco is viewed less favourably and as having less excitement as an activity than cannabis use although tobacco may have specific beneficial functions for facilitating cannabis consumption.

9.1 Accessing cannabis and tobacco

In Chapter Six, the results of the multinomial regression analysis suggested that perceiving access to tobacco from shops as easy was associated with an increased likelihood of smoking tobacco and cannabis. The available evidence in the UK suggests that access is facilitated by adopting one of a multitude of strategies such as lying about their age to shop owners, buying them from illegitimate retailers, and buying or taking them from friends or family members (Sutcliffe et al., 2011). I asked the youth club participants who smoked, or knew other people who smoked, where they obtained their supplies. Participants’ sources,
as expected, were plentiful. Whilst outlining these sources here would repeat an already established typology, the narratives of participants in using these sources (particularly complicit adults) advances our understanding of the complexity of access for co-consumption and for this reason they are described below.

It is the complicity of others that appears to be the largest route for young people to access tobacco and cannabis. Very few participants reported that they bought tobacco from other people who were ‘selling on’ what they bought; and these were usually duty free cigarettes bought from abroad; ‘Well at the moment we’re on cigarettes from America’ (Oona, cigarettes only). Instead, most participants appeared to look to other people as facilitators so that they could access tobacco from seemingly legitimate tobacco outlets. This is an important distinction to make and I begin the discussion of young people circumventing access restrictions to tobacco from these legitimate outlets.

9.1.1 Circumventing tobacco access restrictions

Few participants were above the legal age required to buy tobacco. Despite this, a small number of those close to 18 years of age (and some who were much younger) attempted, often successfully, to purchase tobacco from shops. What becomes quickly apparent from the extracts that follow is that although there are barriers in place to stop young people getting tobacco, their access is fairly unobstructed. The first extract sees Gemma and Georgie talking about not paying attention to age restrictions for purchasing tobacco as they, like many others, knew of specific retailers where they were more or less likely to be successful in getting tobacco;

Int Ok it doesn't stop you getting hold of tobacco?
Georgie Nope there’s a shop, that uh you can just walk in and get it, they don't actually sell it
Int Right, ok (both girls laugh) and that’s just sort of you personally or do you think anyone can walk in the shop and get it?
Georgie Anyone can walk in the shop and get it
Gemma Yeh anyone.

Gemma (co-user) and Georgie (co-user)

Georgie indicates that many of these shops do not officially sell tobacco products, and are not discriminative about who they sell to. Examples of these unofficial retailers included butchers shops and outdoor markets. Aside from these illicit tobacco sellers, some legitimate tobacco outlets also appeared to be known for being easy targets for young people although the young participants in this study rarely had to go into the shop themselves. These findings are supported by Robinson and Amos (2010) who indicated
that young people quickly learn of specific outlets where they are likely to be more successful and where the seller trusts that the young buyer will not inform the authorities that the shop is selling to underage customers. Rather than purchasing tobacco directly from shops, most participants approached other people to help them circumvent access restrictions.

Faith

Usually just ask like some older friends to get it or like got people in your family that know you smoke don't care they will just buy it for you and some shops, not naming any but, don't really care.

Frankie

They get away you a lot of people can get away with it lookin the age and not gettin asked for I.D.

Int

Ok, um and so you think you can get away with getting it from shops personally? Or

Faith

I have personally

Frankie

I can personally but um my mum a lot of the time if it's from my own money then my mum will buy it for me

**Faith** (cigarettes only) and **Frankie** (cigarettes only)

Faith and Frankie report having experience of going into a tobacco outlet and successfully purchasing tobacco. Most of the accounts from participants, who were not old enough to buy tobacco legally, indicated that asking others to facilitate their access to tobacco was the main, and often more successful, method of accessing tobacco. Caiden says that he tries to buy tobacco first but if that fails he asks friends who are close by;

**Int**

Ok um great, thanks uh so. Again, you don't have to tell me any specific details but how do you access tobacco to start with, how do you access?

**Caiden**

Shops

**Int**

Uh what you actually can buy it?

**Caiden**

Yeh I try and if I can't I just get someone else to buy it for me

**Int**

Ok and who are these other people that

**Caiden**

Like usually it's someone like I know that like lives near me so I just ring him up and tell him to come meet me

**Caiden** (co-user)

It is also important to note that not everyone could rely on others to be a regular source of tobacco and those who knew of only one or two complicit adults were restricted in their tobacco smoking; ‘I know a friend that's older than me that, she she smokes as well and she knows like, she only did it for like a few a couple of months and then she told me that she wouldn't get me them anymore so I kind of had to stop cos I didn't have any other source of getting them’ (Izzy, cigarettes only). Izzy says she used to be a tobacco smoker but as a result of the limited options to access tobacco she was forced to stop. Asking
someone they knew to buy tobacco on the young person’s behalf was not the only option. Over a number of interviews, the same phrase was recurrently used; the waiting game. This referred to waiting and approaching strangers outside of shops to ask if they would buy cigarettes on their behalf. In a recent UK study, Robinson and Amos (2010) reported that adolescents would also wait around outside shops and asked strangers to get their tobacco for them; they knew which types of people to ask and which shops would likely have customers willing to make these purchases for them. However, whilst it was often discussed as something lots of young people did, few participants in the current study reported that they themselves used this method to get their cigarettes;

Elliot: We used to wait outside the shop, just ask random people
Int: Right? and is that something that is fairly easy to do?
Ethan: It's what people do quite a lot=
Elliot: =Uh it’s a waitin game
Ethan: Seen those people get piled off (moved on from the shop)
Int: Do you think that’s quite successful or not?
Elliot: Sometimes, sometimes I've been stood outside the shop for three hours
Int: Right
Elliot: But other times I go there see this person park up straight away and then [Int: Ok] just chance it
Int: And have you two (Ethan and Ed) tried that sort of thing to get hold of it?
Ethan: Nah I wouldn’t, I wouldn't bother standing outside a shop waitin

Elliot (co-user) and Ethan (co-user)

Waiting for strangers could be a lengthy process and it did not always result in success as the boys recall several experiences of wasted time. The waiting game is also something Elliot used to do; as if he has progressed on from going to the effort that a lot of young people, perhaps those younger than Elliot and Ethan, go to. Elsewhere in the interview Ethan says that he has lots of friends who could buy tobacco for him anyway, which indicates that the waiting game may be a last resort after sources closer to him have been exhausted. With the exception of the few young people who felt they could convince a legitimate retailer that they were old enough to legally buy cigarettes, or knew of locations where they could source tobacco illegally, most usually asked someone older to buy their tobacco for them. It appears that young people do not need to rely on appearing old enough to buy tobacco as they can circumvent the laws in other ways by utilising connections with other people who will purchase tobacco on their behalf; even close relatives such as parents.
The aim of the chapter and thesis is to explore how tobacco and cannabis consumption practices interact with and contribute to co-use behaviours and it was hard to see a clear relationship between cannabis and tobacco access by examining retailers as sources. This may be a result of the legal status of cannabis in the UK which means that no retailer can legitimately sell cannabis to anyone; although as we have seen, some outlets appear to disregard the law when selling illicit tobacco to young people. Whilst the restrictions on selling tobacco to minors appeared to be disregarded by many shops, none of the participants spoke about vendors that would sell cannabis. An exception to this was an outdoor market, mentioned in three separate interviews as a place to get cheap tobacco and occasionally, the offer of cannabis;

Adam  No you do get the odd shop like that aint like(.) you know what I mean proper
Aiden  And down *Place M* [an outdoor market]
Andy  Yeh down *Place M*
Aiden  Any can get serve down there
Int   Yeh?
Adam  Don't tell the police that
Andy  Yeh don't tell the police that [Int: so...] or we'll have nowhere to buy em
Int   So can you tell me what *Place M* is, it’s a...
Andy  *Place M* is basically a market run by... a load of(.) immigrants(.) who are up to no good an sell em (tobacco) at cheap prices
Ash   I got offered uh marijuana up there twice
Andy  Yeh [Int: right?] its basically like a hub on a Sunday to smoke weed and buy illegal goods
Int   Alright ok
Andy  You can buy other stuff off there as well it’s not just (group laugh).
Int   Ok it’s not just uh yeh... right ok.
Andy  But that’s the main reason why we go up there

Adam (co-user), Aiden (co-user), Andy (joints only), and Ash (co-user)

This was an explicit reference to a single location for accessing both substances, although we do not know if it is the same vendor within the market that supplies tobacco as well as cannabis. For these boys, the primary reason for them going to this outdoor market was to buy tobacco and cannabis. Just one other participant (Kim, never used either substance) said that if a young person could not get hold of cigarettes by playing the waiting game they might ask a dealer to help them out. Apart from these isolated accounts where tobacco and cannabis can be purchased together there were very few explicit references to any potential overlap of tobacco and cannabis access.
9.1.2 Parent complicity - cannabis and tobacco differences

Whilst lessons about co-consumption are perhaps easier to draw from examining the similarities in access practices for each substance, there is importance too in exploring the differences more closely. In this section, I want to highlight an important discrepancy in accounts of obtaining tobacco and cannabis; the role of parent complicity. Whilst many parents were not accepting of their children’s tobacco use, and as I discuss in section 9.2.1 parents were one of the few people that a lot of the young smokers avoided, a few participants revealed that instead of hiding tobacco from their parents, they often relied on their parents as sources for tobacco.

Parents appeared to be willing to buy tobacco for their children as long as they were not paying for them; ‘...a lot of the time if it’s from my own money then my mum will buy it [tobacco] for me’ (Frankie, cigarettes only). Importantly, a recurring aspect within the narratives (where parents willingly supplied tobacco), was that many participants offered explanations for their parents behaviour; acknowledging that parental supply was a questionable and controversial activity. Shortly following the above admission from Frankie that her mother would buy her cigarettes, she interjects; ‘But my mum would not give me money to buy it’. There is some sort of moral balance attempt here; parents would not give their children the money to fund their tobacco smoking. However, in these references to parents supplying, the young people are keen to portray parents in a morally forgiving way, justifying their bad actions or comparing it against a greater evil.

As an illustration of the ease of access to tobacco, participants discussed receiving offers from adults to aid them in getting cigarettes; ‘Uh, I have a friend my age that her mum, well not really mum just sort of like [Izzy: Step mum] Step mum would would just like laid back and go ‘if you want them tell me’ and I said yes’ (Imogen, cigarettes only). Imogen did not need to seek out a supplier for her cigarettes as a friend’s step mother would regularly offer to get them for her. Again, narratives also show that there is a rationalisation of the controversial, and illegal, practice of supplying children as it is safer than their alternative options for getting tobacco;
Izzy: There's a lot of people that say um that they'd rather them know about it, and they would get them for us.

Int: Ok

Izzy: Rather than ask for like

Imogen: Instead of just playing the waiting game

Int: Yeh

Izzy: Or like asking some strangers and people that could be bad, asking them and like we could get in like more trouble

Imogen: More trouble

Int: So it's kind of parents that do that instead of getting strangers to=

Izzy: =Yeh they are a bit laid back

Imogen (cigarettes only) and Izzy (cigarettes only)

Perhaps acknowledging that their children may be exposed to tobacco, regardless of what they do, parents supply tobacco to their children. This is rationalised by an attempt to protect their children against a potentially worse and more immediate danger of talking to strangers. Kevin (tried tobacco) describes how his mother would have eventually come round to the idea that he was smoking. However, from the experience of his older sister, he suggested that his mother would never supply the tobacco, as his sister had to find her own way of getting it; 'I mean like my mum would have killed me if I smoked but I think eventually, even she never bought my older sister cigarettes so I think my older sister would always have to find her own way on getting them'.

Parental attitudes and willingness to supply appeared to be different for cannabis compared to tobacco as parents were not willing (or at least the young people weren’t forthcoming about parent suppliers) to facilitate access of cannabis; 'My dad would actually kill me if he saw me smokin cannabis [Caiden laughs] like, tobacco is one thing but cannabis that’s on another level' (Callum, co-user). Parents would not help to supply cannabis and instead the young people were on their own;
Uri: I don't think they personally would. I think they would say that if you're gonna do it, you know, you're on your own like type thing.

Ulrich: Yeh, you're on your own like it was, it's your choice.

Uri: Yeh, I don't think they would ever supply. I mean, the parents would have to be heavy drug users if they were like that.

Int: Mmm.

Ulrich: Also like, there are people like um, some people's parents that do do it with the kids, cos it's just something that

**Ulrich** (tried cannabis) and **Uri** (tried cannabis)

Uri and Ulrich suggest that parents would not play a role in facilitating access to cannabis, although some families might be more willing to discuss cannabis use and act as suppliers to their children. The contrasting attitudes of parents towards tobacco and cannabis are explicitly evident in the following extract;

Kevin: I think they are quite different. Obviously you know, tobacco is a legal drug whereas cannabis definitely isn't. As we've talked about before and you know I don't think any parent would willingly do that. I mean obviously I think with tobacco it's sort of health concerns are MORE you know they are greater than

Int: Sure.

Kevin: But cannabis is an illegal drug and I don't think anyone, anyone's parents would willingly

Int: Ok.

Kat: Give them.

Kevin: Give their child an illegal drug.

Int: Do you think that's specifically about the legal status then, cos' cann like you say the harms of tobacco may be more than cannabis but because cannabis is illegal

Kevin: Yeh [Kim: Yeh] Parents kind of don't wanna maybe be seen to do that.

**Kat** (never used either substance), **Kevin** (tried tobacco), and **Kim** (never used either substance)

Kevin argues that parents would not want to be seen to be supplying cannabis to their children and this is particularly linked to how parents would be seen by others. There was no offer of an explanation of circumstances when parents would be complicit (unlike tobacco use when parents facilitate supply to protect their children). Herein lies another example of the disparity between cannabis and tobacco; where some parents would rather supply tobacco to their children as it is safer than the dangers of talking to strangers but they would not supply cannabis because it is illegal and considered a heavier drug than tobacco. The legality of tobacco seems to be enough to rationalise the supply of tobacco
products to children whereas the illegality of cannabis is enough to warrant a barrier in parental complicity. There are important implications of this difference in attitudes toward cannabis and tobacco. In 2014, several states in the USA including Colorado began to legalise the recreational use of cannabis and permitted the sale of cannabis in licenced premises to those aged 21 years and above (Benmaamar, 2014). If the UK government adopted a similar policy for cannabis to that of tobacco (that is, legal for those above a certain age to purchase) then it may be conceivable that parents would become complicit in supplying cannabis to their children.

Considering the current legal status, we might expect fewer parents to be in possession of or able to acquire cannabis compared to their ready access to tobacco but nonetheless the results here suggest there may be a danger that legalising cannabis use, or placing an age restriction on it, will lead to parents supplying cannabis to their children. It appears that at the moment parents are unwilling, at least in the responses of participants, to facilitate access to cannabis on the basis that it is illegal and as such young people have to utilise alternative sources to obtain cannabis. These alternative sources are the topic of the next section of results.

9.1.3 Access to cannabis ‘If you know the right people’

With outlets such as shops unlikely to be sources of cannabis for young people, and far less complicity among parents, it might be anticipated that cannabis is more difficult to obtain than tobacco. However, this assumption was quickly abandoned as participants listed the numerous opportunities for access.

| Int | …how many sources would you say you’ve got to get cannabis? Is it the same person every time or is it two or three people? |
| Georgie | UMM let me think (starts counting on her fingers, 1,2,3,4,5 onto second hand) |
| Gemma | (laughs at Georgie) |
| Georgie | About seven or eight places around [Place name removed - local area about 9 km2] alone. Gemma (co-user) and Georgie (co-user) |

Participants identified several sources of cannabis, counting the number of sources they could contact at any one time. It appeared that cannabis users prepared themselves by deliberately having multiple sources of cannabis, so that they knew they had much less chance of being unsuccessful when they wanted to use cannabis. I asked Caiden how many people he knew of that helped supply his cannabis;
Caiden and Callum had at least four sources of cannabis and were confident that they didn’t have to worry about suppliers running out. Importantly, Caiden suggests that cannabis is easier to access than tobacco. Amos et al. (2004) proposed that cannabis might be substituted for tobacco when it was not possible to obtain cannabis but from the participants in the current study, it would appear that no such substitution is necessary. Other participants, even those who do not use cannabis currently, believed it was so easy to access cannabis that, they were reluctant to associate access to cannabis with finding a dealer; *I mean it's not even like about trying to find a drug dealer, it’s just find a friend (laughs)*’ (Uri, tried cannabis). Associating access with every day exchanges with peers serves to distance the young participants from being involved with a wider drug culture and this finding resonates with the previous research by Duffy et al. (2008) who propose that young people distance themselves from associating with terms like dealer which has connotations of criminal activity.

At first glance, these participants (smokers and non-smokers alike) had few barriers, with cannabis usually just a phone call or text message away. However, this was not the case for all participants and those who were not in friendship groups with people who used cannabis often found themselves estranged from contact with the substance. Those who did not know people who used cannabis were less sure about where to get cannabis and even how prevalent it was in the local area. Pete and Polly suspected that cannabis was probably everywhere, although as outsiders, they did not know;

| Int | Ok do you think there's quite a lot of it going around in the area? |
| Pete | Yeh |
| Polly | It probably is but it's like hidden so we wouldn't really know cos they'd probably do it= |
| Pete | =It's everywhere |
| Polly | Discretely |

**Pete** (ex-tobacco user) and **Polly** (tried tobacco)
Participants who did not use cannabis described the importance of knowing the right people as dealers rarely advertised themselves so customers had to seek them out. Cannabis access was only unobstructed; ‘If you know the right people’ (Ethan, co-user). This may be one example where cannabis and tobacco practices intersect and tobacco supports cannabis access.

