Examining General Attitudes Towards Illegal Drug Use & Addiction

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Abstract

Using a true experimental design, the study aimed to examine general attitudes towards illegal drug use and addiction in a general population. A sample of 257 male (115) and female (140) participants with a mean age of 26.26 (SD = 11.48) completed an online questionnaire which measured drug-related knowledge, attitudes and beliefs, general attitudes towards drug use and community support. Statistical analysis found the following results; general attitudes towards recreational drug use and addiction were significantly less positive than attitudes towards drug abstinence. Community support was significantly lower for recreational drug users and drug addicts than drug abstinent individuals. Younger participants reported more positive attitudes towards recreational use and less positive attitudes towards abstinence, higher knowledge of someone with a drug problem and greater support for policy change than older participants. There were significant relationships found between support for policy change, attitudes towards drug use and attitudes towards drug users.

2. Introduction

The dangers of illegal drug use may be a growing concern worldwide with uncontrolled drugs being circulated more easily between countries due to globalisation and the knowledge and distribution of these drugs being circulated more easily through social media platforms and technological advances such as "the silk road" (Korf, Fountain & Wouters, 2013; Martin, 2014). Illegal drug addiction is also a growing and costly concern with "hard" drugs such as heroin and crack cocaine being synonymous with societal issues such as crime and homelessness (Home Office Research Study, 2003) which has reached "unprecedented levels" in Ireland in recent years (O'Sullivan, 2016). Studies have shown that there are critical age periods where illicit drug experimentation takes place (Kandel & Logan, 1984), with the majority of users falling into the 19-28 age range (Schulenberg et al., 2017). These studies suggest that a lack of experimentation before this age is unlikely to lead to experimentation thereafter. As can be seen by extensive research into the epidemic, not only can a number of social issues arise from the misuse of illegal drugs (Redonnet, Chollet, Fombonne, Bowes & Melchior, 2012; Hawkins, Catalano & Miller, 1992) but a significant amount of psychological and medical issues can arise as a result also (Cadet & Bisagno, 2016; Hall & Degenhardt, 2009). With this knowledge, the general attitudes of the public regarding illicit drug use may be assumed to be predominantly negative. However, there is also research that highlights the benefits of the use of illegal drugs such as marijuana (Benson, Watson & Joy, 1999) which has been made legal in many countries and states in the recent past. As a lack of community support has shown to significantly increase the likelihood of relapse in drug addicts (Ibrahim & Kumar, 2009) and studies have found attitudes towards drug use and users to be significantly negative (Bryan, Moran, Farrell & O'Brien, 2000) it is important to examine current attitudes towards the use of drugs and the possible contribution of negative attitudes towards the drug use problem which will be looked at in this study.

2.1 Illegal Drug Distribution & Use

Drug distribution exists in all social classes with drug dealing predominantly occurring through in-person exchange in clubs, neighbourhoods and on the street (Korf, Fountain & Wouters' (2013). However, with rapid technical advances changing the way we live, communicate and buy, a new gate-way for the distribution and acquisition of drugs has emerged. With the aid of tools that allow for anonymous purchasing online such as "TOR" and the fast development of the online currency "BitCoin", the accessibility of illegal drugs online has grown significantly (Christin, 2013). Various types of "cryptomarkets" exist on the "darknet" allowing any person with internet service and the right tools, as mentioned above, the ability to access many types of illegal objects including illicit drugs with just the click of a button (Van Buskirk, Griffiths, Farrell & Degenhardt, 2017). Van Buskirk et al. (2016) conducted a study that estimated the value of drugs that are sold in cryptomarkets to be approximately $600,000 USD a day. These figures make it apparent that illicit drug use is a modern-day epidemic that poses serious threat to society.

Although, as mentioned previously, it is known that illicit drug users come from various socio-economic backgrounds, it seems that when it comes to age, the population of drug users are very prominently in their youth (Kandel & Logan, 1984). Kandel & Logan's study highlighted the link between a person's age when it came to drug experimentation and their likelihood to continue using illegal substances thereafter. Their study reported findings to suggest that drug experimentation predominantly occurs before the age of 21 and that those who experiment with drugs thereafter, are less likely to continue using. A more current longitudinal study which looked at patterns of drug use between 1991-2016 reinforced age-related differences in drug use, finding that the highest

users of illicit drugs were college students followed by adults between the ages of 19-28 (Schulenberg et al., 2017). This study showed the consistent levels of drug use in predominantly young adults and adolescents during that time period with only slight gradual decreases in use over the last five years. Some studies however have investigated ways of reducing the use of illegal drugs in young people, one of which includes Kwan, Bobko, Faulkner, Donnelly & Cairney's (2014) report that reviewed 17 longitudinal studies investigating the relationship between illicit drug use and sport participation in young adults. Their report found a significant relationship between sport participation and reduced illicit drug use in 80% of those studies and highlighted a potential critical age period when attempting to reduce the risk of addiction in adolescents. This critical age period is just one of the reasons why differences between age and attitudes towards drug use will be examined in this study.

2.2 Associated Health Risks

According to Whiteford et al. (2013) illicit drug use disorders account for 10.9% of disability adjusted life years when examining the global burden of disease. Illicit drug use can inadvertently affect a person's health in many ways. One way in which substance abuse can damage health is neuropsychologically. Cadet & Bisagno (2016) for example, found that those with a long history of chronic drug use had moderate cognitive deficiencies as a result. The findings of their study suggest that different drugs have different neuropsychological effects including neurobehavioral consequences due to marijuana use, neuropathological consequences due to heavy cocaine use and alterations to cognitive structures and functions due to methamphetamine use. There has also been strong associative links discovered between Major Depressive Disorder (MDD) and illegal drug use which is especially prevalent in young people (Brook et al., 2002). It is

not just young adults who are affected by the consequences of illicit drug use however, as unborn children can also fall victim to that side effects of illicit drug exposure. Studies have shown that drug use by pregnant women can have a direct effect on foetal growth, maturation, neurotransmission and brain organisation from exposure to drugs through the placenta (Behnke, Smith & Committee, 2013).

Illicit drug abuse is also associated with several physical diseases including HIV and AIDS. Studies have estimated that approximately 15.9 million people inject illegal drugs worldwide and of these people it is estimated that approximately 3 million of them may be HIV positive (Mathers et al., 2008). According to Mathers et al. the HIV disease is of particular concern in countries in south-east Asia, Latin America and eastern Europe specifically, with needle sharing being reported as the primary mode of HIV transmission (Vlahov & Junge, 1998). One way of reducing the numbers of people contracting HIV and AIDS from needle sharing involves the use of needle exchange programmes. However, most government policies do not support such facilities and make it unappealing for users to avail of these services (Strathdee & Beyrer, 2015). It is clear from research that drug use is a major concern for society today and can lead to serious global burden and illness. For this reason, research into the area of drug use, potential prevention of the issue and suggestions to increase support for policy change needs to be addressed with more urgency by researchers and will be examined in this research.

