

A Social Norms Approach to Drug Prevention in Schools in Ireland: Results from a Pre Development Study

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ABSTRACT

Research shows that social norms interventions, which aim to educate individuals and groups on their actual attitudinal and behavioural norms relating to alcohol, cigarette and drug use, incur some success in reducing positive attitudes to substance use and rates of substance use. The research aimed to investigate the extent of misperceptions relating to peer substance-taking attitudes and behaviours amongst a sample of school aged youth (n=80), and was undertaken as a pre development study to a large scale social norms initiative in Irish schools. The study found evidence for the existence of misperceptions relating to cigarette, alcohol or illicit drug use, with no significant differences pertaining to gender and school type. Attitudes to, and self reported cigarette and illicit drug use, tended to be more conservative. Statistically significant differences were found between participants self usage and peer usage of cigarettes, alcohol, cannabis and other illicit drug usage in the past 30 days. A statistically significant main effect for self reported cannabis use and school type was found. Findings were used to guide the development of a culturally appropriate targeted social norms intervention.

Key Words: Social norms, misperception hypothesis, normative beliefs, substance use, schools.

INTRODUCTION

Within Europe, school-based drug prevention is the most frequent and most popular form of universal prevention. The content of these programs are usually educational, whilst also teaching new skills or countering existing beliefs. Consequently, school-based drug prevention tactics have been divided into three general categories, namely: '*knowledge and information*' approaches, '*affective education*' approaches, and '*social influences*' approaches (Botvin, Griffin, Diaz & Ifill-William, 2001). Of interest for this work is that studies have shown that social influence approaches appear to be most successful in preventing the onset of all forms of substance use (Hawks, Scott & McBride, 2002). The social influences approach typically contains two or more of the following components: psychological inoculation, correction of normative expectations, and resistance skills training. When focusing on the correction of normative expectations, the social norms approach was designed to shift its focus toward the youth environment by recognizing the potential influence of cultural and environmental elements beyond the individual's personality, and values that may determine behaviours (Berkowitz, 2002: 2004). It is based on the assumption that individual attitudes and behaviours are shaped and influenced by misperceptions relating to peer held attitudes and behaviours (Perkins, 1997; Berkowitz, 2002; Cuijpers 2002; Berkowitz, 2004). Indeed, extensive reviews on social norms' interventions have documented the potency of normative beliefs on youth health and social behaviours (Berkowitz, 2004). Specifically, normative education is concerned with the perceptions and beliefs about what is '*normal*' behavior in the people around us, and proposes that such beliefs are influential on a variety of health and social behaviors (Perkins, 2003; Berkowitz, 2004). Evidence suggests that perceived norms of peers consistently predict individual attitudes and behaviors (Clapp & McDonnell, 2000; Korcуска & Thombs, 2003; Trockel, Williams & Reis, 2003; Berkowitz, 2004).

In particular, the normative education component of the social influences model has proven to be an essential element in reducing onset of and participation in youth alcohol, tobacco and cannabis use (Taylor, 2000). Including normative education in social influences' programming has been shown to reduce cannabis, tobacco and alcohol use (Taylor, 2000), and has also been found to be cost effective (Cunningham, Wild, Bondy, & Lin, 2001).

In order to prevent or reverse the effects of substance related misperceptions among youth and to stimulate the adoption of positive health behaviours, normative educational interventions attempt to correct misperceptions by educating groups with the correct information on actual attitudinal and behavioural norms of their peers (Cuijpers, 2002; Linkenbach & Perkins, 2003; Perkins & Craig, 2003; McGrath, Sumnall & Bellis, 2006). In short, this approach aims to correct the perception by young people that alcohol and drug use is more prevalent than it actually is (McGrath et al., 2006). Additionally, the social norms approach acknowledges actual healthy norms, without fostering beliefs that alcohol and drug use is more widespread than it actually is, as this has the potential to contribute to the problem it is trying to solve (Berkowitz, 2002; Berkowitz, 2004). It is important to note that this type of prevention initiative is directed at all students without identifying those at risk of misuse, and thereby, targets the peer culture.

The existence of misperceptions is a matter of concern, particularly when considering risk type behaviors such as alcohol, cigarette and drug use in young people. The term '*misperception*' refers to the difference between actual attitudes and behaviors, and the perception held by individuals relating to such attitudes and behaviors (Linkenbach & Perkins, 2003). Misperceptions occur due to a variety of peer, attributional and media influences. The most common type of misperception is known as '*Pluralistic Ignorance*,' which is defined as the widespread misperception of social attitudes and norms produced by the difference between an individual's private (inner) attitude and that of public behavior (Prentice & Miller, 1996). In this instance, individuals believe that their peers think and act differently from them, when in actual fact they are similar (Toch & Klofas, 1984). Secondly, individuals can overestimate the degree to which their own behavior, attitudes and beliefs are shared by other people, known as the '*False Consensus Effect*' (Borsari & Carey, 2001). In other words, they assume that everyone thinks or does the same as they do. Lastly, the third type of misperception known as '*False Uniqueness*' occurs when individuals underestimate the proportion of others who can or will perform desirable actions, such as abstaining from alcohol, cigarette and drug use (Monin & Norton, 2003).