Whilst the relationship between access to tobacco and cannabis is difficult to tease out; with many participants disputing a link between the substances, a few participants discussed that the access to cannabis was only possible through links that users make by smoking tobacco. Kevin, who is a non-smoker, more explicitly comments that the connections you need to facilitate cannabis use are not established until you start using tobacco;

Kevin I think there’s a definite link between uh smoking tobacco and smoking cannabis because you don't go into smoking cannabis straight away because you don't have the connections or you don't know the people that, where to get it from I mean I have no clue (laughs) [Int: Right] where you can get cannabis from like I couldn't even if I wanted to smoke cannabis I wouldn't know where to start

Kevin (tried tobacco)

It seems that for this non-smoker, cannabis is out of reach; even if he wanted to smoke cannabis he would not know where to begin trying to find it. Kevin is not advocating that the progression from tobacco to cannabis is the only way to access cannabis and offers his own example where this progression explanation is not supported.

Kevin I mean it is quite prominent, I mean my sister um my triplet sister, she went to a festival recently and she was smoking cannabis like and she done it a couple of times and she'd rung, unbeknown to me and she was like '(slurred speech) oh I've done some cannabis' and I was like 'what?' and um and you know she's not addicted she doesn't smoke it every day and she doesn't even smoke tobacco but so I don't, so the link is a bit foggy there because she's not been a smoker like then progressed into smoking cannabis because that's not happened but obviously like the same as me she's tried it under the influence of alcohol

Kevin (tried tobacco)

Kevin says that his experience and his sister’s experience of trying cannabis was not under normal circumstances; for he had been drinking when he tried cannabis and his sister was at a festival. Equally these occasions of experimenting (single encounters perhaps) with
cannabis do not necessarily equate to occasions where the experimenter is seeking out access to cannabis. Nonetheless, Kevin hints at a potential role for tobacco use in facilitating access to cannabis that many others, particular users, had not considered when asked to about the link between cannabis and tobacco. In the next extract, Callum finds it difficult to see a link between cannabis and tobacco because a large proportion of tobacco smokers do not smoke cannabis. However, they hint at the possibility that cannabis access has something to do with the people they meet when smoking tobacco.

Caiden & Like cos I started smoking like both at the same time &
Callum & Um... mine was definitely fags before like weed, definitely. &
Int & Ok so thinking about maybe your experience or or people who smoke in general, do you think that smoking one leads to another one or? &
Caiden & What like smoking cannabis leads to tobacco? &
Int & Yeh, or the other way around? &
Callum & I don't think it's got much connection &
Int & Ok? &
Caiden & I'd say it's just money, if you have enough money to= &
Callum & =Yeh and connections as well &
Caiden & Mmmm &
Int & Right? &
Caiden & Like who you know= &
Callum & =Yeh who you know, that's what I meant by connections &
Int & Yep? &
Callum & Like who you know and that um but I don't think like the actual cannabis and tobacco has got much connection between each other

The lack of connection to cannabis, then, is perhaps only noticeable, or a problem at all, to those who have not been involved in cannabis before. This explanation is supported by narratives of a type of cannabis community in which ties are difficult to form initially, but once a cannabis user is known, opportunities and connections to facilitate access to cannabis abound. As such, cannabis users need not rely on their connections to tobacco users any longer. For example, people become aware of who uses cannabis and where they could get it from if they needed to; ‘I mean definitely people know who to go to, to get it, you know you hear about these things like people who smoke this and that but they definitely know where to go’ (Uri, tried cannabis). Uri also has friends who currently use cannabis and these connections appear to be important for making it easy to access cannabis.
In a sense, the knowledge of cannabis sources was imparted only to those young people who were users in a small community or network of peers. The awareness of who does cannabis, and who might have it, becomes public very soon after a person starts using cannabis. Once users became part of this community and known for their cannabis use, then many more opportunities to access it became available;

<table>
<thead>
<tr>
<th>Queenie</th>
<th>I dunno, if you were in and you'd probably know who to go but I don't think they advertise it and I don't think everyone knows who it is</th>
</tr>
</thead>
<tbody>
<tr>
<td>Int</td>
<td>Ok so it's kind of like a um you know someone who knows someone</td>
</tr>
<tr>
<td>Queenie</td>
<td>Yeh</td>
</tr>
<tr>
<td>Int</td>
<td>And it's kind of like a small like network of people that know about it?</td>
</tr>
<tr>
<td>Queenie</td>
<td>Yeh, like once you're in you know who to get it from and there's like loads but when you're on the outside you haven't got a clue</td>
</tr>
</tbody>
</table>

**Queenie** (never used either substance)

It appears, then, that once an individual was granted entry into the cannabis user community they became privy to information about dealers. However, there is some evidence that in turn they may also become targets themselves as other young people expected them to share their supplies. Rather than simply being given access to a range of suppliers, for the next participants, once the user was known they became a source themselves: ‘The minute you start like once, it's very easy to get hold of like you know a lot of people like where to get it cos like they'll know you're doing it and you just think 'easy target' to get it off’ (Rory, co-user).

Coomber and Turnbull (2007) in their UK study, noted that passing on cannabis to other friends was an expected social activity. This expectation to share may be a necessary cost of being known as a cannabis user for being able to access a wider network of cannabis suppliers. Uri and Ulrich discuss cannabis users as a community or gang of selected individuals who share their supplies;
The boys believe that their peers are more likely to share their cannabis than tobacco cigarettes; perhaps because users might not be able to smoke a lot of cannabis on their own. The results so far suggest that users felt there were few barriers to tobacco or cannabis use. Tobacco was available via a number of strategies, from direct purchasing to relying on the complicity of parents, peers, and asking strangers although this was often a last resort. Similarly to conclusions drawn by Stead and Lancaster (2005), future work still needs to focus on messaging and engaging those who are complicit in helping young people access tobacco. Although these are young people’s accounts of their parent’s actions, rather than parents own explanations, complicity in facilitating access was rationalised because it served to protect children from harms of talking to strangers. However, this rationalised complicity does not extend to cannabis use because cannabis is still illegal.

It also appears that for many participants, there was little need for users to substitute cannabis with tobacco because access to cannabis is rarely difficult due to the multitude of contacts that can often source cannabis within a short period of time (e.g. a few hours). Knowing the right people was important for successfully obtaining cannabis and non-users often expected that the connections made through tobacco use were necessary to facilitate access to cannabis but many cannabis users refuted any such link. This may be because tobacco is more important for early encounters with cannabis but for those who have already used cannabis, and are known amongst peers as cannabis users, access is largely unobstructed. As a result, it would appear that tobacco may only play a minor role in the access of cannabis. However, with only a handful of participants explicitly discussing that
tobacco may have a role in establishing connections to cannabis, this explanation requires more research.

9.2 Cannabis and tobacco place-based practice of use

It was suggested in Chapter Two that the use of cannabis, and to a lesser extent tobacco, is better valued as a social activity for young people rather than an individual behaviour and as such users must find settings where they can get together with other people to smoke (Nichter 2006; Johnson et al. 2003; Dunlap et al. 2006). However, the prohibition of cannabis has resulted in pushing consumption into semi-private or secluded outdoor settings (Hammersley et al., 2001; Room, 2008). In this final section of results, I outline the occasions and settings of cannabis and tobacco consumption and how the use of cannabis and tobacco confers different levels of enjoying and excitement. As will become clear in section 9.2.1, tobacco use can be seen as unexciting due to the large number of people who use it whereas cannabis is a much more sought after activity. The visibility and legal status of tobacco use meant that users felt little restriction in where they could go to smoke tobacco compared to cannabis and this is the topic of section 9.2.2. Finally, it appears that some young cannabis users take advantage of the lack of attention that is paid to tobacco use in public to facilitate their use of cannabis in public settings. Herein lies a final example of the interplay of tobacco and cannabis; the role of tobacco in supporting cannabis use which is discussed in section 9.2.3.

9.2.1 Cannabis is special; ‘they don’t treat it like tobacco’

Participants often contrasted the usual types of smoking experiences for cannabis as different to those of tobacco use; ‘they [cannabis users] meet up with certain friends and they just wanna have like a good time and they do it like they just do it for the experience they don’t do it you know they don’t treat it like tobacco, like if you, like they don’t just go and smoke it because they’ve got it’ (Ulrich, tried cannabis). Importantly, cannabis users do not treat their consumption like tobacco smoking. Ulrich describes how cannabis is used with a select group of friends as a specific social activity, which is unlike tobacco which is smoked just because they have the opportunity. Their encounters of cannabis were usually built around the activity of consuming cannabis rather than cannabis being just a part of their time together. For Callum and Caiden as well, cannabis was a rare and usually social event, where cannabis was taken somewhere specific to be smoked.
Cannabis yeh, like to be honest we don't really do it, like we rarely do it and even if they do do it like it’s like at someone’s, at a party or something

Yeh I wouldn't like, I don't really like go down the street with a joint, we'll like sit somewhere and do it

Yeh it wouldn't be out in the street, it wouldn't be on street corners, it wouldn't be nothin like that

These participants would not smoke cannabis just anywhere but chose locations specifically to use. Moreover, if one person in the group was solely responsible for getting cannabis, they could decide where they wanted to go to smoke it and other young people must follow; ‘Whenever I've smoked it I've never paid for it myself except from like once so then it's someone else's and then they share it with people and like you go where they go, if they're like all fussy about it so they're like 'oh well we'll go here' and you gotta like walk miles into some bush or something and then smoke it there so you just follow whoever had it cos they're sharing’ (Ethan, co-user). For the young people in the current study, the activity of getting together with friends and making an event out of cannabis use is akin to what Dunlap et al (2006, pp 54) describe as a ‘session’. The use of cannabis in a session is a practice which confers specific conduct norms such as sharing one person’s supply or clubbing together to pay for and obtain cannabis collectively, and going to specific environments to use cannabis. There was a sense of power in having cannabis and sharing it with others as the recipients would be prepared to follow whoever owned the cannabis. This power was also demonstrated in other interviews as people were attracted to individuals who had cannabis.

That's what I'm saying if you're like at a party and you're the one with the cannabis then it makes you more of like I dunno like the top man sort of thing cos you've got the power, you've got more powerful drug you know and it kind of attracts people to you type thing

Yeh, ok so is cannabis the cool thing then?

Yeh, cannabis is definitely like a lot more

I dunno, I wouldn't say it's cool I'd say it's more like something people wanna try and get the experience

Being a user, or at least having cannabis, was valuable in social situations for standing out and making friends although the word ‘cool’ was not bequeathed to cannabis easily. Uri is comparing cannabis with tobacco, suggesting that those with cannabis were in a better position socially than those with tobacco as cannabis was more powerful. Cannabis was
something that many young people aspired to try and this meant that they would be keen to make acquaintances with people that could facilitate these experiences. Zinberg (1984) suggested that the popularity of a particular substance can act as a deterrent for those who aspire to be independent and resist following the crowd. This was certainly apparent for participants who explained that the sheer visibility of tobacco smoking rendered it less than desirable and herein lies a stark difference between cannabis and tobacco.

<table>
<thead>
<tr>
<th>Ulrich</th>
<th>No one and I don't think like no one cares about smoking like if I saw like 10 people smoking (tobacco)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uri</td>
<td>Yeh it's not cool like you know</td>
</tr>
<tr>
<td>Ulrich</td>
<td>Like yeh I spose but also like you like it's completely different like people just smoke in public like how many people do you see smoking in public, tobacco</td>
</tr>
<tr>
<td>Int</td>
<td>Mmm</td>
</tr>
<tr>
<td>Ulrich</td>
<td>Then how many people do you see smoking in public with cannabis</td>
</tr>
<tr>
<td></td>
<td><strong>Ulrich</strong> (tried cannabis) and <strong>Uri</strong> (tried cannabis)</td>
</tr>
</tbody>
</table>

Uri and Ulrich think cannabis and tobacco could not be more different; because there are so many who smoke tobacco, no one is bothered by tobacco smoking in public, but as cannabis is not a publicly consumed substance it is more alluring. Moreover, the types of people that cannabis was smoked with made it a bit more special for these participants; ‘And the thing is with cannabis, it's not only that they kind of have more the friends they can trust rather than just like the people that just tag along and like that strangers type thing to em’ (Uri, tried cannabis). This is in contrast to tobacco which can be smoked with anyone, even strangers. Importantly, the disenchantment towards tobacco was most visible when tobacco use was discussed in comparison to cannabis; Andy (joints only) attests that tobacco is just for normal situations, whilst cannabis is something a bit more special;

| Andy           | With like smokin weed you're in a circle like play games with it                                     |
| Int            | Right                                                                                               |
| Andy           | Like passin it round sharing it                                                                      |
| Int            | Yeh?                                                                                                 |
| Andy           | With a fag its just like(.) that’s it.                                                               |
|                | **Andy** (joints only)                                                                               |

According to Andy, who claims he does not smoke cigarettes, there is little to cigarettes; they are not exciting and you cannot play games with it. The next extract also shows that challenging someone to smoke cannabis was somewhat appealing whereas people are just
not excited by tobacco and they do not challenge others to smoke a cigarette as; ‘that's just a normal thing’ (Nathan).

Nathan  And they try it and then they try to get friends with them and
Int  Ok
Nathan  Things like that
Int  So is it different to tobacco then?
Nathan  Yeh cos everyone’s like ‘oh I dare you to take a spliff or whatever’
Int  But they don't really dare you to take like a cigarette?
Nathan  Yeh (agrees)
Int  Ok
Neville  People just like
Nathan  That's just a normal thing

Cannabis was also described as an almost universally useful social tool for all sorts of young people; ‘it's (cannabis) something like even the nerdy people trying to fit in with the cooler people’ (Nathan, never used either substance). Not all participants were excited by cannabis, however, although most were aware that cannabis is expected to hold a higher status over tobacco, at least in the eyes of users; ‘And then cos I suppose they think it's (cannabis) cool or something I don't really know’ (Olive, cigarettes only). Olive implies that those who use cannabis think it is cool.

There is a recurring theme in the qualitative results, that cannabis is seen as more special and more socially useful than tobacco use. This theme also appears to extend to the settings of use with cannabis being used amongst groups of more selected friends compared to tobacco which is used with anyone. The collective use of cannabis rendered it an opportunity for participants to socialise and make new friends which appeared to be absent for tobacco use. Compared to cannabis, then, tobacco is unexciting and users more often than not described an intention to quit; as have participants in several studies (Amos et al., 2004; Haines-Saah et al., 2014). In the next section I examine the narratives of using tobacco in public and whether the lack of excitement towards tobacco, and complicity of adults extends to offer unrestricted opportunities for young people to smoke tobacco.

9.2.2 Unrestrained tobacco use in public

Nearly every participant acknowledged the smoke free legislation prohibiting tobacco use in enclosed public spaces. Despite this, most of the young people, smokers and non-smokers alike indicated that they felt little restriction on where they were allowed to use
tobacco. According to some, so many people smoke that it is acceptable anywhere; ‘Tobacco you just walk down the street and have a fag’ (Georgie, co-user). Some participants boasted of experiences smoking tobacco at school;

Int … so whereabouts do you guys smoke tobacco?
and again you don't have to tell me any=
Adam =Uh *Place M* (refers to an outdoor market)
[Int: Ok]
Andy Outside Tesco express (a small convenience shop)
Ash Anywhere, I don't care(.) in school anything
[Aiden: Yeh]
Int Ok so in school as well? (to group)
Andy Yeh in the toilets
Aiden Anywhere we can
Int Anywhere you can?
Andy Yeh
Adam And that is true init? (to other group members)

Adam (co-user), Aiden (co-user), Andy (joints only), and Ash (co-user)

Ash was unperturbed about smoking restrictions and openly admitted smoking in any place he could. The other boys supported this carefree stance on tobacco smoking. Not everyone was so brazen about smoking anywhere and some participants, mostly those who did not currently use tobacco, spoke of finding quieter public places in order to avoid other people, particularly police officers, when they smoked tobacco.

Int So who would tell them off then, anybody or?
Luke Community officers, police officers
Int Right
Liam Yeh, just public people as well like actually I wouldn't say that cos many people just keep their dist
Luke And it depends if they are in like parks, (Liam: Yeh) like public parks and people in parks don't want you doin it
Liam A lot of elderly people as well it seems yeh
Int Yeh?
Liam Mmmm
Int So it's so it's everybody really then, it's not kind of
Liam Um, anyone who gets offended that pretty much the best way to describe it
Int Right ok, so are there places that young people avoid then when they are smoking?
Luke Parks
Liam Yep such as yeh the park
Int Parks?
Luke Police stations
Liam In front off(.) the public eye

Liam (never used either substance) and Luke (tried tobacco)
For Liam, who is not a smoker himself, tobacco use is somewhat kept away from those who might be offended. Parks, for example, are avoided because there may be elderly people present. Other participants spoke about the lack of restrictions on tobacco smoking and that the worst that can happen if a young person is caught smoking tobacco is that their tobacco could get confiscated; ‘Yeh but I mean say like that’s why people aren’t as scared to smoke in public’ (Ulrich, co-user). Smokers noted one caveat to young people’s tobacco smoking anywhere, that of the parental approval or at least parental awareness needed before they could truly smoke anywhere; ‘If their parents know then they’ll do it in plain sight’ (Izzy, cigarettes only). If young people did not want others to find out; particularly parents, then they would have to be more restricted in their tobacco use. These participants were obviously not those who relied on their parents for facilitating access to tobacco. Elliot (co-user) says he smokes anywhere no matter who is around apart from his father. This is despite Elliot’s father knowing that Elliot smokes.