2.3 Associated Health Benefits

Although there are several health risks associated with illicit drug use there have also been several findings to suggest that some illegal drugs can contribute positively to your health. The most commonly known drug associated with health benefits is marijuana. Although marijuana can be associated with negative health consequences such

as impaired respiratory function and cardiovascular disease (Hall & Degenhardt, 2009) it also has also been linked with health benefits such as relieving symptoms of glaucoma and chronic pain (Volkow, Baler, Compton & Weiss, 2014). According to Volkow et al. not only does marijuana have an anti-inflammatory affect it also relieves neuropathic pain in patients with multiple sclerosis and can help in the treatment of epileptic seizures in both adults and children. In a recent study conducted by Lucas et al. (2016) results showed the effectiveness of the use of marijuana as a substitute for more harmful substances finding that it played a significant role in harm reduction and suggested that it may be a useful technique in the treatment of more severe substance addiction. For these reasons marijuana is legal in many states of the US. Although, research has found that legalising the drug has not increased the level of usage in these states, reports did show that the states that legalised the drug had the highest levels of usage (Hasin et al., 2015).

Another example of an illicit drug that is popular for recreational use today and is also involved in the treatment of neuropsychological illnesses is ketamine. Recent studies have shown that ketamine administration in small doses can have rapid positive effects on patients suffering from severe depression and anxiety and can also help to reduce suicide ideation (Ballard et al., 2014). Other uses of common street drugs in medicine are the use of hallucinogenic substances and MDMA. The treatment of depression and anxiety using a hallucinogenic found in "magic mushrooms" called psilocybin has been used to treat psychological distress in life-threatening cancer patients (Ross et al., 2016). The study found a rapid and significant decrease in anxiety and depression. MDMA often referred to as "ecstasy" has been tested for its possible treatment of post traumatic stress disorder (PTSD), a common illness for war veterans. A report by Sessa (2011) highlighted the effectiveness of MDMA on PTSD showing significant decreases in symptoms after small doses being administered. As well as this, the efficacy of MDMA has been tested finding little evidence to support the possibility of extreme side effects (Mithoefer et al.,

2011). Due to many current illegal drugs having positive health benefits, perhaps moving towards the legalisation of common street drugs could have positive consequences for society and help to reduce stigma associated with drug users. The support for such policy change amongst the public will be examined in this research.

2.4 Social Issues & Stigma

One prominent issue related to illicit drug use and addiction is the adverse effects of societal issues such as socio-economic status and stigma. Although much research has investigated the physical and psychological consequences of illicit drug use, little research has been conducted on the relationship between social components and health in illicit drug users. Galea & Vlahov (2002) conducted a study that highlighted the social factors that contributed to negative health consequences and increased risk-behaviour in illicit drug users and among these factors were: socio-economic status, homelessness and incarceration which are all factors associated with stigma and discrimination. Their research found a positive correlation between ethnic minority groups and higher levels of mortality rates and infectious disease in illicit drug users as well as highlighting the effects of social determinants such as discrimination and segregation on illicit drug users through mechanisms such as social disinvestment. This associated stigma is not easy to escape for users as it even follows them in to the healthcare system (Van Boekel, Brouwers, Van Weeghel & Garretsen, 2013). Van Boekel et al. show in their study that the effects of the negative attitudes of health care professionals towards substance abusing patients is common and inevitably results in suboptimal care for such clientele.

Redonnet et al. (2012) also found socio-economic differences when it came to illicit substance abuse and addiction with disadvantaged youth being more susceptible to the behaviour. As well as this, other studies have found a significant relationship between

homelessness and injection initiation in youth with results demonstrating an increased likelihood of drug injecting behaviours because of homelessness in young people in particular (Feng et al., 2013). As there is an abundance of research to suggest that the stigmatisation of illicit drug use is an issue in society today (Ahern, Stuber & Galea, 2007) it may be of interest to consider the idea that stigmatisation may be a factor in preventing the degradation of the epidemic. A study by Ibrahim & Kumar (2009) investigated this idea showing a significant relationship between community support for drug addicts and their likelihood of relapse. These findings were cause for concern with statistics showing that the number of relapsing addicts exceeded the number of newly registered addicts with 94% of the 400 participants reporting medium to low levels of support from their community. Ibrahim & Kumar (2009) concluded that relapsing addicts were most influenced by low levels of self-efficacy and ostracization from their community.

2.5 Attitudes

As well as examining patterns of drug use over a certain period, Schulenberg et al. (2017) examined changing attitudes toward illicit drug use. Their report showed a decrease in the association between drug taking and risk in their youngest participants (8th graders & 12th graders) as well as an increase in the approval of drug taking in the same age groups. This research is in line with Pilkington's (2007) findings which highlights the "normalization" of recreational drug use in youth culture. An Irish study that also aimed to examine attitudes toward illegal drugs was conducted by Bryan, Moran, Farrell & O'Brien in 2000. A survey was distributed to assist the Drug Misuse Research Division (DMRD) in examining the knowledge, attitudes and beliefs of an Irish sample in a nationwide survey specifically. The main aims of the research were to examine levels of awareness to drug use and risk, establish the level of concern regarding the drug situation

in Ireland, ascertain attitudes towards drug users and addicts to assess the level of support for them and finally to establish the level of support for drug policy. The main findings were as follows; 94% of participants reported that they felt that drug related crime was a major issue in Ireland at the time with roughly 40% stating that they felt that it was a problem in their own neighbourhood. However, 56% of participants felt that alcohol abuse caused more issues in society than the misuse of drugs.

Over half of the sample believed that it was "normal" for young adults to have tried drugs at least once in their lives with the younger participants reporting greater experience with the drug marijuana. Approximately three quarters of the sample agreed that drug use was harmful to your health with over 50% reporting in the belief that the use of marijuana was equally as bad for your health as the use of heroin. Social avoidance and fear of drug users was reported to be high and with that sympathy for drug users was low. Younger participants with a higher level of education and those who personally knew a drug addict were slightly more sympathetic. Regarding change in policies, there was a high level of support for needle exchange services and the provision of heroine substitutes. However, 65% of these respondents felt that these services should only be provided to those who intended on becoming drug abstinent. An underwhelming number of participants (24%) reported that they would support the legalisation of marijuana however, 70% believed in treatment as a sentence for drug related crime over awarding prison time. Examining attitudes toward illicit drug use is an integral step in reducing the epidemic as it has been found that users are most influenced by those closest to them e.g. friends and family (Kandel, 1973).

2.6 Strengths & Weaknesses of Previous Research

Current research has proven to demonstrate many of the advantages and disadvantages of illicit drug use to the individual, to widespread healthcare and to society (Cadet & Bisagno, 2016; Mathers et al., 2008; Ahern, Stuber & Galea, 2007). The research as presented above illuminates the severity of drug-related epidemics such as HIV (Strathdee & Beyrer, 2015) as well as lesser investigated contributing factors related to the issue such as stigmatisation (Ibrahim & Kumar, 2009). This research opens a gateway for discussion in to attempting to change attitudes toward illicit drug use as a possible solution to the current drug crisis. On interpretation of the present research there is reasonable cause to believe that the stigmatisation of the issue is both contributing to social determinants that lead to the undesired behaviour and preventing the recovery of the behaviour as well. Evidence suggests that social injustices such as poverty and discrimination (Galea & Vlahov, 2002) are strongly associated with illicit drug use and addiction and that unfortunately sympathy for users is low (Bryan, Moran, Farrell & O'Brien, 2000). As well as this, much evidence has supported that young adults and adolescents are most at risk of adapting the behaviour and becoming substance dependent (Schulenberg et al., 2017; Kwan et al., 2014; Feng et al., 2013). These studies provide a global perspective on the issue and reinforce the fact that illicit drug use is a worldwide epidemic today.