Aside from the desire for some young people to avoid their parents, there appears to be almost no restriction on the places that young people can go to smoke tobacco. Many participants had not considered making conscious decisions about where they could and could not smoke and often emphasised their freedom to smoke anywhere and resistance to smoking regulations. Some completely ignored rules about smoking indoors and even chose to smoke tobacco in school grounds. I turn now to discuss the places that young people went to smoke cannabis and the young cannabis users who appeared to use tobacco as a way of supporting their cannabis use in public.

9.2.3 The role of tobacco in the inconspicuous use of cannabis

Whilst tobacco and cannabis shared some settings of use, the use of cannabis outside was seen as a more calculated activity and users generally hid away from other people or at
least found locations where they could keep a lookout for other people with trusted group members.;

Frankie  Um, either in the place where you normally hang out or round someone’s house
Int     Ok so it’s is it the same sort of places for tobacco use?
Frankie   Yeh
Int        Yeh?
Frankie  Only you wouldn't walk down the street smoking a joint of weed

**Frankie** (cigarettes only)

For Luke, cannabis users also hide in case people come through where they are smoking; ‘Well they(.) avoid, even if it was late at night, sitting in the middle of the field cos there's still people walking their dogs around’ (Luke, tried tobacco). It seemed that regardless of whether other people might be present, there was an expectation that cannabis users usually hid away. This is akin to Dunlap et al.’s (2006) conception of ‘cyphers’ which are situations, usually outside, when a small number of cannabis users get together inconspicuously to smoke cannabis and try hard not to draw attention to themselves. In the next extract Georgie talks about progressing from experimenting casually to finding appropriate locations; ‘Ummm, used to do it (cannabis) just like casual walking about(.) but then we started doin it like more like isolated areas that you could see if someone was comin but then they wouldn't notice that you we're doing it [Int: Right] but you'd notice them’ (Georgie, co-user). It appears that as Georgie gained more and more experience in using cannabis, she moved to more isolated locations when smoking cannabis so that she and her friends could keep a look out.

Other participants acknowledged the expectation that cannabis use had to be hidden and cannabis users sometimes take unnecessary steps to conceal their use; ‘Well I'd say most people hide it like I don't see why they'd need to like you could be sittin in the green or something and there would be no one about but then they'd still go into a bush or something’ (Ethan, co-user). Zinberg (1984) suggested that as cannabis users become more experienced they adapt their use to more and more settings and their need for rigid rules gradually dissolves. This may explain why non-users, as well as novice users, foresaw rigid expectations relating to use conduct norms whilst more experienced users saw these expectations as being less important. Moreover a small, but nonetheless noteworthy number of participants seemed to utilise the expectation that cannabis use should be hidden to conceal their cannabis use in less inconspicuous ways. Smart users would smoke
cannabis casually in public to suggest to people walking by that they were smoking cigarettes and not cannabis.

Uri If you were smart you would kind of just like I know people who will just like sit out in the middle of the field and just do it like casually

Ulrich What like on the green like yeh

Uri Yeh and that is smart because they are not hiding away and it doesn't make them look suspicious they are just sitting there and they are just casually smoking

Int Right

Ulrich Like if I was huddled in like a little tent and you could smell it

Uri It's obvious

Ulrich You know it's kind of obvious but then if you're in open air it's all like

Uri Yeh if you're hiding away

Ulrich Like all the smoke's like

Ulrich (tried cannabis) and Uri (tried cannabis)

These users would place themselves in locations (usually big wide open fields) where they had clear sight of any walkways or people coming near them. A similar practice was noted by Moffat et al. (2009) who suggested that because cannabis was so socially acceptable in Canada, that some older cannabis users stood on busy corners in the town centre smoking cannabis with no threat of attention or sanction from others. However, Moffat et al. did not discuss the relation of this practice to displaying their cannabis as tobacco. The following extract offers another glimpse at the contrasting practices of tobacco use (e.g. which rarely arouses suspicion) with less expected (and unacceptable) cannabis use. Andy distinguishes the difference between tobacco smoking which can be done anywhere and cannabis that is more restricted due to reactions from other people;

Andy Yeh that’s the thing [Group: uhuh] cos no one really cares... Like I know we said people care when they see you smoke but...

Ash But we don't care

Andy But its different if you're smokin a joint to a cigarette cos they'll just be like 'Oh its just another person smokin' so you can smoke it like outside Tesco but if you smoke a joint outside Tesco then they're like 'oh that’s bad'

Adam People always like giving you d's (dirty looks)

Andy Yeh like [Int: right?] like people always expect you to share it if you've got a joint you know but like if it's a fag (Ash and Aiden laugh)

Adam (co-user), Andy (joints only) and Ash (co-user)
Although these boys seem unperturbed by people reacting to their tobacco use, they would rather avoid dirty looks from strangers in response to smoking cannabis. Furthermore, rather than just concealing cannabis use from members of the public or other adults who may reprimand them for smoking cannabis, this account offers insight into hiding cannabis from other young people. Andy highlights that if they were seen to be smoking cannabis, other people would expect it to be shared whereas they can smoke tobacco in public view of others (presumably their peers) without being hassled. There is a subtle, yet important, point to be made here regarding Andy’s discussion of other people’s differing reactions towards cannabis or tobacco use. Earlier in the chapter (section 9.1.3) it was noted that once an individual was granted entry into the cannabis user community they became privy to information about dealers although in turn they may also become targets themselves as other young people expected them to share their supplies. Andy’s eagerness to avoid being seen as smoking cannabis may serve to avoid other people pestering him for his supplies.

Regardless of intent, it appears that for some cannabis users, the display of cigarette smoking is a useful tool to enable them to inconspicuously smoke cannabis in wide open public spaces. The next participant, Elliot, discusses that whilst sitting in an open space meant that users could respond to other people by pretending they were smoking cigarettes, it also meant that he could easily display his presence to others so that they did not enter into an encounter with him by mistake;

Int What about cannabis is there certain places, I know you said you'd sort of go to bushes and sort of try and hide is that what you usually do?
Elliot Nah I sit in the middle of the field so if anyone walks over I can quickly smoke it really fast or put it out
Int Right ok so keep a watchful eye so it's still not something that you'd kind of be happy with other people knowing like strangers and stuff?
Elliot Nah I wouldn't mind them knowing
Int Right(.) what about you guys?
Ed I don't smoke it so.
Elliot If they don't like it then they don't have to come near me or anything
Int Right

Ed (co-user) and Elliot (co-user)

Elliot says he would not mind strangers seeing him, and that they can choose to leave him alone. Perhaps he is claiming the big open space (‘if they don't like it then they don't have to come near me’) making it clear that he is smoking (albeit pretending to smoke a
cigarette) so that others are warned that he is there. Older adolescents in the Moffat et al (2009) study suggested that they took advantage of the nonchalant attitudes of passers-by and smoked cannabis on busy street corners because no one would care.

9.3 Concluding comments – a complex relationship between cannabis and tobacco

This chapter has highlighted that whilst tobacco is not particularly favoured by young people in this study, it does have several benefits for users of cannabis. These benefits extend beyond supporting the physical act of cannabis smoking (e.g. using tobacco to make the inhalation of cannabis smoke more pleasant or by adding tobacco to cannabis to make cannabis supplies last longer) to include being seen as a tobacco smoker by others as a strategy to gain access to cannabis as well as to use cannabis in particular environments.

The potential role of tobacco use as a form of gateway to obtain cannabis was difficult to tease out as participants were reluctant to acknowledge the link between tobacco and cannabis because once the young person became known by peers as a cannabis smoker, cannabis appeared readily accessible through many channels. Nonetheless a handful of co-users, and non-smokers, believed that cannabis would be unobtainable without the connections to suppliers that might be established through tobacco smoking and as such it is important to recognise an important role of tobacco use in initially helping young people to gain admittance into circles that supply cannabis.

Whilst access to cannabis, like tobacco, was seen as largely unobstructed among users, there seemed to be one important difference between practices of access for tobacco and cannabis; that of parental complicity. Many of the tobacco using participants discussed that their parents or parents of friends would readily help them to circumvent the age restrictions on access to tobacco and this was often justified as it was safer than the young person trying to obtain tobacco by waiting outside shops and approaching strangers. However, whilst this may be partly due to the ease in which adults can access tobacco from shops (and cannabis is not sold in shops), the participants explained that it was the current illegal status of cannabis that stopped parents from helping young people to access cannabis. This highlights an important consideration for the consequence of any future policy scenario where cannabis is made legitimately available to adults over a certain age. Despite the current reluctance of parents to facilitate cannabis access, it appears young users have very little difficulty in obtaining cannabis if they know the right people.

The second half of the chapter focused on narratives of place-based experiences of tobacco and cannabis use and in particular the environments that young people go to smoke tobacco and cannabis. The current illicit status of cannabis means that young people have
to identify suitable locations for use where they will not be disturbed by passers-by or by the police and this may entail users making long journeys to secluded outdoor areas. The literature base is sparse but indicates that there may be a role for tobacco use practices in the strategy to avoid making such long journeys to hidden locations of cannabis use. The findings of the current study build on this work to indicate that cannabis users may draw upon perceived images of being a tobacco smoker, which is more acceptable because it is not illegal, in order to smoke their cannabis inconspicuously in public.

The results of this chapter, like the previous three chapters, illustrate the complexity of cannabis and tobacco use and highlight an intricate, and at times, contradictory relationship. There are contrasting attitudes to cannabis and tobacco with cannabis being thought of as more special and exciting compared to tobacco that is much more normal and uncool. Tobacco is also considered more harmful than cannabis and many young people who use cannabis are anti-tobacco. Despite this, tobacco use is implicated in the consumption of cannabis in many ways. It facilitates moderate use of, and helps to conserve, cannabis by filling out joints, and it also helps to facilitate opportunities for young people to use cannabis. Clearly this complexity has implications for tobacco control which have been discussed above. Ignoring the nuanced and sometimes contradictory relationship between tobacco and cannabis may lead to a superficial understanding of the social practices surrounding tobacco and cannabis consumption. Ignoring this complexity will render efforts focused on preventing the uptake of tobacco cigarette use ineffective among those who underestimate their risks of tobacco dependence linked to their cannabis consumption. In the next and final chapter, I conclude the thesis with an overview and critical summary of the results presented in this study. I also outline the wider importance of this research and particularly its implications for monitoring substance use and for public health messages surrounding the implications of mixing cannabis with tobacco. I document the contribution of this investigation to the, as yet, under-developed topic of cannabis and tobacco co-consumption and suggest areas and themes which would benefit from further research.
Chapter Ten: Conclusions and moving forward

10.1 Introduction

This thesis contributes to a small body of work that suggests declines in youth tobacco use may be hindered by the consumption of cannabis and the complex interconnection between the two substances. Contemporary efforts to address young people’s substance use have recognised that the co-consumption of substances is an important area of focus and this thesis makes an original contribution to this agenda by focusing on the awareness that young people have about cannabis and tobacco co-use. Moreover, the thesis emphasises exploring the use of these substances not only from an individual choice perspective but also from a perspective that considers the contextual drivers of tobacco and cannabis use. Previous work from health geography and allied disciplines has suggested that behaviours are shaped by collective norms, emphasising the social nature of behaviours or practices and that certain behaviours are acceptable amongst particular groups of people in particular locations. Crucially, this thesis demonstrates the importance of considering the interaction of place-based practices of cannabis and tobacco. Revealing that place-based restrictions on the use of one substance (e.g. needing to find hidden locations to use cannabis) may influence the place-based practices of using the other (e.g. using tobacco to camouflage cannabis use) is a unique contribution of this work to research on young people’s tobacco and cannabis co-use.

The research focus required a flexible and contemporary approach to unpicking what appeared to be a complex interconnection between the substances. As a result, this thesis documented a quantitative survey in 12 secondary schools and a qualitative interview study in two youth club settings to explore cannabis and tobacco co-use more closely. The survey was used primarily to delineate prevalence and examine risk factors of co-consumption in more detail than is currently achievable in population surveys. In a complimentary study, I examined narratives of co-consumption beliefs and practices through in-depth interviews with small groups of adolescents.
10.2 Contributions to knowledge

Data from both studies supported the thesis in addressing the overriding research aim which was to explore the complexity of tobacco and cannabis co-use and the specific research questions outlined in Box 10.1.

<table>
<thead>
<tr>
<th>Box 10.1 Research questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What are the individual and contextual patterns of tobacco and cannabis co-consumption among school-aged children?</td>
</tr>
<tr>
<td>2. How are smoking identities negotiated in relation to tobacco-for-cigarettes and tobacco-for-cannabis use?</td>
</tr>
<tr>
<td>3. How do belief systems surrounding the relationship between tobacco and cannabis influence their co-use?</td>
</tr>
<tr>
<td>4. How do cannabis consumption practices interact with and contribute to tobacco consumption practices?</td>
</tr>
</tbody>
</table>

In exploring these research questions, this thesis provides several original contributions to knowledge which are outlined below.

10.2.1 Revealing the unknown: individual and contextual effects on co-consumption

The first contribution this thesis makes is to draw attention to fundamental gaps in the literature surrounding who is most likely to co-use cannabis and tobacco. Whilst there is existing evidence to suggest that the risk factors associated with the co-use of tobacco and cannabis are likely to be different to those which predict the use of just tobacco, this evidence base is limited. There are only a handful of studies examining the concurrent use of tobacco and cannabis within a single sample, and these investigations are usually outside of the UK. A further criticism surrounds whether these investigations truly reflect the specific co-use behaviours of cannabis joint smoking. Through the results of the quantitative study, this thesis demonstrates that some cannabis joint smokers do not smoke tobacco cigarettes and many of these young people would not consider themselves to be smokers. This highlights the importance of asking young people about specific tobacco and cannabis practices as otherwise these co-users would not have been identified.

The multinomial, multilevel modelling of the same responses also revealed several key risk factors that may be unique to co-users of tobacco and cannabis compared to users of just tobacco. In particular, co-consumption appears to be more likely among boys than girls and it also appears to be more strongly related to alcohol use than just tobacco use. The most important factor, representing nearly a 13 fold increase in risk, for co-use was the current use of drugs other than cannabis, tobacco or alcohol.
The results revealed that perceived local access to cannabis was an important predictor of co-use and this result indicates that projects based around social norms and peer networks as well as making disruptions to the supply of cannabis more visible may be valuable.

Although other authors have indicated mixed support for school-level effects, the ethnic and socioeconomic make-up of the schools in the current study did not here influence substance use. However this may be an artefact of the small number of schools ($n = 12$) taking part in the study. In contrast, residing in neighbourhoods where there are more income deprived households (an indicator of deprivation effecting children) was associated with an increase in likelihood of reporting the co-use of tobacco and cannabis. Notwithstanding the potential sampling and response bias, the results of this study illustrate that there may be unique risk factors for co-consumption; particularly around gender, age, involvement with alcohol and other drugs and peer involvement with tobacco.

10.2.2 Constructing smoking identities

Building on the complexities of self-identification as a smoker, a second gap in the literature was identified surrounding the different categorisations of tobacco and cannabis smoking as well as a difference in attitudes towards tobacco and cannabis with cannabis seen more favourably compared to tobacco use. This represented an important focus for the thesis; not only in more fully capturing co-consumption patterns but also in understanding how users of tobacco conceptualise their smoking of tobacco-for-cannabis compared to tobacco-for-cigarette use. The uses of tobacco-for-cigarettes and tobacco-for-cannabis were described as very distinct among participants in this study. Most participants attempted to resist taking on an identity as a tobacco smoker as it carried connotations of lack of control and dependence to tobacco. Tobacco cigarette smokers could choose not to adopt a tobacco smoker identity unless they smoked a lot, sometimes even two or three cigarettes a day, knew what they were getting themselves into and were sure they wanted to be known as a smoker. Importantly, the amount and frequency of cigarettes that constituted being a ‘smoker’ was deliberately vague. This vagueness appeared to allow young tobacco users to claim the identity of smoker in certain circumstances and resist it in others.

The task of avoiding a smoker identity was easier for those who did not smoke tobacco in cigarettes. The use of tobacco-for-cannabis was discussed by some young people as a hybrid version of tobacco, which did not constitute smoking. Moreover, some cannabis smokers exclaimed that the tobacco was merely used for filling a joint and not because they wanted to smoke tobacco. As a result, these cannabis users could ignore the tobacco
and the current thesis demonstrates that for all intents and purposes, a cigarette makes a smoker. The strategies discussed above were primarily endorsed by smokers and although non-smokers debunked these illusions, as they considered any tobacco use to be smoking, non-smokers did recognise the desire to avoid a tobacco smoker identity. The subjectivity inherent in young people’s conceptions of tobacco use meant that two people could smoke the same amount of tobacco with the same frequency of use yet one would consider him or herself to be a smoker and the other would not. This complicates the work of researchers and practitioners in targeting smokers if tobacco users do not have a clear and common idea about what constitutes being a smoker and this is particularly an issue for tobacco-for-cannabis use.

10.2.3 Smoking beliefs

A third important contribution to our understanding concerns the beliefs that young people hold about the consequences of using cannabis and tobacco, both separately and mixed together. The literature reviewed in Chapter Two identified that despite a comprehensive awareness of tobacco harms, young people’s awareness of cannabis harms is generally limited, with messages concerning therapeutic uses of cannabis and a lack of scientific evidence (relative to tobacco at least) which only confuses messages surrounding the harms of use. There is a much smaller literature base on young people’s harm awareness for cannabis than tobacco, and understanding what drives decisions to use tobacco and cannabis together is an important, but as yet underdeveloped, area of study for co-use research.