Although some research has examined attitudes toward illicit drug use and users there does not seem to be sufficient research in to the growing and changing of these attitudes to date. For example, Bryan et al.'s (2000) attempt to summarise the attitudes, knowledge and beliefs of an Irish population, is currently more than seventeen years old and a follow up study has not been conducted. As well as this, although the study does report differences in attitudes towards drug use, it does not explicitly examine differences in attitudes towards drug users in comparison to non-drug users which this study aims to do. It is also clear from Ibrahim & Kumar's (2009) findings that community-based

support is an integral part of recovery from drug addiction yet there is a lack of research examining personal responsibility regarding the social issue. There is an abundance of research examining age in relation to drug use (Kandel & Logan, 1984) (Kwan, Bobko, Faulkner, Donnelly & Cairney's, 2014) however, these studies fail to examine the lack of difference between age and attitudes towards drug addicts. Although Strathdee & Beyrer (2015) address the issue of negative attitudes within government towards policy change, they do not address the negative attitudes of the public towards such change which is arguably more important. Recent efforts to destigmatise other healthcare epidemics such as depression have proven to be successful however, there seems to be little urgency surrounding the reduction in the stigma attached to illicit drug use at present.

2.7 Current Study

Using the rationale highlighted above which suggests that drug use and addiction is a poignant problem in society today (Whiteford et al., 2013), the current study sets out to examine negative attitudes towards both drug use and users due to significant research findings which suggest that negative attitudes may be contributing to the issue (Ibrahim & Kumar, 2009). Although Bryan, Moran, Farrell & O'Brien (2000) collected sufficient data to examine general knowledge, attitudes and beliefs surrounding drug use, a true-experiment was not conducted to examine exact differences between attitudes towards the various types of drug users which will be attempted in this study. Another notable variable that appears to be important when examining attitudes towards drug use is age (Kandel & Logan, 1984). Schulenberg et al. (2017) did extensive work on the changing of attitudes towards drug use in different age groups over time however, they failed to examine some key components of this study which include attitudes towards users and policy change as well as knowledge of drug users. This study will examine age differences

and relationships to these variables. Continuing from this, although Bryan et al. (2000) and Strathdee & Beyrer (2015) have both touched on attitudes towards policy change, neither produced a quantifiable score in relation to support for policy change or compared its relationship with other variables which will be seen in this study. Finally, the relationship between attitudes towards drug use and attitudes towards drug users will be examined which has not be researched to date. The hypotheses for this study are as follows;

Hypothesis One – there will be significant differences between general attitudes towards recreational drug use, drug addiction and drug abstinence.

Hypothesis Two- there will be significant differences between the willingness to be friends with, the willingness to help and the willingness to lend money to a recreational drug user, a drug addict and a drug abstinent individual.

Hypothesis Three- there will be a significant relationship between age and general attitudes towards recreational drug use, drug addiction and drug abstinence.

Hypothesis Four- there will be a significant difference between age and knowledge of someone with a drug problem.

Hypothesis Five- there will be a significant relationship between age and support for policy change.

Hypothesis Six- there will be a significant relationship between support for policy change and attitudes towards drug use.

Hypothesis Seven- there will be a significant relationship between support for policy change and attitudes towards drug users.

Hypothesis Eight- there will be a significant relationship between attitudes towards drug use and attitudes towards drug users.

3. Method

3.1 Participants

The population of the study consisted of 257, male (115) and female (140) participants between the ages of 18-73 (*M*= 26.26, *SD*= 11.48). Two participants did not report what gender they identified as. 72% of participants reported to have received third level education, 26.5% reported to have received higher secondary level education and roughly 2% of participants reported to have received either lower secondary level education or no education at all. 54.9% of participants reported that they lived in a capital city, 3.5% reported that they lived in another city, 21.4% reported that they lived in a large town, 10.9% reported that they lived in a small town and 9.3% reported that they lived in a rural area. 68.1% of participants reported knowing someone with a drug problem. To source participants, the snowball effect was used by sharing an online survey link across three different social media platforms (Facebook, Instagram and Twitter) as well as by distributing the link via email. Random allocation was used to assign participants to each condition and there was an equal chance of each participant being assigned to any one of the three conditions; recreational drug use (1), drug addiction (2) and drug abstinence (3). Condition 1 consisted of 94 participants, condition 2 consisted of 90 participants and there were 73 participants in condition 3. There were no incentives given for participation. The minimum age for participation was 18. There were no other requirements for participation.

3.2 Design

A true experimental between-group design was used to test hypothesis one. The dependent variable was total general attitudes and the independent variables were the three conditions; recreational drug use, drug addiction and drug abstinence (control). The participants were randomly allocated to one of the three conditions. The same design was used to test hypotheses two with the dependent variables being willingness to be friends with Aaron, of assisting Aaron if he were to ask for help on the street and of lending money to Aaron, the independent variables were again the three conditions. A between-group correlational design was used to test hypothesis three the variables were age and total general attitudes across the three conditions. Hypothesis four was tested using a within-group design with the dependent variable being age and the independent variable being knowledge of someone with a drug problem. Within-group correlational designs were used to test hypothesis five, six, seven and eight. The variables for hypothesis five were age and support for policy change, the variables for hypotheses six were support for policy change and attitudes towards drug use, the variables for hypothesis seven were support for policy change and attitudes towards drug users and the variables for hypothesis eight were attitudes towards drug use and attitudes towards drug users.

3.3 Materials

3.3.1 Drug-related knowledge, attitudes and beliefs

To collect detailed information regarding general attitudes towards illegal drug use and addiction, 26 questions were taken from a nationwide survey entitled "Drug-related knowledge, attitudes and beliefs in Ireland" (Bryan, Moran, Farrell & O'Brien, 2000) (appendix 2). These questions sought to examine general knowledge of the most prominent illegal drugs used in Ireland in 2000, examine common attitudes towards illicit drug use/ users and to investigate the beliefs of participants in relation to illegal drug use

and drug policy. To examine drug knowledge, participants were first asked to identify which commonly used illegal drugs they had previously heard of; cannabis, ecstasy, cocaine, amphetamines, heroin and LSD. A fake drug named "revilin" was added to the list as a control. In Bryan, Moran, Farrell & O'Brien's (2000) study, the information collected was used to determine which illegal drugs were the most widely known however, for this study the number of drugs recognised were simply added together to give an overall score for general knowledge of drugs. This decision was made due to the study's interest in general knowledge of drugs rather than knowledge of drug type. It was noted separately if a participant ticked the box for "revilin".

The following 23 questions consisted of statements to assess participant's attitudes and beliefs. Participants were asked to rate each statement on a scale from 1-7 with "disagree strongly" representing a score of 1 and "agree strongly" representing a score of 7. Examples of these questions included "I would be nervous of someone who uses illegal drugs" and "drugs education in schools should start at primary level". For this study, the questions were grouped into three categories with 5-7 questions in each; attitudes towards drug users (questions; R2, R4, R6, 9, R10, R13 & R21), attitudes towards drug use (questions; R1, R3, R7, 11, 14, 15 & R22) and support for policy change (questions; R5, 8, 16, 17 & 19). Questions with an "R" in front of them were reverse coded. The scores for the questions in each group were added together to give a total attitude score towards drug addicts, drug use and support for drug policy change. The higher the score, the more positive a person's attitude/support. Some questions were omitted from grouping as they were not relevant to any category. The These questions were then followed by two yes/no questions to assess personal knowledge of someone who uses or is addicted to drugs. Each of these questions were individually scored and were proceeded by 5 background information questions to determine a participant's age,

gender, level of education, residential area and whether they do or do not have children. There was no reliability score available for the measure.

3.3.2 General Attitudes Measure

The Generalised Attitudes Measure (GAM) (McCroskey & Richmond, 1996) (appendix 4) was used to measure attitudes towards drug use in each of the three conditions (recreational drug use, drug abstinence and drug addiction). The measure consists of six questions to assess participant's general attitudes towards a statement of interest. The statement used in each of the three conditions was directly related to the type of drug use exposed to the participant in the voice clip proceeding the measure. Each voice recording clip involved an actor speaking about his own experience with either recreational drug use, drug addiction or drug abstinence (appendix 3). An example of a statement given is "on the scales below, please indicate your feelings in relation to recreational drug use". The strength of the participants feelings in relation to the statement are measured on a scale of 1-7 ranging from good-bad, wrong-right, harmful-beneficial, fair-unfair, wise-foolish and negative-positive. Answers of 1 or 7 indicate very strong feelings and an answer of 4 indicates neutral feelings. Questions 1, 4 and 5 are reverse-coded and then the scores for all six questions are added together giving a total general attitudes score indicating how each participant felt about the given statement. The reliability of the measure is reported to have an estimated alpha value of above .90 (McCroskey, 2006).

3.3.3 Questions to Examine Community Support

Three standalone questions were introduced following the GAM which were used to examine how likely participants were to be friends with Aaron, to help Aaron if they were to meet him on the street and to lend money to Aaron in each of the three conditions (appendix 5). These questions were also measured on a scale of 1-7 with 1 being labelled as "extremely unlikely" and 7 being labelled as "extremely likely". These questions were scored individually and were added to assess participant's personal responsibility.

3.4 Apparatus

The voice clips were recorded using a standard phone (Apple iPhone 6+) and were uploaded to a laptop that had Windows 10 software installed. The recordings were then uploaded to YouTube on the laptop device. Surveys were developed using Google Forms. A website called na.gg was used to randomly allocate participants to each condition.

3.5 Procedure

Participants were asked to partake in an experiment to "examine attitudes towards illegal drug use and addiction". The experiment consisted of one survey for each condition. To randomly allocate participants, the links for each of the three surveys were entered in to the na.gg website which created one single link. Every participant was given the same link which randomly allocated them to a condition. Each survey was exactly the same apart from the voice recordings in the final section which varied depending on condition. Once participants clicked on the link, they were brought to the survey's information sheet (appendix 1). This sheet informed participants of the nature of the study, where the data collected was going to be used, their right to withdraw at any time before submitting the survey and prior notice of equipment that may be needed to

complete the survey e.g. earphones. The email address of the experimenter was included here for further enquiries. Immediately proceeding the information sheet was a consent box that was to be ticked only if participants were over the age of 18 and consented to taking part in the study. No identifiable information was collected to ensure that all participants remained anonymous. All the data was stored in a password-locked computer.

Section 1- section 3 of the survey was adapted from Bryan, Moran, Farrell & O'Brien's (2000) study which can be seen in (appendix 2). Section 1 was aimed at examining knowledge of illegal drugs, section 2 was aimed at examining attitudes towards illegal drug use, drug addicts and support for policy change and section 3's purpose was to gather demographic information. The final section consisted of one of the three voice recordings highlighting the condition that the participant was assigned to (appendix 3). This was followed by the generalised attitudes measure (McCroskey & Richmond, 1996) (appendix 4) which was used to measure attitudes towards the voice clip preceding it. Also included in section 4 were the three standalone questions to examine participant's support of drug users (appendix 5). Proceeding the final section was the debrief sheet (appendix 6) which thanked participants for their cooperation and provided information of helplines and websites associated with substance abuse. In total, the survey took an estimated 5-7 minutes to complete.

4. Results

A significance level of .05 was used on all statistical tests except for the Man-Whitney tests (as seen in hypothesis two) in which the significance level was reduced to .017 under Bonferroni correction. The reliability of measures is highlighted in Table 1 and the statistical analysis for all hypotheses are highlighted below.

Table 1: Reliability of Measures

	General Attitudes Measure	Support for Policy Change	Attitudes to Drug Users	Attitudes to Drug Use
N	6	5	7	7
Cronbach's Alpha	.89	.42	.76	.70

The number of questions in each measure is represented by N. The measure is reliable at a Cronbach's Alpha score above .7.

4.1 Hypothesis One

It is hypothesised that there will be significant differences between total general attitudes towards recreational drug use, drug addiction and drug abstinence.

Table 2: Descriptive Statistics of Total General Attitudes Across Three Conditions

	1	2	3
N	94	90	73
Mean	20.07	18.03	30.00
SD	6.62	6.40	7.53
Std. Error	.68	.67	.88

Lower bound	18.72	16.69	28.24
Upper bound	21.43	19.37	31.76
Min	6	6	12
Max	42	34	42

1= recreational drug use, 2= drug addiction, 3=drug abstinence

Table 2 highlights the descriptive statistics recorded for total general attitudes across condition 1 which represents recreational drug use (M = 20.07, SD = 6.62), condition 2 which represents drug addiction (M = 18.03, SD = 6.40) and condition 3 which represents drug abstinence (M = 30.00, SD = 7.53). Results highlight that the mean general attitude score was highest in condition 3 and lowest in condition 2 as can be seen in the bar chart below (Figure 1).
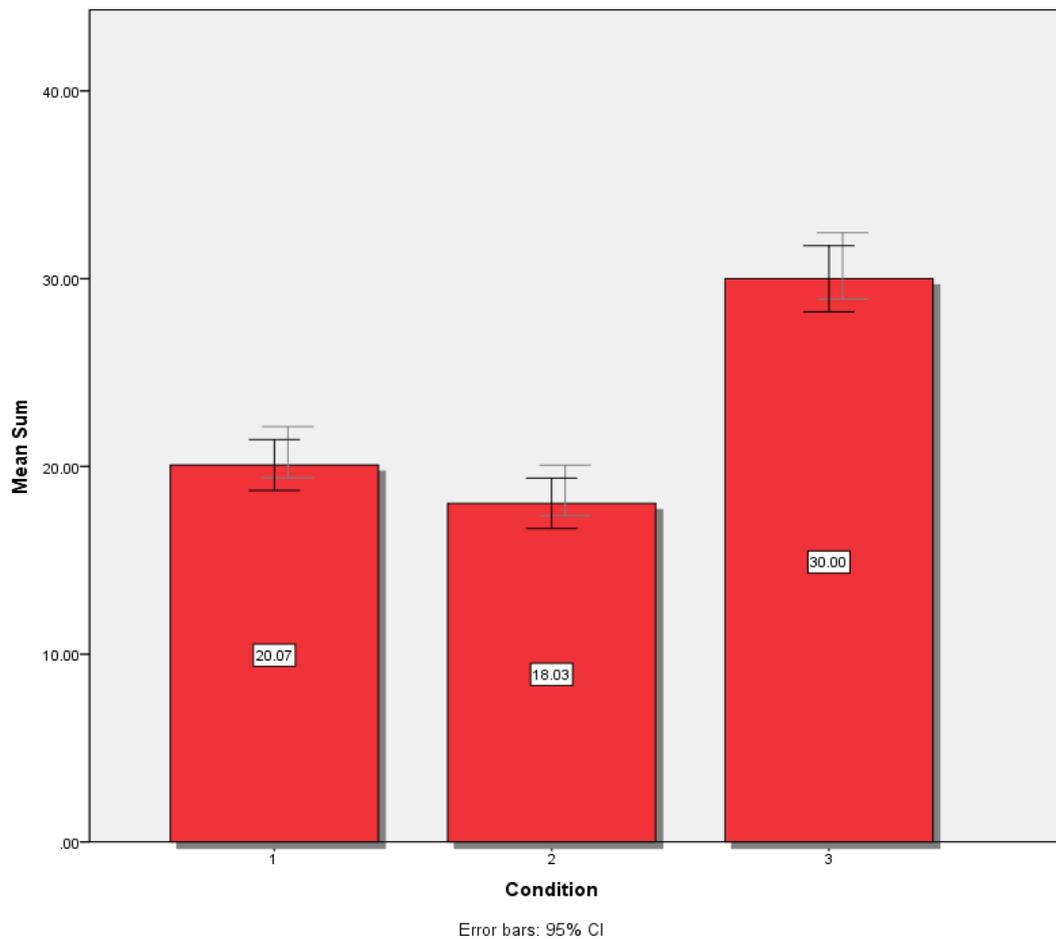