The reasoning behind decisions to co-consume tobacco and cannabis was explored in Chapter Eight. A theme emerged that cannabis was considered more positively than tobacco. This was in part because tobacco use was much more prevalent and normal compared to cannabis which was more endearing but also because tobacco use harms are much more present in public discourse than harms surrounding cannabis use. The young people in the current study appeared to understand the health harms and legality of tobacco use. However, participants strongly disputed the evidence base of the negative effects of cannabis, drawing strongly on media reports of potential medicinal uses of cannabis and some participants believed that cannabis could be legitimately accessed and used in certain circumstances. Importantly, the cannabis smoking participants appeared to use the uncertainty surrounding cannabis harms to legitimate their use as they could not find a convincing reason to avoid cannabis. Non-users were not as sure about the safety of cannabis and mostly talked about the behavioural and psychoactive changes that occur
when someone uses cannabis. Previous literature has indicated that some young people believe cannabis can undo the harms of tobacco use and this belief was posed to young people in the current study. Although participants expected that smoking a tobacco cigarette (containing 100% tobacco) was worse than smoking a cannabis joint, because a joint would contain less tobacco, they did not accept that cannabis counteracted the harms of using tobacco. Nonetheless, most participants believed that cannabis was healthier to consume than tobacco use and cannabis joint smokers tended to attribute their negative experiences to the tobacco.

Despite beliefs about the dangers of using tobacco, many cannabis users continued to use tobacco in their cannabis joints. Chapter Eight also alerts us to a number of explanations for why young people decide to add tobacco to cannabis which primarily centre on the use of tobacco to fill out joints so that cannabis lasts longer, which is important for sharing supplies with others to consume cannabis socially. Many participants discussed that they could get ‘high’ by adding only a small amount of cannabis to a joint containing mostly tobacco. Others explained that cannabis was too strong on its own and that tobacco was added to make the smoke more tolerable to inhale and so that users did not become too intoxicated. Although many cannabis users smoked joints simply because that was the way they were used to being offered cannabis, experienced cannabis users, who had become in a sense connoisseurs, said that they had chosen to continue to add tobacco to their cannabis because it meant that they could achieve a particular level of intoxication to match their expectations for the consumption event. One cannabis user, who just wanted to enjoy a mellow high, said that he had consciously decided to add tobacco because otherwise he would be out of control. It appears, then, that a compromise is made whereby the benefits of adding tobacco to cannabis outweigh the consideration of the harm they may expose themselves to by using tobacco.

10.2.4 Consumption practices

A final and fundamental contribution to knowledge on co-consumption centres on the potential linkage of tobacco and cannabis practices beyond the physical act of smoking a joint. The focus on place-based practice within the current thesis is primarily on access to and locations to use cannabis and tobacco as there is emerging evidence that practices of tobacco and cannabis may interact. For example, young people who smoke tobacco are thought to have more opportunities to use cannabis (and vice versa) and there are thought to be similarities in the way that tobacco and cannabis are accessed (e.g. a reliance on the complicity of friends and family members and ‘social dealing’) which distances cannabis
access from other illegal drug markets. Although there is very little literature on the places that young people go to use cannabis, young people who smoke cannabis are thought to make long journeys to outdoor locations that are secluded and away from public gaze in order to smoke cannabis in groups because of the current illicit status of cannabis use. A recent investigation in Canada highlights, however, that some young people may use the image of smoking tobacco, which is not illegal, to camouflage their cannabis use in more conspicuous settings. The potential role of tobacco use in facilitating cannabis access was not immediately apparent in the current study as many participants were reluctant to acknowledge the link between the substances due to the very easy access to cannabis. A handful of co-users, and non-smokers, believed that cannabis would be unobtainable without the initial connections to suppliers that would be impossible without being a tobacco smoker first. Therefore, it may be that tobacco plays an important role simply to initially support the admittance into groups of people that supply cannabis.

Finally, because cannabis use is not permitted in the UK, the young cannabis users in the current study did often need to travel far to find hidden and semi-private locations to smoke cannabis. In contrast, whilst smoking tobacco in enclosed public spaces is illegal, it is not illegal for young people to smoke tobacco outdoors in public and so participants were largely unrestricted in their use of tobacco. The young people in this study appeared to take advantage of the relatively unrestricted use of tobacco to assist them in using cannabis. Specifically, experienced cannabis users appeared to draw on the expectation that if passers-by saw a group of young people smoking in hidden wooded areas they might suspect that cannabis was being used. However, participants also described that if smokers were seen in open public spaces such as parks or fields then passers-by would assume it was tobacco they were smoking. These open public spaces would also give the users plenty of time to react if they saw people coming towards them. This adds a unique contribution to the literature on co-consumption suggesting that users may deliberately smoke tobacco cigarettes or at least present the image that they are using tobacco in order to conceal their cannabis use.

10.3 Academic and policy implications

As discussed above, this study makes several original contributions to the emerging literature on young people’s cannabis and tobacco use behaviours and these have clear academic and policy implications. Although the results chapters addressed distinct research questions surrounding co-use, there was a central theme running through the results. This theme relates to the overwhelming evidence that tobacco practices play an integral role in cannabis use (e.g. facilitating a pleasant cannabis consumption experience, making
cannabis supplies last longer, and facilitating the use of cannabis in public) yet there appears to be a simultaneous reluctance among young people to acknowledge this link and particularly the involvement with tobacco use as important for cannabis use. For example, young people in the current study rarely recognised their tobacco use for cannabis as a form of tobacco smoking and they disputed that connections made when smoking tobacco facilitates access to cannabis.

The reluctance to report tobacco use has important implications for monitoring tobacco and cannabis prevalence as many of the co-users identified in this study would not have been classified as tobacco users if they were not explicitly asked about cannabis joint use. Current surveillance methods for young people’s substance use in England and Europe take the form of school-based, population representative, surveys such as the SDD (Fuller & Hawkins, 2014) and ESPAD (Hibell et al., 2012). Whilst these surveys have increased focus, in recent years, to include the concurrent use of tobacco and cannabis, as well as alcohol and other drugs, they tend to ask about tobacco use as a separate practice to cannabis use.

This thesis is the first investigation to demonstrate that if co-consumption is to be truly understood, measures of concurrent use must acknowledge specific practices such as cannabis joint smoking. Moreover, the current work advocates that unless cannabis joint smoking is incorporated into monitoring efforts, a group of tobacco smokers will remain hidden and out of reach from those trying to prevent tobacco uptake.

The results of the thesis also demonstrate that when explaining cannabis use, decisions to use cannabis often inherently involve contrasting cannabis to tobacco and justifying cannabis consumption by framing cannabis as healthier than tobacco use; and specifically that smoking a cannabis joint (e.g. with added tobacco) is healthier than smoking tobacco on its own. The current evidence base indicates that contrary to these beliefs, the combined use of tobacco and cannabis has more adverse health implications than smoking either substance on its own (Jones et al., 2011; Lee & Hancox, 2011; Van der Kooy et al., 2009). Despite this evidence, it is clear that young people believe tobacco to be more detrimental to health and that these beliefs stem from their engagement with health harm information for each substance. It is important to note that whilst I did explicitly ask the young people to compare the substances and tell me which is better or healthier, in many cases these comparisons were not provoked which suggests that it may be a commonly used rationalisation for using cannabis. The participants in this study, as in previous work such as Haines-Saah et al. (2014) tended to focus on the harms of tobacco use and dismissed that there was any credible evidence to indicate that cannabis was harmful. Perhaps more
importantly, the young people in this study appeared to be confident in the current state of confusion regarding cannabis use harms in scientific and public health messaging; they used the unclear cannabis advice to their advantage, suggesting that it cannot be dangerous as it has not been convincingly proven to be dangerous. The strategy of justifying tobacco-for-cannabis practices as not as bad as they could be (e.g. holding a belief that cannabis joints are less harmful than cigarettes containing 100% tobacco) warrants further investigation.

Another implication of this work is the illustration that parental complicity in access works differently for tobacco and cannabis. For example, whilst access to cannabis and tobacco was largely unobstructed for many participants, there was one important difference in that those seeking tobacco could rely on the complicity of parents to facilitate access because young people would otherwise have to engage in risky behaviours like approaching strangers to buy tobacco on their behalf. However, the current illegal status of cannabis represented an important barrier in parents being complicit in young people’s attempts to obtain cannabis. Although these narratives are from young people rather than parents themselves, this indicates that one of the few barriers to access cannabis for young cannabis users was that they could not rely on parents to assist them. This finding has important implications in the current global climate of increasingly lenient policies for cannabis that have decriminalised use or made medicinal and even recreational access to cannabis legal for those above a certain age such as has been the case in the USA (Benmaamar, 2014). As this research demonstrates, the legal but age restricted nature of tobacco in the UK currently means that some parents justify being complicit in young people’s access to tobacco. The findings raise the question that if cannabis policy follows a similar path to the USA, would parents be more readily willing to break the law to facilitate access to cannabis for their children if it was available in shops and only age restricted. Of course, it should be reiterated that findings on parental complicity are drawn from narratives of young people rather than from parents themselves and it may be that parents have different explanations for facilitating or not facilitating access to these substances. However, it is worth noting the difference in participant’s narratives of access to cannabis and tobacco for future work.

Finally, the results of this study indicate that there are contrasting perceptions of acceptable locations to use cannabis and tobacco. Many of the cannabis users in this study described that cannabis use was expected to be hidden away because it is currently illegal and that young novice users may be paranoid whilst intoxicated. However, a handful of more experienced participants suggested that clever users could take advantage of this
expectation and draw upon perceived images of tobacco use to conceal their cannabis consumption in public. This indicates that despite tobacco use being disenchanted for young people, as ‘everyone does it’; young people are simultaneously drawn to use tobacco to support their cannabis. That young cannabis users draw on practices of tobacco to conceal cannabis illustrates that the two substances are intertwined and efforts to address one substance should also address the other and make clear that using any amount of tobacco, be it tobacco cigarettes or tobacco-for-cannabis can be harmful to health and lead users to become tobacco dependent in the future.

10.4 Study limitations and future directions

10.4.1 Limitations

The thesis makes a number of important and original contributions to our knowledge of co-consumption. However, the conclusions drawn from the results should be considered in conjunction with the limitations of the work. For example, whilst the quantitative modelling of co-consumption identified a number of unique predictors, the results show that these factors explained just 26.8% of the variance and this indicates that a number of important factors may still be unaccounted for. Moreover, no school effects were found and only a small effect of neighbourhood deprivation was identified for the concurrent use outcome in the school survey. These findings may indicate that school characteristics and other contexts of disadvantage are unimportant for co-use although these null findings may be the artefact of failings in the survey to adequately capture data on these factors. Legleye et al. (2011) and Green et al. (2014) suggests that although deprivation is linked to heavy or problematic use, there is a weak relationship between disadvantage and experimenting with tobacco or cannabis and it may be that the majority of participants in this study, whilst currently using cannabis and tobacco, had not progressed to more sustained use. The small sample size in the current investigation precludes the modelling of heavier use of tobacco and cannabis and this will be an important focus of future research to delineate the origins of potential pathways to smoking through disadvantage that become much clearer among young and older adults.

Related to this, the neighbourhood characteristics used relied upon participants giving valid postcodes and over a quarter of participants did not give postcodes. This restricts the ability to fully understand the relationship between youth co-consumption and neighbourhood disadvantage. Further research is needed to understand the contribution that young people’s engagement in tobacco and cannabis co-consumption adds to the spatialised patterns of adult tobacco consumption, a pattern that has a huge importance for
resultant socio-spatial patterns of health inequalities (Hiscock et al., 2012; McLafferty, 2008; Pearce et al., 2011; Shohaimi et al., 2003).

Another concern within the responses of the school survey was the small number of schools agreeing to take part. Despite inviting a total of 123 secondary schools, just 12 schools agreed to conduct the survey and returned responses for analysis. The challenge of recruiting schools to take part in survey research has been documented elsewhere with many population studies failing to achieve a response rate from half of the schools they invite and one study reports a response rate of just 6% of schools (Atkinson, Sumnall, & Bellis, 2012). The limited sample of schools inevitably introduces a bias to the results and it is difficult to assume that the sample is representative of all secondary schools in the local population let alone at a national level.

Finally for the quantitative study, the multinomial regression analysis simultaneously modelled the effects of predictors on two outcomes (e.g. reporting current tobacco-only use or reporting current tobacco and cannabis use) compared to those who did not report currently using tobacco. It is not possible however, from this analysis to identify if the impact of predictors on co-use is due to the concurrent use of tobacco and cannabis or whether it is specifically due to the additional use of cannabis. Separating these effects may be possible by modelling a fourth outcome in the multinomial analysis (e.g. those cannabis users who did not report any current tobacco use). However, due to the small number \( n =53 \) of cannabis-only users in the sample, it was considered inappropriate to model this outcome as there would be small cell counts for a number of predictors.

There are also concerns for the qualitative arm of this work and one of the main criticisms of qualitative enquiry generally is the subjectivity of the findings; that the results are purely the interpretation of one researcher or a team of researchers and that if the data were analysed by someone else that a different conclusion would be drawn. The response to this limitation is that subjectively is inherently present in qualitative research that attempts to unpick nuanced features of discourse although transparency in how the researcher came to the specific conclusions can enhance the rigor of qualitative research. In the current study, quotations and larger extracts of the narratives are presented alongside interpretation so that the reader may consider the validity of the interpretations. The use of computer assisted analysis also played an integral role in the provision of transparency as it was possible to rapidly access an audit trail of the extracts to ground them within the source text (transcripts). Ultimately, whilst the researcher can present the steps that led them to the findings, there is inevitable subjectivity and this should be reflected upon when evaluating the results of the study.
A similarly widespread concern of qualitative study is the issue of generalising the results of interviews with a small group of young people to make inferences about all young people. However, the goal of the current research was to demonstrate the complexity inherent in narratives of cannabis and tobacco co-consumption, and to place the groundwork for future researchers to examine some of the issues identified here. It is clear from the unexplained variance in the quantitative modelling that we currently do not have a firm handle on the full range of risk factors that make young people vulnerable to co-consuming cannabis and tobacco. This exploratory work has a place in setting out important avenues for future work with more and more diverse groups of young people where generalisability is more important.

Finally, there are concerns for the trustworthiness of findings from research on tobacco and cannabis use, illustrated in the literature review in Chapter Three, and this shaped the design of a study to facilitate accounts from participants that were open and honest. Tobacco and cannabis use may be youth oriented practices that participants may not wish to share with adult researchers who are for all intents and purposes, ‘outsiders’. This criticism can be levied at both the qualitative and the quantitative study of young people’s cannabis and tobacco use behaviours although it might be expected that participants may feel particularly susceptible to giving false accounts when face-to-face with a researcher as opposed to sitting in front of a computer screen. Prior to the interviews taking place, emphasis was made on the confidentiality of the interviews, so that participants knew no one would be identified by what they said and crucially that there was no obligation to disclose admissions of illegal substance use. Despite these assurances the participants may still have been motivated to avoid telling the truth about their cannabis and tobacco use so as not to cause unwanted consequences of their taking part (e.g. getting into trouble, or having access to cannabis stopped or the places they can go to smoke being restricted). For example, a handful of participants interjected in their group interviews when fellow interviewees were discussing the places that they went to smoke cannabis and where they bought tobacco just in case the police started going there. Nonetheless, many participants appeared comfortable in talking about their experiences and disclosed important strategies (e.g. using tobacco to conceal cannabis use) that future research would benefit from addressing.

10.4.2 Future directions

The aforementioned implications of this work pave the way for the future agenda of co-consumption research. In this section I discuss the prominent next steps for progressing our
understanding of young people’s use of cannabis and tobacco. The most important next step for co-consumption work is to implement more sophisticated questioning (e.g. explicitly asking about tobacco-for-cannabis use, and using multiple questions to capture tobacco users) in population based monitoring of co-use. These results, like those reported by others (e.g. Bélanger et al., 2011) demonstrate that there may be a hidden population of tobacco users which must be considered, otherwise researchers may not reach their whole target population (co-users). Results here indicate that additional cohorts of smokers are identified when using multiple questioning around the use of tobacco-for-cannabis and smoking tobacco cigarettes in the context of cannabis consumption (e.g. asking if cannabis users smoke tobacco cigarettes in between episodes of cannabis use). These types of questions reveal more smokers than by simply asking young people to self-report their use of tobacco. Future research, and efforts to monitor use of tobacco and cannabis, need to employ multiple, contextually based, questions and account how responses to individual questions contribute to understanding our populations of young smokers.

Related to and following the need to accurately capture populations of co-users is a need to further understand the antecedents of co-consumption. The multilevel modelling in this thesis outlined that there may be different factors that are important for predicting who may become a co-consumer of cannabis and tobacco (for example, peer and family use of tobacco, engagement with other substances, perceiving access to cannabis to be easy). However, it is important to now test these factors with a larger, more representative population sample of young people and to assess whether the factors are implicated in co-use can be attributed to the use of cannabis in addition to tobacco, the heavier tobacco use associated with smoking joints and cigarettes or a combination of both, which could not be tested in the current study due to sample limitations.