Figure 1: Bar Chart Highlighting Total General Attitude Scores Across Three Conditions

A one-way analysis of variance showed that the total general attitudes score differed significantly between the three conditions (F (2, 252) = 69.17, p < .001). More specifically, Tuckey HSD post hoc analyses highlighted that the total general attitude scores for the drug abstinent condition were significantly higher than the recreational drug use condition (Mean difference = 9.93, p = .000, CI [95%] 7.42, 12.43) and the drug addiction condition (Mean difference = 11.97, p = .000, CI [95%] 9.44, 14.50). Thus, highlighting that general attitudes towards drug abstinence are significantly more positive than general attitudes towards recreational drug use and drug addiction. There was no significant difference between attitudes towards recreational drug use and drug addiction.

4.2 Hypothesis Two

It was hypothesised that there would be a significant difference between the willingness to be friends with, assist if in need of help and lend money to a recreational drug user, a drug addict and a drug abstinent individual.

Descriptive statistics assessing the willingness to be friends with, assist if in need of help and lend money to a recreational drug user, a drug addict and a drug abstinent individual highlight the median and mode across all three conditions. When asked "How likely are you to want to be friends with Aaron?" the median and mode answers were as follows; recreational drug use condition (1) (Median = 4, Mode = 4), drug addiction condition (2) (Median = 2, Mode = 2), drug abstinence condition (3) (Median = 5, Mode = 4). When asked "How likely are you to assist Aaron if he were to ask for your help on the street?" the median and mode answers were; condition 1 (Median = 5, Mode = 6), condition 2 (Median = 3, Mode = 2) and condition 3 (Median = 5, Mode = 5). Finally, when asked "how likely are you to lend money to Aaron?" the median and mode answers

were as follows; condition 1 (Median = 2, Mode = 1), condition 2 (Median = 1, Mode = 1) and condition 3 (Median = 4, Mode = 4).

Kruskal-Wallis one-way anova's showed that willingness to be friends with Aaron (X^2 (2) = 50.00, p < .001), the likelihood of assisting Aaron if he were to ask for help on the street (X^2 (2) = 40.98, p < .001) and the likelihood of lending Aaron money (X^2 (2) = 60.71, p < .001), differed significantly across all three conditions. Mann-Whitney U tests were used for further analysis and the significance level was reduced to .017 under Bonferroni correction. The tests showed that willingness to be friends with Aaron in the recreational drug use condition (mean rank = 113.16) and the drug addiction condition (mean rank = 70.92) differed significantly (z = -5.46, p < .001). They also showed that willingness to be friends with Aaron in the drug addiction condition (mean rank = 61.15) and the drug abstinence condition (mean rank = 107.71) differed significantly (z = -6.35, p < .001). However, willingness to be friends with Aaron in the recreational drug use condition (mean rank = 76.72) and the drug abstinence condition (mean rank = 93.38) did not differ significantly (z = -2.25, p = .025). Thus, highlighting that participants were significantly more likely to want to be friends with recreational drug users and drug abstinent individuals than drug addicts.

When examining the likelihood of assisting Aaron if he were to ask for help on the street, Mann-Whitney U tests showed that the recreational drug use condition (mean rank= 106.10) and the drug addiction condition (mean rank = 78.29) differed significantly (z = -3.58, p < .001). They also showed that the drug addiction condition (mean rank = 60.67) and the drug abstinence condition (mean rank = 108.30) differed significantly (z = -6.50, p < .001) and the recreational drug use condition (mean rank = 74.98) and the drug abstinence condition (mean rank = 95.62) differed significantly (z = -2.79, p = .005). Thus, highlighting that participants were more likely to assist drug abstinent individuals than recreational drug users or drug addicts if they were to ask for help on the street.

Similarly, when examining the likelihood of lending money to Aaron, Mann-Whitney U tests showed that the recreational drug use condition (mean rank = 100.62) and the drug addiction condition (mean rank = 81.97) differed significantly (z = -2.52, p = .012), the drug addiction condition (mean rank = 56.97) and the drug abstinence condition (mean rank = 110) differed significantly (z = -7.40, p < .001) and the recreational drug use condition (mean rank = 64.38) and the drug abstinence condition (mean rank = 106.24) differed significantly (z = -5.70, p < .001). Thus, highlighting that participants were significantly more likely to lend money to an individual who abstains from drugs than a recreational drug user or drug addict.

4.3 Hypothesis Three

It was hypothesised that there would be a correlation between age and total general attitudes towards recreational drug use, drug addiction and drug abstinence.

A Pearson correlation coefficient found that there was a weak positive significant relationship between age (M = 23.58, SD = 8.04) and general attitudes towards drug abstinence (M = 30, SD = 7.53) (r (70) = 0.25, p = .033). Therefore, the null hypothesis is rejected. This relationship can account for 6.25% of variation of scores. There was also a weak negative significant relationship found between age (M = 26.31, SD = 11.55) and general attitudes towards recreational drug use (M = 20.07, SD = 6.62) (r (91) = -0.22, p = .034). Therefore, the null is rejected. This relationship can account for 4.84% of variance scores. However, there were no significant relationship between age (M = 28.34, SD = 13.30) and general attitudes towards drug addiction (M = 18.03, SD = 6.40). Thus, highlighting that the older participants were, the more positive their attitudes were towards drug abstinence and the more negative their attitudes were towards recreational drug use.

4.4 Hypothesis Four

It was hypothesised that there would be a significant difference between age and knowledge of someone with a drug problem.

An independent samples t-test found that there was a statistically significant difference between the age of participants who knew someone with a drug problem (M = 25.23, SD = 9.98) and who didn't know someone with a drug problem (M = 28.80, SD = 14.10) (t (115.01) = 2.03, p = 0.45, CI (95%) .08 -> 7.06). Therefore, the null can be rejected.