It is also imperative that young people’s understanding of tobacco and cannabis co-use health harms are placed more prominently on the research agenda. Firstly, it appears that young people draw on the currently under-developed body of evidence, or at least the flood of mixed messages in media and on peer-based anecdotal forums online, to support their choices to use cannabis. Importantly, now that there is clearer evidence of the way young people use their confusion to legitimise their consumption if cannabis, the effectiveness of persuasive messaging campaigns to dispel myths and strengthen young people’s awareness of cannabis harms must be tested. This is particularly relevant as young people use their current state of awareness to underpin their continued use of tobacco. In the current thesis, a handful of narratives show that young people appear to use tobacco with cannabis because cannabis on its own was too strong (intoxicating). In this example, the addition of
tobacco is welcomed because of its purpose of minimising harm and these beliefs must be scrutinised further in future research. This is timely as a recent leaflet intervention campaign has been developed at ASH Wales to dispel the myth that tobacco added to cannabis or tobacco in shisha (water) pipes is safe although the effectiveness of this campaign and the mechanisms that serve to influence young people’s behaviour change in this regard are as yet unknown.

It would be pertinent to address the implications of legalising cannabis for parental complicity. The results here indicated that parents were largely accepting of their children’s tobacco use and would sometimes aid in supplying tobacco to their children (by going to the shop for them) in order to stop their children getting into a more present danger of talking to strangers or getting into trouble. Some participants said that parents would draw the line at supplying cannabis however because cannabis is an illegal substance. These findings are purely from the narratives of our young participants and future research needs to corroborate this exploratory finding with narratives from parents themselves to unpack whether parents would be more willing to supply cannabis to young people if it were to be regulated akin to current policies on tobacco access. Such research would be timely as there is continued, international policy debate surrounding legalisation.

There are also areas that researchers in the discipline of human or health geography could specifically contribute to furthering our understanding of co-consumption of tobacco and cannabis. There is very little work considering how place-based interactions may be important in promoting or discouraging tobacco cigarette use. However, a handful of participants in this study revealed that they may disguise cannabis as tobacco cigarettes in order to consume cannabis in open spaces. It is unclear from this exploratory work whether young people deliberately purchase and carry tobacco for the sole purpose of ‘camouflaging’ cannabis use although research by Haines-Saah (2014) has noted that cannabis users may transport unused cannabis joints in cigarette packaging. More work is needed to study how these practices of displaying tobacco consumption for cannabis impact on actual tobacco use. Specifically, future research may benefit from utilising the lessons learnt in this thesis on identifying cohorts of young cannabis joint users, who use tobacco to support cannabis consumption, to identify how they manage to resist smoking tobacco cigarettes.

This section has outlined five areas of research for progressing our understanding of young people’s tobacco and cannabis co-consumption. Through focusing on these aspects of co-consumption (capturing smokers and co-users, understanding patterns of co-use, debunking health risk myths, parental complicity and tobacco practices for cannabis use)
we will be in a stronger position to support young people to resist taking up tobacco and cannabis use.

10.5 Concluding comments

Notwithstanding the limitations discussed above, the results of this thesis highlight that there is an intricate relationship between cannabis and tobacco which extends beyond the physical properties of adding tobacco to cannabis to social and place-based consequences of co-use although at times the connection between the substances is paradoxical. The substances are not equally favoured by the participants in this study and many young cannabis users (and non-users) were anti-tobacco. Indeed, nearly all of the participants described the negative health implications of using tobacco and many tobacco using participants avoided self-identifying as tobacco smokers unless they regularly smoked tobacco cigarettes. Despite this, at several junctures we see cannabis consumption being supported by tobacco use practices; from the addition of tobacco to make cannabis less potent, to opening up networks for accessing cannabis and in supporting the creation of environments where young people can smoke cannabis in public settings without fearing being caught through the display of what appears to be tobacco use.

Tobacco use, then, is not in itself a beneficial activity for young people, which is evidence of the successes of anti-tobacco interventions and denormalisation strategies in wider society. However, many young people make a compromise to continue to use tobacco (despite the aforementioned social stigma) all the time it supports their cannabis use (which is perceived to be valuable for young people, not least in creating social identities). Clearly this complexity has implications for tobacco control and tobacco awareness amongst young people which have been discussed above. Ignoring the nuanced and sometimes contradictory relationship between tobacco and cannabis leads to a superficial understanding of the social practices surrounding tobacco and cannabis consumption and ultimately may fall short of preventing the uptake of tobacco cigarette use among those who underestimate their risks of tobacco dependence linked to their cannabis consumption.

These insights are integral in progressing our understanding of cannabis and tobacco co-consumption. Specific lessons are learnt from the quantitative aspects of the thesis which illustrate that not all co-users (e.g. cannabis joint smokers) use tobacco cigarettes and so are not likely to be identified in current survey methods. Unless this is addressed, monitoring efforts will miss a hidden cohort of tobacco users. Moreover, the qualitative work demonstrates that young people emphasise their ambivalence and sometimes distaste for tobacco cigarettes because tobacco is known to be harmful to health and most certainly
poses the biggest risk to users of cannabis joints. Messaging around the dangers of using each substance on its own appear to be used by young people to rationalise their use of joints and it seems that whilst young people do not necessarily believe that cannabis is ‘healthy’, they do believe that their risks of using tobacco in this way (e.g. for cannabis use) are not the same as using tobacco-for-cigarettes; these messages need to be debunked.
References


doi: 10.1177/1468794104044434


doi:10.1177/1524839910369222


doi:10.1207/S1532480XADS0701


doi: 10.1002/CHI.739


Kitzinger, J. (1994). The methodology of focus groups: The importance of interaction between research participants. *Sociology of Health and Illness, 16*(1), 103–121. doi:10.1111/1467-9566.ep11347023


canadian youth: Do we need more multi-substance prevention programming? *The

smokers and nonsmokers: Who is smoking what? Canadian Medical Association

modeling in the school environment, student characteristics, and smoking

school environment and smoking onset in elementary school students. *Cancer
Epidemiology Biomarkers & Prevention*, 14(7), 1762–1765. doi:10.1158/1055-
9965.epi-05-0065

stages of youth smoking onset consistent with youth’s perceptions of their smoking
&uid=70&uid=4&sid=21106135202881

characterization of different smoker types. *Nicotine & Tobacco Research*, 13(11),
1106–1113. doi:10.1093/ntr/ntr169

doi:10.1300/J233v04n03_06

Lee, M. H. S., & Hancox, R. J. (2011). Effects of smoking cannabis on lung function,

initiation and transition to daily use of tobacco and cannabis during adolescence: a
retrospective cohort study. *Addiction*, 106(8), 1520–1531. doi:10.1111/j.1360-
0443.2011.03447.x


Okoli, C. T. C., Richardson, C. G., & Johnson, J. L. (2008). An examination of the relationship between adolescents’ initial smoking experience and their exposure to


QSR International Pty Ltd. (2010). *NVivo qualitative data analysis software*.


Strand, S., Malmberg, L., & Hall, J. (2015). *English as an additional language (eal) and educational achievement in england: an analysis of the national pupil database,* Retrieved April 24, 2015, from


Survey Monkey Inc. (2014). *Survey Monkey*.


framework. *Nicotine & Tobacco Research, 5*(Supplement 1), S101–S117. doi:10.1080/14622200310001625546


Appendices

Appendix A – Potential data collections suitable for measuring co-consumption of cannabis and tobacco among young people in the United Kingdom

Appendix B – Ethics committee review letter and ethical conduct declaration form

Appendix C – Co-consumption final questionnaire (paper version)

Appendix D – Letter to schools (school survey study)

Appendix E – Example letter to parents (school survey study)

Appendix F – Information sheet for pupils and teacher script (school survey study)

Appendix G – Study check list (school survey study)

Appendix H – Topic guide (interview study)

 Appendix I – Information sheet for participants (interview study)

Appendix J – Letter to parents (interview study)

Appendix K – Confidentiality agreement and ground rules (interview study)

Appendix L – Transcription notation sheet (interview study)

Appendix M – Example transcript summary (interview study)

Appendix N – Code structure (interview study)
### Appendix A Potential data collections suitable for measuring co-consumption of cannabis and tobacco among young people in the United Kingdom

<table>
<thead>
<tr>
<th>Data set title</th>
<th>Participants, country, and survey years</th>
<th>Questions allowing for co-use to be computed</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>European School Survey Project on Alcohol and Other Drugs (Hibell et al. 2012)</td>
<td>15-16 year olds. 36 countries in Europe (including UK) 1995-present (five cross-sectional waves to date, most recent in 2011).</td>
<td>On how many occasions (if any) during your lifetime have you smoked cigarettes? How frequently have you smoked cigarettes during the last 30 days? On how many occasions (if any) have you used marijuana or hashish (cannabis)?: 1) in your lifetime, 2) during the last 12 months, 3) during the last 30 days</td>
<td>Each participating country is required to ask a set of core questions but is permitted to add their own questions. The 2007 ESPAD questionnaire for Switzerland asked cannabis users how often tobacco was added to their cannabis joints? (see Bélanger et al 2011 for details).</td>
</tr>
<tr>
<td>Health Behaviour in School-aged Children (Currie et al. 2010)</td>
<td>11, 13, and 15 year olds Cross national study in Europe as well as North America 1985- present (cross-sectional survey conducted every four years)</td>
<td>Have you ever smoked tobacco? (At least one cigarette, cigar or pipe) How often do you smoke tobacco at present? ('Every day'; 'At least once a week, but not every day'; 'Less than once a week'; 'I do not smoke') On how many occasions (if any) have you done the following things in the last 30 days... smoked cigarettes ('Never'; '1-2 times'; '3-5 times'; '6-9 times'; '10-19 times'; '20-39 times'; '40 or more')</td>
<td>These questions are the mandatory questions from the core survey; individual countries are allowed to ask optional questions.</td>
</tr>
</tbody>
</table>

*Have you ever taken cannabis... in your life... in the last 12 months... in the last 30 days? ('Never'; '1-2 times'; '3-5 times'; '6-9 times'; '10-19 times'; '20-39 times'; '40 or more')*
## Appendix A Potential data collections suitable for measuring co-consumption of cannabis and tobacco among young people in the United Kingdom

<table>
<thead>
<tr>
<th>Data set title</th>
<th>Participants, country, and survey years</th>
<th>Questions allowing for co-use to be computed</th>
<th>Notes</th>
</tr>
</thead>
</table>
| Mental Health of Children and Young People in Great Britain 2004 (Green et al. 2005) | 11 - 16 year olds selected from Child Benefit records, England, Scotland and Wales, 2004 (cross sectional survey) | Do you smoke cigarettes at all nowadays?  
About how many cigarettes a day do you usually smoke?  
Those who said they have never smoked are asked to choose one of the following statements: I have never tried smoking a cigarette, not even a puff or two, I did once have a puff or two of a cigarette, but I never smoke now, I do sometimes smoke cigarettes.  
Choose one of the following smoking status statements which best describes you: I have never smoked, I have only ever tried smoking once, I used to smoke sometimes but I never smoke a cigarette now, I sometimes smoke cigarettes now but I don't smoke as many as one a week, I usually smoke between one and six cigarettes a week, I usually smoke more than six cigarettes a week.  
Have you ever, even once, used cannabis?  
On how many occasions have you used or taken cannabis? (once, 2-5 occasions, 6-10 occasions, more than occasions)  
About how often have you used cannabis in the past year? (about daily, 2 or 3 times a week, about once a week, about once a month, only once or twice in the past year, not at all in past year) | |
### Potential data collections suitable for measuring co-consumption of cannabis and tobacco among young people in the United Kingdom

<table>
<thead>
<tr>
<th>Data set title</th>
<th>Participants, country, and survey years</th>
<th>Questions allowing for co-use to be computed</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Offending, Crime and Justice Survey</strong></td>
<td>10 - 29 year old residents in private households England and Wales 2003 - 2006 (longitudinal annual survey consisting the of re-interviewing of a sample of previous year's respondents as well as new participants)</td>
<td>Have you ever smoked cigarettes, even if it was only a puff or two? Have you ever taken cannabis (also known as marijuana, grass, hash, ganja, blow, draw, skunk, weed, spliff)? How many times have you taken cannabis in your lifetime? Have you taken cannabis in the last 4 weeks? Have you taken cannabis in the last 12 months? Frequency of taking cannabis (frequent use, once a month, not frequent)</td>
<td>In 2010, the question 'On average, how many cigarettes do you smoke in a week?' was removed. The survey asks the question 'how often do you usually use drugs?' but this is not specifically about cannabis.</td>
</tr>
<tr>
<td><strong>Scottish Schools Adolescent Lifestyle and Substance Use Survey</strong></td>
<td>13 and 15 year olds Scotland 1982 - present (cross-sectional survey every two years)</td>
<td>Do you smoke cigarettes at all nowadays? Now read the following statements carefully and cross the box next to the one which best describes you ('I have never smoked'; 'I have only ever tried smoking once'; 'I used to smoke sometimes but I never smoke a cigarette now'; 'I sometimes smoke cigarettes now but I don't smoke as many as one a week'; 'I usually smoke more than six cigarettes a week')</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix A Potential data collections suitable for measuring co-consumption of cannabis and tobacco among young people in the United Kingdom

<table>
<thead>
<tr>
<th>Data set title</th>
<th>Participants, country, and survey years</th>
<th>Questions allowing for co-use to be computed</th>
<th>Notes</th>
</tr>
</thead>
</table>
| Smoking, Drinking and Drug Use Among Young People (Fuller 2014) | Year 7 - 11 (mostly age 11 -15)  
England (in some years, schools in Scotland and Wales have also participated)  
1982 onwards (annual cross-sectional survey) | *Do you smoke cigarettes nowadays?*
Participant chooses one of the following smoking status statements which best describes them: I have never smoked, I have only ever tried smoking once, I used to smoke sometimes but I never smoke a cigarette now, I sometimes smoke cigarettes now but I don't smoke as many as one a week, I usually smoke between one and six cigarettes a week  
Those who said they have never smoked are asked to choose one of the following statements: I have never tried smoking a cigarette, not even a puff or two, I did once have a puff or two of a cigarette, but I never smoke now, I do sometimes smoke cigarettes.

*Have you smoked any cigarettes in the last seven days ending yesterday?*

*How many cigarettes did you smoke on each day in the last seven days ending yesterday?*

*Have you ever tried cannabis (even if only once)?*

*When did you last use or take cannabis? (in the last month, in the last year, more than a year ago)*

*On how many occasions have you used or taken cannabis? (once, 2-5 occasions, 6-10 occasions, more than occasions)* | In alternate survey years, additional questioning focusing on either tobacco use or on drug taking. Questions presented in this table are included in every year of the survey. |
<table>
<thead>
<tr>
<th>Data set title</th>
<th>Participants, country, and survey years</th>
<th>Questions allowing for co-use to be computed</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TellUs</td>
<td>10-15 year olds (school years 6, 8 and 10 only) England 2006 - 2008 (cross-sectional surveys)</td>
<td>Read the sentences below carefully and tick the box next to the one that best describes you. ‘I have never smoked’; ‘I have only ever tried smoking once’; ‘I used to smoke sometimes but I never smoke a cigarette now’; ‘I sometimes smoke cigarettes now but I don’t smoke as many as one a week’; ‘I usually smoke between one and six cigarettes a week’; ‘I usually smoke more than six cigarettes a week’; ‘I don’t want to say’)</td>
<td>Tellus originally started (Tell Us 1) as a pilot in a small number of LAs in 2006. Tellus 2-4 are national surveys gathering children and young people’s views on their life, school and local area. There are two surveys (one for year 6 and one for year 8 and 10). The year 6 survey does not include questions on cannabis.</td>
</tr>
<tr>
<td>Young Person’s Behaviour and Attitudes Survey</td>
<td>11-16 year olds (school years 8 - 12) Northern Ireland 2000, 2003, 2007, 2010, 2013 (cross-sectional surveys)</td>
<td>Have you ever smoked tobacco? (At least one whole cigarette, not just a puff of someone else’s) (Yes, in the last week; Yes, in the last month; Yes, in the last year; Yes, over a year ago; No, never) How often do you smoke cigarettes now? (Every day; At least once a week but not every day; Less than once a week; I do not smoke now) How many cigarettes do you usually smoke in a week? Have you ever used or tried cannabis? (Yes, in the last week; Yes, in the last month; Yes, in the last year; Yes, over a year ago; No, never) How often do you use cannabis? (Daily; A few times a week; A few times a month; A few times a year; Rarely; Not anymore)</td>
<td>To accommodate demand for the inclusion of topics, two versions of the questionnaire were produced and schools were randomly assigned one version. Only questionnaire B asked asking smoking and drug use.</td>
</tr>
</tbody>
</table>
Appendix B – Ethics Committee review letter

Mr Richard Tyler
22 South Lane
Clanfield
Waterlooville
PO8 0RA

27th June 2012

ETHICAL APPROVAL – SFEC2012-1

Protocol Title: Young people, tobacco and cannabis: neighbourhood and school cultures of co-consumption in England

Date Reviewed: 25th June 2012

Dear Richard,

Thank you for resubmitting your protocol for ethical review and for the clarifications provided.

Your responses have been reviewed and I am pleased to inform you that your application has been given a favourable opinion by the Science Faculty Ethics Committee (SFEC2012-1). Please notify us in the future of any substantial amendments that may be required and send us a final study report.

Good luck with the study.

[Signature]

Dr Chris Markham
Chair, Science Faculty Ethics Committee
13th May 2013

Dear Mr Tyler,

ETHICAL REVIEW - response to clarification document and revised application from Science Faculty ethics committee.

Protocol Title: Young people, tobacco and cannabis: neighbourhood and school cultures of co-consumption in England

Date Reviewed: 22nd April 2013

In response to your request for an amendment to your study protocol please find the Committees response below. The Committee acknowledge the challenges you face in recruitment but would still like to maintain the principle of parental inclusion.

The Committee requests that an information letter regarding the study and young person’s involvement is given to each participant and they are encouraged to take the copy home to their legal guardian. The letter should be co-authored by yourself and the Youth club and we request that you also include their logo alongside the University’s.