4.5 Hypothesis Five

It was hypothesised that there would be a significant relationship between age and support for policy change.

A Pearson correlation coefficient found that there was a weak positive significant relationship between age (M = 26.26, SD = 11.48) and support for policy change (M= 23.60, SD = 5.13) (r (253) = 0.14, p = .025). Therefore, the null hypothesis is rejected. This relationship can account for 6.25% of variation of scores.

4.6 Hypothesis Six

It was hypothesised that there would be a correlation between support for policy change and attitudes towards drug use.

A Pearson correlation coefficient found that there was a weak positive significant relationship between support for policy change (M = 23.60, SD = 5.13) and attitudes

towards drug use (M= 32.49, SD = 7.30) (r (255) = 0.27, p < .001). Therefore, the null hypothesis is rejected. This relationship can account for 7.29% of variation of scores.

4.7 Hypothesis Seven

It was hypothesised that there would be a correlation between support for policy change and attitudes towards drug users.

A Pearson correlation coefficient found that there was a moderate positive significant relationship between support for policy change (M = 23.60, SD = 5.13) and attitudes towards drug users (M = 29.75, SD = 7.63) (r (255) = 0.48, p < .001). Therefore, the null hypothesis is rejected. This relationship can account for 23.04% of variation of scores.

4.8. Hypothesis Eight

It was hypothesised that there would be a correlation between attitudes towards drug use and attitudes towards drug users.

A Pearson correlation coefficient found that there was a moderate positive significant relationship between attitudes towards drug use (M = 32.49, SD = 7.29) and attitudes towards drug users (M = 29.75, SD = 7.63) (r (255) = 0.42, p < .001). Therefore, the null hypothesis is rejected. This relationship can account for 17.64% of variation of scores.

5. Discussion

The aim of this research was to examine the attitudes of a general population towards illegal drug use and addiction. More specifically, the study sought out to examine differences between general attitudes towards recreational drug use, drug addiction and drug abstinence, examine differences between likeliness of wanting to be friends with, assisting and lending money to recreational drug users, drug addicts and drug abstinent individuals, examine the difference between age and knowledge of someone with a drug problem and to examine the relationship between other variables such as support for policy change, attitudes towards drug users and attitudes towards drug use. In summary, the findings showed that general attitudes towards drug abstinence were significantly higher than attitudes towards recreational drug use and drug addiction, participants were significantly more likely to want to be friends with recreational drug users and drug abstinent individuals than drug addicts, were significantly more likely to assist a drug abstinent individual than a recreational drug user or a drug addict if they were to ask for help on the street and were significantly more likely to lend money to a drug abstinent individual than an addict or recreational user. Results also showed that younger participants had significantly less positive attitudes towards drug abstinence and significantly more positive attitudes towards recreational drug use than older participants, were more likely to know someone with a drug problem and had greater support for policy change. Further investigation found that the more positive attitudes were towards drug use and drug users, the greater support there was for policy change. Finally, results found that there was a relationship between positive attitudes towards drug use, and positive attitudes towards drug users.

In line with previous research (Bryan, Moran, Farrell & O'Brien, 2000), the results for hypothesis one showed significantly less positive general attitudes towards drug use (both recreational use and addiction) than drug abstinence. Theses findings highlight that since Bryan, Moran, Farrell & O'Brien's study in 2000, which found predominantly negative attitudes towards both drug use and users, general attitudes have not significantly changed. These results are important to research as it highlights that attitudes towards drug use may not be changing as time progresses which is in line with studies that found that drug taking behaviours have stayed mostly consistent over the last five years (Schulenberg et al., 2017). Future research should consider why such negative attitudes towards drug use have remained to be the norm over periods of time and investigate the potential benefits of removing drug related stigma's in society. As mentioned previously, there are many studies to suggest health benefits of using common illegal street drugs (Hall & Degenhardt, 2009) and future studies should consider the possible benefits of increasing positive attitudes towards safe drug use. Qualitative components may have helped to further understand participants negative attitudes which this study is lacking.

Hypothesis two showed that participants were significantly more likely to want to be friends with recreational drug users and drug abstinent individuals than drug addicts, they were significantly more likely to assist drug abstinent individuals than recreational users and addicts if they were to ask for their help on the street and they were significantly less likely to lend money to recreational users and addicts than they were to drug abstinent individuals. These results were interesting to find as attitudes towards recreational drug use were low in hypothesis one and participants reported that they were unlikely to lend recreational drug users money or help them if they were to encounter them on the street. However, participants were significantly more likely to want to be friends with them than

addicts. This may be due to negative attitudes attached to recreational drug use still being prominent however, the act of recreational drug use becoming more common. Pilkington (2007) reported that the theory of "normalisation" of recreational drug use in mainstream youth culture has surpassed the old ideals of "peer pressure" as being the cause for rising numbers of youth recreational drug use. In relation to supporting illegal drug users, both financially and socially, the results were also in line with previous research. Just as is seen in Ibrahim & Kumar's (2009) study which reported extremely low levels of community support for drug addicts, the results showed that participants were significantly less likely to help drug addicts and recreational users both if asked for help on the street and financially. The findings of this hypothesis are concerning when comparing them to previous research which suggests that a lack of community support is strongly associated with relapse in drug addicts. Future research should consider the role of attitudes towards drug users more widely when attempting to reduce drug use in communities. Future research should also consider developing a more detailed scale to examine community support for drug users as the questions used in this research may not be sufficient to produce reliable generalisations.

Again, in line with research age differences were found in hypothesis three, four and five suggesting that younger participants had significantly more positive attitudes towards recreational drug use and significantly less positive attitudes towards drug abstinence than older participants as well as reporting higher knowledge of someone with a drug problem and having higher support for policy change respectively. The results of hypothesis three showed a weak relationship between age and general attitudes towards recreational drug use and drug abstinence and are in line with Schulenberg et al.'s (2017) findings which reported a significant decrease in the association between drug taking and risk and a significant increase in the approval of drug taking in 8th-12th graders when

examining changing attitudes towards drug use over time. They are also in line with his reports that most drug users are college students followed by 19-28 year olds which sheds light on the results for hypothesis four which found significant differences between age and knowledge of someone with a drug problem. However, if considering Kandel & Logan's (1984) theorised "critical age period" for drug use the results may be of concern. Saying that, this theory could be regarded as somewhat outdated and more current research into critical age periods for drug use needs to be undertaken. Similar to Bryan, Moran, Farrell & O'Brien's (2000) study, support for policy change was high (M = 30, SD = 5.29) in hypothesis five with results specifying that younger people showed higher levels of support for such change.

Hypotheses six and seven set out to examine the relationship between support for policy change and attitudes towards drug use and drug users respectively. The findings showed that there were significant relationships between both. Although Bryan, Moran, Farrell & O'Brien (2000) examined all three variables using individually scored questions, they did not examine the relationship between the variables, nor group the relevant questions together to get a quantifiable measure of support for policy change and attitudes towards both drug use and users. The same can also be said for hypothesis eight which examined the relationship between attitudes towards drug use and drug users. A significant relationship between these variables was found, however the relationship was not examined by Bryan et al. (2000). Although looking at each individual question separately has multiple advantages, gathering information about general attitudes towards a particular variable can be hugely advantageous to research also, as it helps to develop a broader picture. However, it is important to note that the alpha value of the measure for support for policy change was significantly lower than what is deemed as reliable. Future research should consider developing a more reliable measure for examining variables

such as support for policy change and attitudes towards drug users when researching attitudes towards drug use.