If you have any queries regarding this please contact Dr Bray in the first instance as your departmental lead. I know you’ve also worked with David Carpenter and I’m sure he will clarify anything if you wish, please forward a copy of this information letter to sci.fac@port.ac.uk.

Kind regards,

Dr Chris Markham

Chair, Science Faculty Ethics Committee
Appendix B continued - Ethical conduct declaration form

**FORM UPR16**
Research Ethics Review Checklist

Please include this completed form as an appendix to your thesis (see the Postgraduate Research Student Handbook for more information)

<table>
<thead>
<tr>
<th>Postgraduate Research Student (PGRS) Information</th>
<th>Student ID: 33756C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate Name: RICHARD TYLER</td>
<td></td>
</tr>
<tr>
<td>Department: Geography</td>
<td></td>
</tr>
<tr>
<td>First Supervisor: Dr. Liz Twiggy</td>
<td></td>
</tr>
<tr>
<td>Start Date: 01/10/2011</td>
<td></td>
</tr>
</tbody>
</table>

| Study Mode and Route:                          |
| Part-time                                      |
| Full-time                                      |
| MPhil                                          |
| PhD                                           |
| Integrated Doctorate (New Route):              |
| Prof Doc (PD)                                  |

| Title of Thesis: Young People, Tobacco and Cannabis: Social and Place-Based Complexities in Co-Consumption |
| Thesis Word Count: 69,436                        |

If you are unsure about any of the following, please contact the local representative on your Faculty Ethics Committee for advice. Please note that it is your responsibility to follow the University's Ethics Policy and any relevant University, academic or professional guidelines in the conduct of your study. Although the Ethics Committee may have given your study a favourable opinion, the final responsibility for the ethical conduct of this work lies with the researcher(s).

**UKRIO Finished Research Checklist:**
(If you would like to know more about the checklist, please see your Faculty or Departmental Ethics Committee rep or see the online version of the full checklist at: http://www.ukrio.org/what-we-do/code-of-practice-for-research)

1. Have all of your research and findings been reported accurately, honestly and within a reasonable time frame? YES/NO*

2. Have all contributions to knowledge been acknowledged? YES/NO*

3. Have you complied with all agreements relating to intellectual property, publication and authorship? YES/NO*

4. Has your research data been retained in a secure and accessible form and will it remain so for the required duration? YES/NO*

5. Does your research comply with all legal, ethical, and contractual requirements? YES/NO*

*Delete as appropriate

UPR 16 (2013) – November 2013
Candidate Statement:

I have considered the ethical dimensions of the above named research project, and have successfully obtained the necessary ethical approval(s)

<table>
<thead>
<tr>
<th>Ethical review number(s) from Faculty Ethics Committee (or from NRES/SCREC):</th>
<th>SFEC2012-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signed:</td>
<td>Date: 27/04/15</td>
</tr>
<tr>
<td>(Student)</td>
<td></td>
</tr>
</tbody>
</table>

If you have *not* submitted your work for ethical review, and/or you have answered 'No' to one or more of questions a) to e), please explain why this is so:

<table>
<thead>
<tr>
<th>Signed:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Student)</td>
<td></td>
</tr>
</tbody>
</table>

UPR 16 (2013) – November 2013
Appendix C – Co-consumption final questionnaire (paper version)

Hampshire sample survey

Young people's substance use survey

Thank you for deciding to take part in this study on cigarette and drug use.

You should have had the chance to read through the information sheet.

Before you start answering questions we just want to say a few more things.

1) Whatever you tell us in the survey will be between you and the researcher and no one will be able to find out what you have said, not even your teacher. The only thing we will be able to tell is the year group and school that you are in.

2) Your name will not be on your answers so please be as honest as you can because you will not get into trouble for being truthful about your smoking or drug use in this survey.

3) If you get stuck on a question, ask the teacher to help you, they will explain what the question is asking.

When you are happy to start click next to go to the next page.

Before you begin...

Before you can start answering questions on smoking and drug use there are a few things we need to make sure you understand.

Please read the next few statements and if you agree with them then tick the boxes to the right of each statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>I Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have read the information about this survey and I have had the chance to ask questions.</td>
<td>✔️</td>
</tr>
<tr>
<td>I understand that I can stop taking part at any time without giving a reason why but any answers I give up to that point can still be recorded.</td>
<td>✔️</td>
</tr>
<tr>
<td>I agree to take part in this study and the information I give can be used for research on cannabis and tobacco use by the researcher.</td>
<td>✔️</td>
</tr>
</tbody>
</table>

When you are ready, click on the next button to begin answering the questions.

About you

Please tell us a little about yourself.

Are you a boy or a girl?

Question 1

- Boy
- Girl
### Hampshire sample survey

#### What is your date of birth?

**Question 2**

Date Of Birth = [ ] / [ ] / [ ]

#### How old are you?

**Question 3**

- [ ] 11
- [ ] 12
- [ ] 13
- [ ] 14
- [ ] 15
- [ ] 16

#### What year are you in at school?

**Question 4**

- [ ] Year 7
- [ ] Year 8
- [ ] Year 9
- [ ] Year 10
- [ ] Year 11

#### What is your home postcode?

**Question 5**

[T] [T]

### Tobacco use

Tobacco has a few different names and is sometimes called **baccy, ciggies, fags, rollies, roll-ups or smokes.**

The next question is about your use of tobacco in either **cigarettes** or roll-ups.

#### Which sentence describes you best?

**Question 6**

- [ ] I have never smoked, not even a puff
- [ ] I have tried smoking once or twice, but do not smoke now
- [ ] I used to smoke, but don’t now
- [ ] I smoke every now and then (less than one cigarette a week)
- [ ] I often smoke (one or more cigarettes a week)

#### Do you consider yourself to be a smoker?

**Question 7**

- [ ] Yes
- [ ] No

### Questions for people who have smoked tobacco

You told us that you have either in the past or that you smoke now. The next few questions ask a little more about your tobacco smoking.
<table>
<thead>
<tr>
<th>Question 8</th>
<th>Which sentence describes you best?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ I used to smoke but gave up and will not try again</td>
<td></td>
</tr>
<tr>
<td>☐ I don’t smoke now but might try it again when I am older</td>
<td></td>
</tr>
<tr>
<td>☐ I smoke now but will give up when I am older</td>
<td></td>
</tr>
<tr>
<td>☐ I will not stop smoking, not even when I am old</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 9</th>
<th>Roughly how many cigarettes (including roll-ups) have you smoked in the last 7 days?</th>
</tr>
</thead>
<tbody>
<tr>
<td>You don’t have to remember exactly, if you can’t remember just say to the nearest 5 (eg. 20, 25, 30 etc)</td>
<td></td>
</tr>
</tbody>
</table>

### Your first cigarette

The next few questions ask about your first experiences with cigarettes or roll-ups.

<table>
<thead>
<tr>
<th>Question 10</th>
<th>How old were you when you first took a puff of a cigarette</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 11</th>
<th>Who were you with when you first tried a cigarette?</th>
</tr>
</thead>
<tbody>
<tr>
<td>You can choose more than one answer</td>
<td></td>
</tr>
<tr>
<td>☐ Young people in my family</td>
<td></td>
</tr>
<tr>
<td>☐ Adult(s) in my family</td>
<td></td>
</tr>
<tr>
<td>☐ By myself</td>
<td></td>
</tr>
<tr>
<td>☐ With friends</td>
<td></td>
</tr>
<tr>
<td>☐ Other (please give details)</td>
<td></td>
</tr>
</tbody>
</table>

### Your first cigarette
Hampshire sample survey

**Question 12**

**Where were you when you first tried a cigarette?**

- At school (including play areas)
- At home
- At a nightclub/disco/party
- In a pub/bar
- Other (please give details)

**Question 13**

**Why did you first try cigarettes?**

You can choose more than one answer

- I wanted to see what it was like
- I wanted to fit in with friends
- Friends gave me one to try
- I wanted to look more grown up
- I wanted to be seen as a smoker
- Other (please give details)

**Your last cigarette**

The questions on the next few pages ask you to think back to the last cigarettes or tobacco you smoked.

**Question 14**

**Where did you buy your last packet of cigarettes/tobacco?**

- I only tried it once or twice and have never bought a packet
- I didn't buy them myself
- Petrol station
- Supermarket Tobacconist
- Duty free
- Other (please give details)
Hampshire sample survey

Your last cigarette

You told us that you did not buy your last packet of cigarettes or tobacco yourself; please tell us where you got them.

Please tell us where you got your last packet of cigarettes/tobacco

- I was given them by an adult living in my home
- I was given them by a young person (under 18) living in my home
- I was given them by an older relative not living at my home
- I was given them by a friend
- I was given them by a stranger
- I was given them by someone at a local house
- Other (please give details)

Question 15

Your last cigarette

You said that you got your last packet of cigarettes/tobacco from a friend.

Question 16

How old is the friend who gave you your last cigarette?

Age

Your opinion on smoking

The following questions ask about your opinion on smoking rather than about your actual smoking.

How many 11-15 year olds do you think smoke?

- About 1 in 5
- About 1 in 10
- About 1 in 15

Question 17

How easy do you think it is for young people to buy cigarettes/tobacco from shops in your area?

- Easy
- Difficult

Question 18
Hampshire sample survey

How easy do you think it is for young people to get hold of cigarettes/tobacco (other than buying them in shops) in your area?

Question 19  ○ Easy  ○ Difficult

Your opinion on smoking

Do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking can help people relax</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking can help you stay thin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking makes you look more grown up</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking is a waste of money</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking helps you make friends more easily</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicotine is the cancer causing ingredient in cigarettes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking can cause mouth cancers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cigarettes are less harmful if you roll them yourself</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking makes your skin wrinkle faster</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking can harm people around you who don’t smoke</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Question 20

People who smoke

These questions ask about the places and people you spend time with.

At home, how often do you find yourself in the same room as someone who is smoking

Question 21  ○ Regularly (once a week or more)  ○ Occasionally (less than once a week)  ○ Never

Do you agree or disagree with the following statement?

Question 22

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second-hand or passive smoke is harmful to health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How do you feel about people smoking near you in your home/in a car?

Question 23  ○ It doesn’t bother/annoy me  ○ It bothers/annoys me a little  ○ It bothers/annoys me a lot

People who smoke
Hampshire sample survey

This question asks about whether the people around you smoke.

Please give us an answer for each row but if you do not want to answer click ‘doesn’t apply’.

Who smokes, if any, out of the following people you know?

<table>
<thead>
<tr>
<th>Who</th>
<th>Never smokes</th>
<th>Occasionally (less than once a week)</th>
<th>Regularly (once a week or more)</th>
<th>Doesn’t apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best friend</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boyfriend/girlfriend</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother or female who looks after me</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father or male who looks after me</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular visitors to the house</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Your older brothers and sisters

Do you have any older brothers or sisters?
(including step-brothers and step-sisters, or other young people living with you)

Question 25

☐ Yes  ☐ No

Your older brothers and sisters

Do any of your older brothers or sisters smoke?
(including step-brothers and sisters or other young people in the house)

Question 26

☐ Never smokes  ☐ Occasionally (less than once a week)  ☐ Regularly (once a week or more)  ☐ I’d rather not say

Your younger brothers and sisters
Hampshire sample survey

**Question 27**

Do you have any younger brothers or sisters?
(this includes step-brothers and step-sisters and other young people living with you)

- [ ] Yes
- [ ] No

Your younger brothers and sisters

**Question 28**

Do any of your younger brothers or sisters smoke?
(including step-brothers and sisters or other young people in the house)

- [ ] Never smokes
- [ ] Occasionally (less than once a week)
- [ ] Regularly (once a week or more)
- [ ] I'd rather not say

Education About Smoking

These questions are about what you know about smoking although you do not have to be a smoker yourself to answer these questions.

**Question 29**

Where have you learned about the topic of smoking?
You can choose more than one answer.

- [ ] School lessons
- [ ] Special outside speakers
- [ ] Family
- [ ] School nurses
- [ ] Television/radio
- [ ] Posters/flylets
- [ ] Friends
- [ ] Doctors
- [ ] Magazines/newspapers
- [ ] Internet
- [ ] I have not been given any information

- [ ] Other (please give details)
**Hampshire sample survey**

If you wanted more information on the topic of smoking, where would you most like to get it?
Please choose your top TWO only.

- School lessons
- Special outside speakers
- Family
- School nurses
- Television/radio
- Posters/leaflets
- Friends
- Doctors
- Magazines/newspapers
- Internet
- Other (please give details)

**Stopping smoking**

These questions are about stopping smoking and again you do not have to be a smoker yourself to answer these.

Have you heard of the local NHS Stop Smoking Service "Quit4life"?
- Yes
- No

If you are a smoker, would you like to give up smoking within the next month?
- Yes
- No
- I am not a smoker

If you wanted to stop smoking what/who would you like to help you?

- Friends
- Teachers
- Internet sites
- Family
- School nurse
- Chemist
- NHS Quit4life Service
- Doctors
- Private 'stop smoking' clinic (e.g. hypnotherapy)
- Self-help books/leaflets
- Phone help lines
- I wouldn't want/need help
- Other (please give details)
Hampshire sample survey

The next question asks if you were a smoker and have given up smoking, how did you do it?

IMPORTANT If you have never smoked select "I have never smoked" and if you have never tried to give up smoking select "I have never tried to stop smoking."

You can also choose "I have never smoked" if you only tried smoking once or twice.

I was a smoker and gave up with the help of:

- [ ] Friends
- [ ] Family
- [ ] NHS Quit4Life Service
- [ ] Self-help books/leaflets
- [ ] Teachers
- [ ] School nurse
- [ ] Doctors
- [ ] Phone help-lines
- [ ] Internet sites
- [ ] Chemist
- [ ] Other students
- [ ] Private ‘stop smoking’ clinic (e.g. hypnotherapy)
- [ ] On my own I didn’t need help
- [ ] I have never tried to stop smoking
- [ ] I have never smoked

Other (please give details):

Alcohol

The following questions ask about alcoholic drinks

Have you ever had an alcoholic drink? That is a whole drink, not just a sip

- [ ] Yes
- [ ] No

If you have had an alcoholic drink...

You told us that you have had an alcoholic drink in the past. Please tell us a bit more about your drinking experience.

In the last four weeks, how many times, if any, have you got drunk?

- [ ] None
- [ ] Once
- [ ] Twice
- [ ] Three or more times
Hampshire sample survey

Where did you get the alcohol from? You can choose more than one answer.

Question 37
- Parents
- Brother or sister
- Home
- Friends
- Shop
- Stranger
- Other (please give details)

Where do you usually drink alcohol?

Question 38
- At home
- At a friend's house
- At a party
- In a public place (e.g. park, street)
- Other (please give details)

Alcohol

What do you usually drink?
You can choose more than one answer

Question 39
- Lager
- Cider
- Beer
- Wine
- Vodka
- Other spirits
- Alcopops
- Other alcoholic drinks

Have you ever been sick/ill from drinking alcohol

Question 40
- Yes
- No

You told us that you have been sick or ill from drinking alcohol.

Did you need help to recover (e.g. visit to doctor/hospital)?

Question 41
- Yes
- No
Cannabis

Cannabis has a few different names and is sometimes called weed, spliff, marijuana, hash, ganja, skunk or whacky backy.

The next question is about your use of cannabis.

**Which sentence describes you the best about smoking cannabis?**

- [ ] I have never smoked, not even a puff
- [ ] I have tried smoking once or twice but do not smoke now
- [ ] I used to smoke, but don’t now
- [ ] I smoke every now and then (less than once a week)
- [ ] I often smoke (once or more a week)

**How easy do you think it is for young people to get hold of cannabis in your area?**

- [ ] Easy
- [ ] Difficult

Cannabis

You told us you have tried smoking cannabis before.

**How old were you when you first tried smoking cannabis?**

**Ways of Using Cannabis and Tobacco**

The next few questions are about the different ways in which you might use cannabis and tobacco.

You will see a number of different statements on the next few screens and for each way of using cannabis you are asked to say how often you do it.

Don't forget, if you get stuck on any question, your teacher will be able to help you understand.

**How often do you use cannabis in a joint/spliff or pipe/bucket on its own (WITHOUT ADDING TOBACCO)**

- [ ] Never
- [ ] Occasionally (less than once a week)
- [ ] Regularly (once a week or more)
### Hampshire sample survey

#### How often do you use cigarettes or roll-ups on their own (WITHOUT CANNABIS)

**Question 46**
- Never
- Occasionally (less than once a week)
- Regularly (once a week or more)

#### How often do you use cannabis but not by smoking it (e.g. in food)

**Question 47**
- Never
- Occasionally (less than once a week)
- Regularly (once a week or more)

#### How often do you use cannabis in a joint/spliff MIXED with tobacco (from a cigarette or roll-up)

**Question 48**
- Never
- Occasionally (less than once a week)
- Regularly (once a week or more)

### If you have mixed cannabis and tobacco together.

You told us that you have used cannabis and tobacco **mixed together**.

The next few questions are about the reasons why you smoke cannabis and tobacco together.

You will see a number of different statements on the next few screens and you are asked to say whether each statement is true or false about you.

**I smoke cannabis and tobacco mixed together because it is cheaper than smoking cannabis on its own.**

**Question 49**
- True
- False

**I smoke cannabis and tobacco mixed together because it burns smoother than smoking cannabis on its own.**

**Question 50**
- True
- False

**I smoke cannabis and tobacco mixed together because it makes the cannabis last longer.**

**Question 51**
- True
- False
Hampshire sample survey

Question 52
I smoke cannabis and tobacco mixed together because cannabis is too strong on its own.
☐ True  ☐ False

Question 53
I smoke cannabis and tobacco mixed together because smoking them together makes you 'higher'
☐ True  ☐ False

If there is another reason why you smoke cannabis and tobacco mixed together, please tell us in the box below.

Question 54

If you do not have any other reasons for mixing cannabis and tobacco then just leave the box empty and click next.

The next few questions are for people who smoke cannabis and tobacco at different times.

As before, on the next few screens you will see different statements and you are asked to say whether each statement is true or false for you.

If you do not smoke cannabis and tobacco at different times you can select this option as one of your answers.

Question 55
I smoke cigarettes/roll-ups when I don’t have any cannabis left
☐ True  ☐ False  ☐ I only smoke cannabis mixed with tobacco
Hampshire sample survey

Question 56
I smoke cigarettes/roll-ups when I am in a place where I cannot smoke cannabis
○ True ○ False ○ I only smoke cannabis mixed with tobacco

Question 57
I tend to smoke mainly cigarettes or roll-ups and just smoke cannabis occasionally
○ True ○ False ○ I only smoke cannabis mixed with tobacco

Question 58
If there is another time or place that you smoke cigarettes or roll-ups instead of cannabis, please tell us in the box below.

If you do not have a different place or time that you use cigarettes or roll-ups instead of cannabis or if you only smoke cannabis and tobacco mixed together please leave the text box empty and click next.

Other drugs

Question 59
How often do you use the following, if at all?

Never Occasionally (less than once a week) Regularly (once a week or more)
Solvents (i.e. glue sniffing) ○ ○ ○
Other drugs, e.g. Ecstasy, LSD, speed, cocaine ○ ○ ○

Thank you!
You have now completed the questionnaire, thank you for taking part.

The aim of this questionnaire was to find out about young people's cigarette and cannabis use. Other studies have suggested that the places that young people spend time in and the people they spend time with have an impact on smoking and drug use.

The survey you have just completed will help us to see whether things like spending time with smokers or being in places where smoking and drug use is common and where cigarettes and cannabis are easy to get hold of influences your smoking behaviours and attitudes to smoking and drug use.

We also wanted to find out if there are any patterns in the use of cigarettes and cannabis

When we have all of the questionnaires completed we will put the results from all the other schools together to look at the patterns of smoking and cannabis use across Hampshire and the Isle of Wight.

On the next page you will see a few useful website links and details of who to contact if you want to talk about any of the things we covered in the survey. Your teacher will also have some paper copies of these details for you to keep.

Click 'next'

Before you finish we would like to take a few moments to tell you where you can get information on smoking and cannabis and to tell you who you can talk to safely about any of your concerns within your school. In your school you can talk to [school specific named tutor] or go to [school specific support service] to speak to about any concerns you might have.

On the internet

There are lots of resources available for you to find out about drugs use and cigarettes on the internet. Some of the websites we suggest are:

- [www.ash.org.uk](http://www.ash.org.uk) – this website is useful to find out information about smoking (whether you want to quit or not)
- [www.quit4life.rhs.uk](http://www.quit4life.rhs.uk) – this website is very helpful if you smoke and want to quit smoking
- [www.quitbecause.org.uk](http://www.quitbecause.org.uk) – this website is specifically aimed at young people with facts and information on smoking
- [www.talktofrank.com](http://www.talktofrank.com) – this website have lots of information on all kinds of drugs

On the phone

Here are some useful helpline numbers for you to use if you feel you need to talk to someone. Most of these are free to call and are confidential:

- 0845 602 4663 – Quit 4 Life in Hampshire
- 0800 599 9091 – Catch 22 has a 24/7 drugs and alcohol emergency referral & crisis line for young people in Hampshire
Appendix D – Letter to schools (school survey study)

Dear [head teacher/PDL/PSHE lead]

RE: Tobacco and cannabis use in school-aged children in Hampshire and Isle of Wight.

We are writing to you on behalf of our research team from the University of Portsmouth, Smoke Free Hampshire and Isle of Wight Alliance, and Hampshire County Council to request your cooperation in administering a computer based questionnaire on cannabis and tobacco use in children from [school name] during the autumn term of 2012. This research will form part of a doctoral research programme at the University of Portsmouth as well as inform future Smoke Free activities.

In 2010, the Smoke Free Hampshire and Isle of Wight Alliance conducted a smoking survey in 11 schools in Hampshire which explored smoking, drinking and drug use. The results of this survey suggest that the prevalence of smoking in school pupils aged 11-15 in Hampshire is comparable to national figures, although some school figures were above the national average of 6%. The survey also highlighted that the use of tobacco is highly related to the use of cannabis and this relationship is becoming increasingly recognised as an influencing factor of young people’s engagement with substances.

This study is being conducted in partnership with Smoke Free Hampshire and Isle of Wight and Hampshire County Council as a follow up to the 2010 survey. The survey would use the existing Smoke Free questionnaire with the addition of new questions designed to explore the co-use of cannabis and tobacco.

We have included an information sheet with this letter outlining the background information of the study and how the research will inform our understanding of young people’s substance use as well as aid in the development of future practice.

We hope that you will consider taking part in this research and in the coming weeks Richard Tyler, the principle investigator of the study, or a member of the Smoke Free Alliance will contact you to discuss the procedure of the study should you wish to take part. In the meantime if you do have any questions regarding this research please do not hesitate to contact Richard on 02392 846347 or by email at Richard.Tyler@port.ac.uk.

Thank you for taking the time to read this letter and we look forward to speaking with you.

Yours sincerely,

Richard Tyler
PhD Candidate
University of Portsmouth

Sarah Preece
Co-ordinator, Smoke Free
Hampshire and Isle of Wight

Glynis Wright
County Inspector/Advisor
PDL
Appendix E – Example letter to parents (school survey study)

Dear Parent/Guardian,

Please note: this could be addressed from the principle investigator of the research or from the school itself, according to school preference

I am writing to inform you of a survey that will be taking place at [school name]. This survey asks children about their attitudes and beliefs towards cigarettes and other drugs such as cannabis as well as young people’s experiences with these substances.

I would like to take the time to tell you about this research and how your son/daughter can help with this study.

Background information and the current study

Smoking in young people is thought to be largely influenced by environments that encourage or discourage smoking. These factors can be physical in nature such as whether a young person spends a lot of time in places that allow or disallow smoking and also how easy or difficult it is to get hold of cigarettes. Other factors involve the people that the young person interacts with in their environments. These can be: friends, families and people in the local community and the attitudes that these people hold towards cigarette and drug use.

As well as these influences on smoking, research is finding that the use of cigarettes is closely linked to use of other drugs such as cannabis. For example, cannabis users are likely to spend time with others who smoke cigarettes. Cannabis users are also more likely than non-users to become cigarette smokers and develop nicotine dependence even during short-term and infrequent cannabis use.

This research project aims to explore the factors that influence cigarette and cannabis use in young people. In order to do this we have put together a survey, in collaboration with NHS Hampshire, which will be running in your child’s year group at [school name].

Why has your child been selected to take part?

This survey is being carried out in lots of schools in Hampshire and the Isle of Wight and your child’s school has been chosen to represent the local area.

Please also be assured that by taking part in this research it is not implied that your son/daughter is using either tobacco or cannabis. In fact, we are as much interested in the views of children who do not smoke as we are with those who do.

By taking part in this research your child will be helping us to understand more about young people’s experiences of cigarette and drugs use. We can use this information to help us to prevent children taking up smoking as well as support young smokers who decide they want to stop using cannabis or cigarettes.

Does your child have to take part?

The survey is not compulsory and your son/daughter will be asked to choose themselves whether they want to complete the survey or not. Having said this, I appreciate that you
may have concerns about your child taking part in research on drug use. As such, I would
like to give you the opportunity to express any concerns you have and if you wish to,
withdraw your son/daughter from being asked to take part in the session.

What will your child be asked to do?

Your son/daughter will be asked to complete the survey using one of the school’s
computers during a normal school day. The survey should take no longer than 15 minutes
to complete and will ask pupils questions such as if they or their friends smoke, if a lot of
people smoke in the neighbourhood, how easy it is to get cigarettes and if they have ever
tried cannabis.

Will my child’s responses be kept confidential?

The survey has been designed in such a way that the answers they give will not be traced
back to them. Teachers will not find out what any individual pupil has answered and pupils
will not give their name on the survey form. This is to protect the identity of the children
and encourage them to be as honest as possible.

What will happen to the results of the study?

Results from schools taking part across Hampshire and Isle of Wight will be put together
into a report to look at regional differences in smoking. Some of the questions in the
survey ask about the child’s local environment such as their school and neighbourhood.
This information will only be used to identify the types of area that are influential in young
people’s smoking and at no point will any physical locations or school names be used in
any reporting of the results. [School name] will also be given an individual report of their
school pupil’s responses compared to the overall figures but these will only ever show the
year group of the children.

Who is organising and funding the research?

The study is being organised by a research team at the University of Portsmouth and NHS
Hampshire and Isle of Wight Smoke Free Alliance. The research is being funded by the
Department of Geography at the University of Portsmouth.

Further information

If you have any questions regarding this research please do not hesitate to contact...
[school].

If you do not wish for your child to take part in this study please contact [named person] at
[school name] who will ensure that your child does not complete the survey.

Thank you for taking the time to read this letter.

Yours Sincerely,

[Principle investigator/School Staff Member]
Appendix F – Information sheet for pupils and teacher script (school survey study)

Schools study information for pupils and teacher script

We would like to ask you to take part in a survey on cigarettes and drug use. Before you decide if you want to take part we would like to tell you about why we are doing this research and what you will be doing if you agree to complete the survey.

Why are we doing the study?

We are running this survey because we are interested in how smoking in young people is related to factors in the environment like whether you can easily get cigarettes, whether people in your area think it is ok to smoke and if your friends smoke. We also want to see if using cannabis (sometimes called weed or whacky backy) is related to smoking.

Why have I been chosen?

This survey is being carried out in lots of schools in Hampshire and the Isle of Wight and your school has been chosen to represent your local area. You do not have to use cigarettes or drugs to answer the questions and we are just as interested in your understanding of smoking in your area if you are a non-smoker.

By taking part in this research you will be helping us to understand more about young people’s experiences of cigarette and drugs use. We can use this information to help us support young smokers who decide they want to stop using cannabis or cigarettes.

What will happen if I take part?

If you agree to take part you will be asked to complete a survey on the computer. It should take about 10-15 minutes to complete. The questions will ask you things like whether you or your friends smoke, if a lot of people in your neighbourhood smoke, how easy it is to get cigarettes and if you have ever tried cannabis.

Once all of the surveys have been completed we will take the answers given by pupils in all of the schools and put them together into a report. Your school will get a report of the responses to see how your school compares to others but remember they will not be able to see who said what.

Do I have to take part?

No, if you do not want to take part in the survey you do not have to. If you decide that you want to take part, to share your story, we will be very grateful. If you want to take part but change your mind later that is fine too, just tell a teacher that you do not want to answer the questions.

Will my answers be kept secret?

You do not need to put your name on the answer form and no one will be able to tell who said what. Your teachers will not ask you what you have put so please be as honest as you can. You will not get into any trouble for being truthful about smoking or drug use.

What if I have any other questions?

If you have any questions about the study please ask your [PSHE?] teacher.
Teacher Script

You have been asked to take part in a survey on cigarettes and drug use. Before you decide if you want to take part I want to tell you about why this research is being done and what you will be doing if you agree to complete the survey.

The researchers are interested in how smoking in young people is related to factors in the environment like how easy it is to get cigarettes, whether people in your area think it is ok to smoke and if your friends smoke. They also want to see if using cannabis (sometimes called weed or whacky backy) is related to smoking.

This survey is being carried out in lots of schools in the area and our school has been chosen to represent the area. You do not have to use cigarettes or drugs to answer the questions and the researchers are just as interested in your understanding of smoking in the area if you are a non-smoker.

By taking part in this research you will be helping the researchers to understand more about young people’s experiences of cigarette and drugs use. This information can be used to help support young smokers who decide they want to stop using cannabis or cigarettes.

If you agree to take part you will be asked to complete a survey on the computer. It should take about 10-15 minutes to complete. The questions will ask you things like whether you or your friends smoke, if a lot of people in your neighbourhood smoke, how easy it is to get cigarettes and if you have ever tried cannabis.

Once all of the surveys have been completed the answers given by pupils in all of the schools will be put together into a report. Our school will get a report of the responses to see how our school compares to others but they will not be able to see who said what.

If you do not want to take part in the survey you do not have to. If you want to take part but change your mind later that is fine too, just tell me that you do not want to answer the questions.

You do not need to put your name on the answer form and no one will be able to tell who said what. Teachers will not ask you what you have put so please be as honest as you can.

You will not get into any trouble for being truthful about smoking or drug use.

If you are happy to take part please log on to the computer and go to the address given [perhaps written on the board, or pre-loaded onto the computers].
Appendix G – Study check list (school survey study)

Timetable agreement for the cannabis and tobacco consumption questionnaire

This document outlines the various steps involved in taking part in the cannabis and tobacco co-consumption research project.

In order to facilitate the smooth running of the study we have developed a table that also outlines the permissions granted for each stage of the study as well as outlining our commitment to fulfil our responsibility to provide timely feedback and reports from the results of the study.

We understand that different members of staff will be responsible for specific tasks within schools and that some decisions regarding the approval of the questionnaire taking place within the school and the delivery of information to students may come from different individuals such as senior management or PSHE/PDL leads.

It is hoped that by creating a written timetable document, it will make the procedure for delivering the questionnaires as transparent as possible and prevent any delays caused in the event of staff role changes within the school (for example a member of staff leaving a post).

<table>
<thead>
<tr>
<th>Task:</th>
<th>Agreed/Actioned by:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial agreement to host the surveys within [school name]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Questionnaire seen/agreed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating year groups decided</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timetabling of sessions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Documents (letters to parents, study information) prepared</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information for the end of the questionnaire (contact details) prepared and forwarded to Richard Tyler for inclusion in the surveys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Letters sent to parents/guardians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers/staff delivering the survey session briefed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pupils given study details</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data collection – computer session</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report prepared for individual schools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final meeting to discuss interpretation of results</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix H – Topic guide (interview study)

**Topic Guide for cannabis and tobacco consumption study**

(Prompts indented under relevant questions)

1. **Knowledge/Awareness**
   What do you know about tobacco/cannabis?
   What are the rules, laws about smoking cannabis and tobacco?
   Information sources, what is trusted, where to get info, particularly around co-use. do you need more on cannabis?

2. **Do you have any experience using either of tobacco or cannabis?**
   Would you consider yourself to be a smoker?
   Can you tell me about the last time you used tobacco/cannabis
   When do you/people usually use cannabis/tobacco?

3. **Types of smoker (Smoker Identity)**
   Are there different kinds of smoker? Can you explain the differences? Social smoker, occasional, frequent (and for cannabis) What is normal use?
   Are there particular types of people that smoke cigarettes/cannabis? Boys, girls, older children

4. **Places**
   What do people in your neighbourhood think of young people? Strangers, peers/friends, family attitudes
   What do people in your neighbourhood think of smoking cigarettes? And cannabis?
   Places where tobacco use is accepted, is it the same for cannabis? Can you describe where you go to smoke tobacco and then cannabis?
   Can you think of any places where tobacco smoking is not allowed, is it the same for cannabis?

5. **Access**
   Where do you usually get your cigarettes from?
   Where do you usually get your cannabis from? No. sources

6. **Co-use**
   How do you use cannabis?
   Would you mix cannabis with anything else?
   Is smoking tobacco in a joint the same as smoking it on its own?
   People often talk say that one substance leads to the other, do you think this is true?
   What is your experience, did they happen at the same time?

7. **Trying to stop**
   Have you tried to stop smoking either tobacco or cannabis?
   Where can you get help from?
   What makes stopping difficult?
   Can you stop both, one without the other?
Appendix I – Information sheet for participants (interview study)

Cannabis and smoking research information sheet

Thank you for your interest in this research project. Before you decide if you want to take part we would like to tell you about why we are doing this research and what you will be doing if you agree to take part.

Why are we doing the study?
We are doing this research because we want to see if and how smoking cigarettes is related to using cannabis and how the places young people spend time in and the people they spend time are important for the use of cigarettes and cannabis. We want to find out about the experiences of young people in your area. You do not have to use cigarettes or drugs to answer the questions and we are just as interested in your understanding of smoking if you are a non-smoker.

What will happen if I take part?
You will be asked to take part in an interview, or a few interviews with the researcher which will last between 15 and 30 minutes. In the interviews you’ll be asked to talk about your experiences of cigarettes and cannabis, being around people who smoke and about your local area. There are no right or wrong answers, you are the expert and you won’t get in trouble for being as honest as you can.

What you say in the interview will be recorded using a tape recorder so that the researcher can listen back to the interview and write about your responses. No one will be able to trace what is said back to you. You can choose to take part on your own or choose one or two friends to take part as well, as long as they agree to take part too. The interviews may take a little longer if there are two or three people.

If I say yes now but change my mind do I have to take part?
No, if you do not want to take part in the interview you do not have to. Once the interview has started you can choose not to answer a question or you can decide to end the interview without giving a reason.

It is important to take the time to consider if you really want to take part in this research. If you want to you could talk to a parent/guardian about taking part. What you say is confidential and we will not contact your parents to ask their permission for you to take part but we encourage you to consider whether you want to ask them first. If you like, we have an information sheet that you can give to your parents.