5.1 Strengths and Limitations

The strengths of the current study include a true-experimental design testing the relationship between variables that have been neglected to be examined within current research into attitudes towards drug use and users. For example, attitudes towards recreational drug users, drug addicts and drug abstinent individuals have not been previously compared using this design. The benefits of such a design include quantifiable and controlled results that include random assignment to groups reducing bias and producing more valid results. Three out of four of the measures used proved to be reliable using Cronbach's alpha however, one was below the cut-off point. The experiment was conducted on a large sample of 257 male and female participants with a wide age range, from various backgrounds and education levels. The experiment is easily replicable and has produced significant and interesting findings. The biggest strength of this research is that the information gathered from these investigations have the potential to aid a poignant issue in society today and could help the development of new techniques to prevent and control the problem. As is highlighted numerous times throughout this report, the impact drug use has on the individual, a community and on a worldwide scale is an enormous burden that we are facing today and it is not going away any time soon. Therefore, research like this needs to be considered more urgently if the lives of millions of people are to be protected.

With every piece of research there are a number of limitations to consider. In this experiment, although there was a wide age range (18-73) the mean age was only 26.26. Therefore, the population consisted of predominantly younger participants. A more varied

age sample would help the reliability of results. Secondly, the majority of participants had third level education (72%) and were from a capital city (54.9%). Again, a more varied sample population would be more representative. Thirdly, as mentioned above, the measure for support for policy change had a Cronbach's alpha value below .7 making it an unreliable measure. Future research should consider developing a more reliable measure to examine this variable. As well as this, there were issues with the website for randomly allocating participants to conditions. Therefore, there was a 33.33% chance of participants being allocated to either the recreational drug use condition or the drug abstinence condition and a 33.34% chance of participants being allocated to the drug addiction condition. However, in the end there were less participants allocated to the drug abstinent condition. Another point to note is the high number of participants that reported to recognise the fake drug "revilin" in the survey (10.9%). Upon requested feedback from participants it was discovered that they had mistaken the control drug "revilin" for "Ritalin" a brand name of methylphenidate commonly prescribed for ADHD. Future research should consider a fake drug name that is less similar to commonly known medication. A last limitation to consider would be limiting gender identity to male and female as the "other" option led to a small amount of participants identifying as "unicorns" and/or other objects unrelated to gender.

5.2 Implication of Results for Future Research

Results suggest that future research should consider examining the effectiveness of increasing positive attitudes towards drug use and users in an attempt to aid the drug issue we face today. As the results above show, there was a significant relationship between support for policy change and positive attitudes towards drug users and use. Therefore, to change drug policies within large communities, positive attitudes towards

the issue may need to be increased. More results to suggest that increasing positive attitudes towards drug use and users includes results for hypothesis two which shows low levels of community support for recreational users and addicts. As there was a significant relationship between attitudes towards drug users and drug use in hypothesis eight, it suggests that perhaps removing the stigma around drug use will increase support for drug users within communities. Future research should conduct experiments to test these hypotheses and should consider the possible benefits and disadvantages of taking such action. More suggestions for future research include examining variables that were not investigated in this study that might have an effect on attitudes towards drug use and users. For example, religiosity, political stance and social awareness. As there was an abundance of information collected in this study, future research may consider focusing on other aspects of the data collected or examine individual questions more extensively. Future research should consider the limitations of this study and combat them by improving on measures, changing the name of the fake drug that was used as a control and by attaining a more representative sample.

The benefits of future studies examining attitudes towards illegal drug use and users include, the potential development of new strategies to reduce the drug issue for the health of an individual, for the welfare of a community and for the burden of disease on a global scale (Mathers et al., 2008). As could be seen with past movements to remove the stigma surrounding mental health issues, perhaps removing the stigma surrounding this social issue is a way to reduce the problem and give drug users and addicts a greater chance of integrating back into society (Ibrahim & Kumar, 2009). It is suggested that qualitative interviews with participants as well as drug users, may help to gain greater insight into why participants' attitudes were predominantly negative and would also contribute to the understanding of how negative attitudes affect the individual with a drug problem. As highlighted by Van Boekel, Brouwers, Van Weeghel & Garretsen (2013),

the stigma attached to illicit drug use is not just a community issue but is also an issue within the healthcare system. The negative attitudes of healthcare professionals towards drug using patients results in suboptimal care for these individuals receiving treatment which reduces their chances of recovering from addiction. For this reason, future research should consider interventions within these systems to create a fairer and more constructive experience for drug users availing of healthcare services.

5.3 Conclusion

In conclusion, the study found that general attitudes towards recreational drug use and drug addiction were significantly lower than general attitudes towards drug abstinence. Results also showed that there was a significantly greater willingness to be friends with recreational drug users and drug abstinent individuals than there was with drug addicts. Continuing from this, results showed that there was significantly less willingness to help recreational drug users and drug addicts if they were to ask for help on the street than there was to help a drug abstinent individual. Results also showed that participants were significantly less likely to lend recreational drug users and drug addicts money than they were to lend money to drug abstinent individuals. When examining the relationship between age and general attitudes across the three conditions, results showed that younger people had significantly more positive attitudes towards recreational drug use and significantly less positive attitudes towards drug abstinence than older participants. Younger people also reported higher knowledge of someone with a drug problem and reported to have higher support for policy change. The relationships between support for policy change and attitudes towards drug use and drug users were investigated showing significant relationships between both. There was also a significant relationship between attitudes towards drug use and attitudes towards drug users. As previous studies

suggest that attitudes towards drug use and drug users may play a role in the existing problem and also impede its recovery (Ibrahim & Kumar, 2009) it is important for future research to investigate these hypotheses further.

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Appendices

Appendix 1. Information Sheet

My name is Maria Hunt and I am conducting a survey to examine attitudes toward illegal drug use and addiction as a part of my psychology degree. The results of this survey will be used in my final year thesis which will be submitted for examination and presented for grading purposes.

This is an anonymous survey therefore no information that can identify you will be collected. Participation is voluntary, and you can change your mind at any time. However, as all submissions are anonymous, please note that it is not possible to withdraw from the study after your answers have been submitted.

This survey may touch on sensitive issues surrounding illegal drug use and addiction and therefore the contact information of helplines and other services will be provided to you on the final page.

If you are interested in receiving more information about the study, please contact xxxxxxx@mydbs.ie.

Please note that by completing and submitting this survey you are consenting to your participation in the study.

*The final section of this survey requires listening to a short voice recording clip and therefore earphones may be required.

Thank you for your participation!

Consent to participate:

☐   I am over 18 years old and I consent to taking part in this study

Appendix 2. Questionnaire adapted from "Drug-related knowledge, attitudes and beliefs in Ireland" (Bryan, Moran, Farrell & O'Brien, 2000)

Which of the following drugs have you heard of?