Will my answers be kept secret?
Yes, we will not share your name with anyone and no one will be able to tell who said what so please be as honest as you can. You will not get into any trouble for being truthful about smoking or drug use.

What if I have questions?
If you, or your parent/guardian(s) have any questions regarding this research then please contact the researcher Rich Tyler. He will be attending the youth club during the normal opening hours or alternatively you can email richard.tyler@port.ac.uk or call 02392 846347.
Appendix J – Letter to parents (interview study)

Re: A study exploring cannabis and tobacco use among young people

Dear Parent/Guardian,

Your son/daughter has expressed an interest in taking part in a study looking at cannabis and tobacco use among young people. Before they can take part, I would like to tell you a bit about the research and what they will be doing.

First of all I would like to say that taking part in the study does not mean your son/daughter has used either cannabis or tobacco. The purpose of the research is to look at neighbourhood and school influences on substance use and we are just as interested in the views of young people that do not use substances as we are of those that do.

Background information and the current study

Smoking among children and teenagers is thought to be influenced partly by environments that either encourage or discourage smoking. For example, a young person may be more likely to smoke if they spend a lot of time in places where smoking is not restricted and if cigarettes are easy to get hold of. Other factors include the people that the young person interacts with such as: friends, families and people in the local community. The attitudes that these people hold towards cigarette and cannabis use may also influence decisions to try smoking.

There is also a close relationship between using cannabis and tobacco. For example, cannabis users are likely to spend more time with people who smoke cigarettes and cannabis users are more likely than non-users to become cigarette smokers and develop nicotine dependence later on in life.

This research aims to explore cigarette and cannabis use in young people. In order to do this we are conducting short interviews to find out about young people’s awareness of tobacco and cannabis, whether and how tobacco and cannabis is used in the local area as well as how young people feel about their neighbourhoods. The research is being carried out in youth centres across Hampshire and over the past few weeks I have been working closely with the youth workers at the [youth club name]. I have explained the study to people using the service and after learning about the research your son/daughter has said that they would like to take part.
What will happen in the interviews?

Your son/daughter will be asked to take part in an interview either on their own or with a friend and they will be asked to talk about their understanding and experiences of cannabis and tobacco use within the local area and will be asked questions about where smoking takes place and what local people think about young people and smoking.

These interviews will take place at the youth centre and taking part is completely voluntary; participants will be able to withdraw from the interviews at any point and they will not have to answer any questions that they do not want to.

Will the interviews be kept confidential?

Yes. We will record the interviews so that we have an accurate record of what is said but the audio recordings will be typed out into transcripts and we will remove any names of people or places and replace them with made up names. Your child’s name will not appear in any reports and we also won’t reveal the name of the youth club that your child attends. This is to protect the identity of the children and encourage them to be as honest as possible.

What will happen to the results of the study?

The interviews will be used to inform us about the types of area where cannabis and tobacco is used and about the types of uses. It will also form a part of my doctoral research project at the University of Portsmouth.

By taking part in this research your child will be helping us to understand more about young people’s experiences of cigarette and drugs use. We can use this information to help us to prevent children taking up smoking as well as support young smokers who decide they want to stop using cannabis or cigarettes.

Who is organising and funding the research?

The research is being organised by a research team at the University of Portsmouth and NHS Hampshire and Isle of Wight Smoke Free Alliance. The research is being funded by the Department of Geography at the University of Portsmouth.

What if I have any questions?

If you have any questions regarding this research please do not hesitate to contact me on 02392 846347 or you can email me at richerd.tyler@port.ac.uk

Thank you for taking the time to read this letter.

Yours Sincerely,

Richard Tyler
Appendix K – Confidentiality agreement and ground rules (interview study)

Thank you for agreeing to take part in this study on the use of cigarettes and cannabis (sometimes called weed or whacky backy).

This piece of paper is for you to keep and it is to remind you of some key points we have discussed at the beginning of the interview.

1. You have given your consent to take part in the discussion on cigarettes and cannabis use which is being audio recorded. What you say on the tape will be typed out into something called a ‘transcript’ so that no one can identify your voice.
2. You have given your consent for the researcher to use this transcript in research on cannabis and tobacco use.
3. You do not have to answer any of the questions and you may choose to end the interview and leave at any point although we will still use anything you have said up to that point.
4. If you are taking part with a friend or a group of people you must remember that what they say should remain between us and you should not share what they have said with others outside of the interview.
5. You are free to talk about your experiences in as much detail as you want to and you won’t get into trouble if you talk about your own substance use as it will remain confidential.
6. If you talk about taking part in any illegal activity that the researcher thinks needs to be addressed either with a teacher or the police, then the researcher will discuss this with you and won’t do anything without talking to you first.

Ground Rules –

The following rules are here for everyone (even the researcher) and will make sure that everyone gets a chance to talk about their experiences.

1) Only speak one at a time
2) Everyone gets to speak
3) You only have to say what you want to say
4) Be respectful when someone else is talking
5) What is said in the room stays in the room, do not talk outside this room about what other group members have said.
6) ... (space for new ground rules)
7) ... (space for new ground rules)
Appendix L – Transcription notation sheet (interview study)

Underlined text indicates an emphasis in the tone of voice

CAPITAL letters indicate raised voice (beyond that of regular emphasis as indicated by underlining)

= at the end of a turn and beginning of the next indicates no pause between speakers (usually an interruption)

[ ] within a segment of text indicates a second speaker talking over or during one speakers’ words where a break in the transcription would be unnecessary or inappropriate

** indicates that a place or person’s name has been removed and replaced with a pseudonym

Notes to the reader are indicated by parentheses (.)

indicates a deliberate pause

… indicates a period of silence (these are not timed but are significantly longer than deliberate pauses indicated by (.)
Appendix M – Example transcript summary (interview study)

Summary – YC1-001

Aiden (15), Ash, Adam and Andy (all 16) all report smoking tobacco and cannabis but Andy is not a ‘smoker’

- The group know tobacco is bad for you and the laws about selling but conversely cannabis was ‘good’.
- Andy makes specific (unprompted) point that he does not have experience in smoking tobacco (but does smoke cannabis) – later he tells us that he used to be a smoker.
- The idea of addiction appears to be when someone can’t stop, spends all their money on a substance and wants to smoke when they can’t.
  - This appears to be the same for cannabis – want it when you can’t have it (craving) that makes an addiction.
  - They are not addicted, and could stop if they wanted to.
  - YP don’t want to stop smoking anyway
- Money was a major part of tobacco use.
  - It categorises addiction – ‘spending all money on it’
  - It was the main reason why others (older people) didn’t agree with YP smoking.
  - Adam agrees that smoking drains people’s money.
  - It was a reason why cannabis users add tobacco.
- The link between cannabis and using other drugs is rubbish
  - A link between cannabis and tobacco use exists but only because of money
- ‘Chainy’ smokers are attention seekers; they don’t need to smoke that much.
  - Emo’s smoke because of depression.
  - Smoking a lot of cigarettes is unattractive.
  - Girls smoke but discretely because smoking too much is unattractive.
- ‘Normal’ cannabis use is whenever they can get it – this might be weekly or even daily
- Tobacco has a function (smoking tobacco helps to meet people) but cannabis appears to be the function (it’s a ‘hobby’, people get together to smoke cannabis, play games with it etc).
- YP who don’t smoke, don’t mind others smoking.
- Cannabis is not as bad as tobacco.
  - They get the messages about tobacco – ‘it’s all over the telly’.
  - But there isn’t enough proof that cannabis is harmful, participants were in touch with ‘research’ (indirectly by a friend who does a lot of searching for info) – ‘it’s never killed anyone’.
- Although familiar with different methods of consuming cannabis, money dictates how it is consumed.
  - ‘Purees’ (just cannabis) are the gold standard of cannabis consumption.
  - To keep costs down and to avoid wasting the cannabis supply they add tobacco.
- ‘Most people’ think tobacco is the bad bit about smoking cannabis.
  - People (although not these participants) get addicted to tobacco through cannabis.
  - Mixing tobacco with cannabis is not as bad as smoking tobacco on it’s own.
- YP will smoke tobacco anywhere, they don’t particularly feel restricted or care about where they smoke.
- There are rules for cannabis use - YP will only smoke cannabis somewhere quiet, not too public.
- They have easy access to both substances.
  - Waiting outside shops to ‘get lucky’ with adults buying on their behalf (tobacco).
  - Some shops are ‘not proper’ and sell to YP (tobacco)
- Tobacco-added cannabis smokers are a different kind of smoker to cigarette smokers.
  - Smokers are people who smoke cigarettes.
  - Andy (ex tobacco user) says tobacco-added cannabis smokers are not smokers.
# Appendix N – Code structure (interview study)

## Code structure

<table>
<thead>
<tr>
<th>Beliefs about addiction</th>
<th>Impact on health</th>
<th>Links between cannabis and tobacco</th>
<th>Policy and law</th>
<th>Psychoactive aspects of cannabis use</th>
</tr>
</thead>
<tbody>
<tr>
<td>You get addicted to tobacco not cannabis</td>
<td>A routine makes an addiction</td>
<td>Cannabis couldn't lead people to cigarette smoking</td>
<td>Cannabis is illegal</td>
<td>Cannabis isn't all the same, it's effects change</td>
</tr>
<tr>
<td>You have to smoke a lot (tobacco) to be addicted</td>
<td>Not all YP get addicted</td>
<td>Cannabis use is too infrequent</td>
<td>Cannabis isn't a 'drug'</td>
<td>Don't mind being associated with cannabis use</td>
</tr>
<tr>
<td>Beliefs about harms of mixing</td>
<td>Mixing harms depend on dose of each substance</td>
<td>Comments about the gateway to further substance use</td>
<td>Legal status of cannabis</td>
<td>Cannabis makes you unpredictable</td>
</tr>
<tr>
<td></td>
<td>Reactions to mixing from non-smokers</td>
<td>Most people stick to cannabis and don't try harder drugs</td>
<td>Cannabis is illegal</td>
<td>Cannabis is cooler</td>
</tr>
<tr>
<td></td>
<td>Tobacco in joints is exactly the same</td>
<td>Cannabis doesn't always lead to tobacco use</td>
<td>Legalising Cannabis</td>
<td>Cannabis is more acceptable</td>
</tr>
<tr>
<td></td>
<td>Tobacco is the worst part of cannabis</td>
<td>Explicit reference to cigarette use because of mixing</td>
<td>There are lenient penalties for just using cannabis</td>
<td>Cannabis is more social</td>
</tr>
<tr>
<td></td>
<td>Tobacco with cannabis is not as bad</td>
<td>The substances are not linked</td>
<td>Cannabis isn't all the same, it's effects change</td>
<td>Don't mind being associated with cannabis use</td>
</tr>
<tr>
<td></td>
<td>Tobacco with cannabis is worse</td>
<td>Cannabis is just a stronger version of what you get from tobacco</td>
<td></td>
<td>Cannabis is cooler</td>
</tr>
<tr>
<td></td>
<td>Unsere of harms of mixing</td>
<td>No clear link</td>
<td></td>
<td>Cannabis is more acceptable</td>
</tr>
<tr>
<td>Health harms of cannabis use</td>
<td>Medical uses of cannabis</td>
<td>Tobacco comes first, just.</td>
<td></td>
<td>Cannabis is more social</td>
</tr>
<tr>
<td>Health harms of tobacco use</td>
<td>Doctors orders</td>
<td>Awareness of smoke free legislation</td>
<td></td>
<td>Tobacco starts socially but that's it</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Awareness of tobacco access laws</td>
<td></td>
<td>People look down on smokers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Legal status of cannabis</td>
<td></td>
<td>Tobacco not cool</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cannabis is illegal</td>
<td></td>
<td>No one talks about tobacco</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Legalising Cannabis</td>
<td></td>
<td>Tobacco is anti-social</td>
</tr>
<tr>
<td></td>
<td></td>
<td>There are lenient penalties for just using cannabis</td>
<td></td>
<td>Tobacco-added cannabis users against tobacco use</td>
</tr>
<tr>
<td>Smoker image and function</td>
<td>Don't mind being associated with cannabis use</td>
<td>Negative image of tobacco use</td>
<td>Smoking (tobacco) helps to make new friends</td>
<td>Taking anything that's offered to make friends (cannabis too)</td>
</tr>
<tr>
<td></td>
<td>Cannabis is more acceptable</td>
<td>People look down on smokers</td>
<td>Some want to be seen smoking (cannabis or tobacco)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cannabis is more social</td>
<td>Tobacco not cool</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tobacco starts socially but that's it</td>
<td>No one talks about tobacco</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>People look down on smokers</td>
<td>Tobacco is anti-social</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tobacco-added cannabis users against tobacco use</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tobacco is anti-social</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Taking anything that's offered to make friends (cannabis too)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Code structure

<table>
<thead>
<tr>
<th>Variety of cannabis consumption possibilities</th>
<th>Joints are most common choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dialogues with parents</td>
<td>Parent attitudes towards cannabis</td>
</tr>
<tr>
<td>Information sources</td>
<td>Doctors</td>
</tr>
<tr>
<td></td>
<td>General knowledge or media (TV)</td>
</tr>
<tr>
<td></td>
<td>Internet</td>
</tr>
<tr>
<td></td>
<td>People with experience</td>
</tr>
<tr>
<td></td>
<td>Peer educators</td>
</tr>
<tr>
<td></td>
<td>Public health awareness campaigns - stalls</td>
</tr>
<tr>
<td></td>
<td>School education</td>
</tr>
<tr>
<td>Deciding</td>
<td>I've seen what it does - I don't want to mess up my life</td>
</tr>
<tr>
<td>Resisting use</td>
<td>Non-smokers avoid smokers</td>
</tr>
<tr>
<td></td>
<td>Not needing to smoke</td>
</tr>
<tr>
<td>Thoughts about young people's awareness</td>
<td>Desire to know more about cannabis or tobacco</td>
</tr>
<tr>
<td></td>
<td>Don't know much about cannabis</td>
</tr>
<tr>
<td></td>
<td>I know enough about tobacco</td>
</tr>
<tr>
<td></td>
<td>I wouldn't want to know any more about cannabis</td>
</tr>
<tr>
<td></td>
<td>Young people need to know more</td>
</tr>
<tr>
<td>Tobacco harms more publicised than cannabis</td>
<td>Cannabis messages don't match experiences</td>
</tr>
<tr>
<td>Why use tobacco-added cannabis</td>
<td>Mixed burns smoother</td>
</tr>
<tr>
<td></td>
<td>Mixed is cheaper and makes supplies last longer</td>
</tr>
<tr>
<td></td>
<td>Mixed tastes nicer</td>
</tr>
<tr>
<td></td>
<td>Mixing allows engineering the high</td>
</tr>
<tr>
<td>You get to choose - agency and use choices</td>
<td>Peers</td>
</tr>
<tr>
<td></td>
<td>No pressure from peers</td>
</tr>
<tr>
<td></td>
<td>Resisting peer pressure</td>
</tr>
<tr>
<td></td>
<td>Wanting to find out for self - experimenting</td>
</tr>
<tr>
<td>Code structure</td>
<td>Access</td>
</tr>
<tr>
<td>----------------</td>
<td>--------</td>
</tr>
<tr>
<td>Asking older adults to get their cigarettes</td>
<td>Parent suppliers</td>
</tr>
<tr>
<td>Discarded tobacco</td>
<td>Parent suppliers</td>
</tr>
<tr>
<td>If at first you don't succeed - trying elsewhere or not bothering</td>
<td>Parent suppliers</td>
</tr>
<tr>
<td>Illegal retailing</td>
<td>Parent suppliers</td>
</tr>
<tr>
<td>Perceptions of accessibility</td>
<td>Which is easier to access</td>
</tr>
<tr>
<td>Sources for cannabis</td>
<td>Growers</td>
</tr>
<tr>
<td>Cannabis in the local area</td>
<td>Not that prevalent locally</td>
</tr>
<tr>
<td>Cannabis use categories</td>
<td>Regular or social (two categories for cannabis)</td>
</tr>
<tr>
<td>No desire to stop cannabis use</td>
<td>Planning to smoke cannabis but not tobacco in the future</td>
</tr>
<tr>
<td>Trying cannabis</td>
<td>Scrupling together any small change to get cannabis</td>
</tr>
<tr>
<td>No desire to stop cannabis use</td>
<td>Planning to smoke cannabis but not tobacco in the future</td>
</tr>
<tr>
<td>Code of conduct among young people</td>
<td>Regular use - but not wasted or treated like tobacco</td>
</tr>
<tr>
<td>Respect for non-users</td>
<td>Other peoples feelings</td>
</tr>
<tr>
<td>Hiding use from parents (particularly dads) and teachers</td>
<td>Some do hide (if they are very young)</td>
</tr>
<tr>
<td>Negotiating the smoker identity</td>
<td>A (tobacco) cigarette makes a proper smoker</td>
</tr>
<tr>
<td>Tobacco isn't the focus of use - I'm smoking weed not tobacco</td>
<td>Tobacco isn't the focus of use - I'm smoking weed not tobacco</td>
</tr>
<tr>
<td>Tobacco use</td>
<td>Acceptable anywhere public (outside)</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Tobacco use categories</td>
<td>Chainy smokers</td>
</tr>
<tr>
<td></td>
<td>Social smokers</td>
</tr>
<tr>
<td>Who's using</td>
<td>Boys smoke (either substance) to look grownup or tough</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boys and Girls using substances</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>More boys smoke tobacco</td>
</tr>
<tr>
<td></td>
<td>No difference for tobacco</td>
</tr>
<tr>
<td>You can't tell who's a user</td>
<td></td>
</tr>
</tbody>
</table>