☐   Cannabis e.g. hashish, marijuana, grass

☐   Ecstasy e.g. E/E Tablets

☐   Cocaine

☐   Amphetamines e.g. speed

☐   Revilin

☐   Heroin e.g. smack, gear

☐   LSD e.g. acid

Q1. All illegal drugs are equally harmful to your health.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q2. Our society is too tolerant towards drug users.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q3. if you try drugs even once you are hooked.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q4. I would see drug addicts more as criminals than victims.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q5. Treatment should only be given to drug addicts who intend on giving up drugs for good.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q6. I would be nervous of someone who uses illegal drugs.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q7. Money spent on the prevention of drug use, is money well spent.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q8. The use of cannabis should not be against the law.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q9. Drug addicts are not given a fair chance to get along in society.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q10. people who end up with a drug problem only have themselves to blame.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q11. Most young people today try out ecstasy/ E tablets.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q12. Drugs are not really a problem to us here in this neighbourhood.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q13. Drug addicts really scare me.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q14. Occasional use of ecstasy is not really dangerous.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q15. It is normal that young people will try drugs at least once.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q16. Medically prescribed heroin substitutes [such as methadone/physeptone] should be available to drug addicts.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q17. Drugs education in school should start at primary level.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q18. Drug related crime is a major problem in Ireland today.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q19. Society should provide syringes and needles free of charge to drug addicts to avoid the spread of HIV/AIDS.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q20. Drug addicts charged with petty offences should be given a choice between treatment and prison service.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q21. It would bother me to live near a person who is a drug addict.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q22. Regular use of cannabis is just as dangerous to your health as regular use of Heroin.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q23. The availability of illegal drugs poses a great threat to young people nowadays.

Disagree Strongly	Disagree Moderately	Disagree Slightly	Don't Know	Agree Slightly	Agree Moderately	Agree Strongly
1	2	3	4	5	6	7

Q24. I personally know someone who smokes cannabis.

☐   Yes

☐   No

Q25. I personally know someone who has/had a drug problem.

☐   Yes

☐   No

Background Information-

Q: How old are you?

_____

Q: What gender are you?

☐   Male

☐   Female

Other _____

Q: What is the highest level of education you have received?

☐   Primary

☐   Secondary Lower

☐   Secondary Higher

☐   Third Level

☐   No Education

Q: Which is the most applicable to where you live?

☐   Capital City

☐   Other City

☐   Large Town (10,000-40,000 pop.)

☐   Small Town (1,000-10,000 pop.)

☐   Rural Area

Q: Do you have children?

☐   Yes

☐   No

Scoring

Each recognised drug in the drug knowledge question was added to give a score out of 6. It was noted separately if a participant ticked the box for "revilin". Questions 1-23 were grouped into three categories with 5-7 questions in each; attitudes towards drug users (questions; R2, R4, R6, 9, R10, R13 & R21), attitudes towards drug use (questions; R1, R3, R7, 11, 14, 15 & R22) and support for policy change (questions; R5, 8, 16, 17 & 19). Questions with an "R" in front of them were reverse coded. The scores for the questions in each group were added together to give a total attitude score towards drug addicts, drug use and support for drug policy change. The higher the score, the more positive a person's attitude/support. The rest of the questions were individually scored.

Source:

Bryan, A., Moran, R., Farrell, E., & O'Brien, M. (2000). *Drug-related knowledge, attitudes and beliefs in Ireland: report of a nation-wide survey*. Drug Misuse Research Division, Health Research Board.

Appendix 3. Scripted Voice Recordings

Condition 1-

My name is Aaron and I'm here to tell you a bit about me. I'm 19 years old and I'm from Dublin. I've just left a part-time job, so I don't have much money at the moment. Whatever money I do have I tend to spend on going out at the weekend with my friends. I like to drink and take drugs when I go on nights out however, I only really do drugs about twice a month. I usually find a dealer in the club or get a friend to buy me them. I usually take ecstasy pills or smoke weed. I would never take heroin or cocaine. I wouldn't consider myself to be a druggy, I just dabble with them every now and then. My friends all do the same, so I don't think it's anything out of the ordinary.

https://www.youtube.com/watch?v=MqZR5lIQ2XY

Condition 2-

My name is Aaron and I'm here to tell you a bit about me. I'm 19 years old and I'm from Dublin. I've just left a part-time job, so I don't have much money at the moment. Whatever money I do have I tend to spend on heroin. I've been an addict for about six months. I don't like that I'm addicted to drugs, but I find it too difficult to quit. I've tried to quit multiple times, but I always end up back on the drugs. I got in to drugs at an early age when my friends were all experimenting. That's where my addiction started. One day I'd like to be fully recovered and not be reliant on drugs.

https://www.youtube.com/watch?v=M9QBieL3O2w

Condition 3-

My name is Aaron and I'm here to tell you a bit about me. I'm 19 years old and I'm from Dublin. I've just left a part-time job, so I don't have much money at the moment.

Whatever money I do have I tend to spend on going out with my friends to the cinema, or out for food. I like to go to pubs and clubs occasionally, but I don't like to go to places where there are lots of drugs. None of my friends are in to drugs, that's just not our scene. I think people that take drugs are stupid, it's a dangerous road to go down. I would never go near drugs myself.

https://youtu.be/hNz_pfq7B_Q

Appendix 4. General Attitudes Measure

On the scales below, please indicate your feelings in relation to Aaron's drug use. Numbers "1" and "7" indicate a very strong feeling. Numbers "2" and "6" indicate a strong feeling. Numbers "3" and "5" indicate a fairly week feeling. Number "4" indicates you are undecided or do not understand the adjective pairs themselves. There are no right or wrong answer. Only choose one number per line. Numbers "1" and "7" indicate a very strong feeling. Numbers "2" and "6" indicate a strong feeling. Numbers "3" and "5" indicate a fairly week feeling. Number "4" indicates you are undecided or do not understand the adjective pairs themselves. There are no right or wrong answer. Only circle one number per line.

1) Good   1   2   3   4   5   6   7   Bad

2) Wrong 1   2   3   4   5   6   7   Right

3) Harmful   1   2   3   4   5   6   7   Beneficial

4) Fair   1   2   3   4   5   6   7   Unfair

5) Wise   1   2   3   4   5   6   7   Foolish

6) Negative   1   2   3   4   5   6   7   Positive

Scoring:

Reverse-code the items 1, 4, & 5 (7=1, 6=2, 5=3, 3=5, 2=6, 1=7). Then sum the five

scores for the total score.

Source:

McCroskey, J. C., & Richmond, V. P. (1996). *Fundamentals of human communication:*

An interpersonal perspective. Prospect Heights, IL: Waveland Press

Appendix 5. Questions to Examine Community Support

Q: How likely are you to want to be friends with Aaron?

Extremely Unlikely	Moderately Unlikely	Slightly Unlikely	Don't Know	Slightly Likely	Moderately Likely	Extremely Likely
1	2	3	4	5	6	7

Q: How likely are you to assist Aaron if he were to ask for your help on the street?

Extremely Unlikely	Moderately Unlikely	Slightly Unlikely	Don't Know	Slightly Likely	Moderately Likely	Extremely Likely
1	2	3	4	5	6	7

Q: How likely are you to lend money to Aaron?

Extremely Unlikely	Moderately Unlikely	Slightly Unlikely	Don't Know	Slightly Likely	Moderately Likely	Extremely Likely
1	2	3	4	5	6	7

Appendix 6. Debrief Sheet

Thank you for your participation!

Your answers have been recorded.

If you have been affected by any of the issues covered in this study and require assistance, please visit: http://www.drugs.ie/

or call the Samaritans helpline on: 1890 200 091