Research has shown that youth substance related misperceptions are associated with increased experimentation and use, prob-

lematic patterns of use, dependency and associated health and social problems (Berkowitz, 2004). Borsari and Carey (2001) noted that the more young people perceive others as drinking heavily, or approving of excessive consumption, the higher personal consumption will be. Evidence of misperceptions among college students have been found with regards to alcohol (Clapp & McDonnell, 2000; Far & Miller, 2003; Haines, Barker, & Rice 2003; Perkins & Craig, 2003), tobacco (Hancock & Henry, 2003; Hancock, Abhold, Gascoigne & Altekruuse, 2002) and illegal drug use (Pollard, Freeman, Ziegler, Hersman & Goss, 2000; Wolfson, 2000). However, it is worth noting that the majority of social norms research has been conducted in the USA and amongst college based cohorts (McAlaney, Bewick & Hughes, 2011). Outside of the USA, misperceptions of peer alcohol use have been recorded in Scotland (McAlaney & McMahon, 2007), England (Bewick, Trusler, Barkham, Hill, Cahill, & Mullhern, 2008), Hungary, Slovakia, Romania and the Czech Republic (Page, Ihasz, Hantiu, Simonek & Klarova 2008), Australia (Hughes, Juilian, Richman, Mason, & Long, 2008) and Finland (Lintonen & Konu, 2004), with findings comparable to US based studies (Thombs, Ray-Tomasek, Osborn, & Olds, 2005; McAlaney & McMahon, 2007).

To date, little is known about the perceptions of Irish youth norms around cigarette, alcohol or illicit drug use. Prevalence data for youth cigarette, alcohol, cannabis and drug use in Ireland, (Kelly, Gavin, Molcho & Nic Gabhainn, 2012) and several recent qualitative studies on youth attitude and substance availability, all indicate the social accommodation of substance taking behaviors within contemporary Irish youth culture (Van Hout, 2010; 2011). To date, no research investigating youth perceptions regarding substance related group attitudinal and behavioural norms has been undertaken in Ireland. Secondly, social norms' interventions have not yet been designed or implemented in Ireland. Commentaries have underscored the need for evidence based drug prevention programs in Ireland (Van Hout, 2011). As the bulk of research on social norms' interventions originates from the US, and primarily from older college aged cohorts, it was deemed important for the success of the first Irish designed social norms intervention to investigate levels of youth perceptions toward cigarette, alcohol, cannabis and other illicit drugs, and self reported substance using rates for use in a pre development study. Findings reported in this paper were used to develop a large scale, culturally appropriate 'Irish' social norms' targeted group intervention, currently

implemented in three schools in the South East, with evaluation scheduled for 2013. The aim of this pre development study was to investigate the presence of misperceptions of group norms in relation to self reported use of cigarette, alcohol, cannabis and other illicit drug use in a school going adolescent sample.

METHODOLOGY

Ethical approval for the study was granted by Waterford Institute of Technology, Ireland. A convenience sample of 100 students from three schools in the South East region who agreed to partake, were targeted for inclusion. Participants were recruited from Grade Ten (15-17 years) across the three schools (girls only, boys only and mixed). Data collection was undertaken following schools' consent, and retrieval of parental/guardian consent for participating students. All those agreeing to participate were then provided with an information leaflet, advised of anonymity, confidentiality, and rights to withdraw from the study.

Participants completed the standard social norms questionnaire (N=80), developed and adapted from Far and Miller's (2003) work on social norms and substance misuse, on a randomly selected date in all three schools. Participation occurred during class time under supervision of the researchers and their designated teacher. Students were asked to rate a series of fourteen questions based on a five point Likert scale (strongly agree, agree, neutral, disagree, disagree strongly). Seven of the statements related to their own beliefs, and seven related to their peer beliefs on smoking cigarettes, drinking alcohol and use of illicit drugs (i.e. speed, cocaine). The participants were then asked to indicate their consumption of cigarettes, alcohol and illicit drugs in the past 30 days, and similarly, then asked to indicate what they thought their fellow peers were consuming. Data was coded on a continuous scale of 1-5 (1= strongly agree, 2=agree, 3=neutral, 4= disagree, and 5=strongly disagree), and analyzed using PASW version 18 Statistical software. Descriptive statistics were used to describe the personal and educational characteristics of the participants. Mean scores were used to examine difference in scores between self perception and peer perception. Frequency and percentages were used to examine self usage and peer usage. Where appropriate, Wilcoxon signed ranked test, and chi-squared analysis was used to test for statistical significance between scores. Difference in scores were calculated by subtracting participants'

actual scores from peer scores across all statements for both beliefs and usage. Analysis of Variance (ANOVA) was then conducted to test for group difference in misperceptions in relation to gender and school type. $P < 0.05$ was considered statistically significant.

RESULTS

The demographic information relating the participants is illustrated in Table 1.

TABLE 1

Gender, mean age and standard deviations

School type (N=80)	Mixed school n=19	Girls only n=26	Boys only n=35
Gender	(f)	(f)	(f)
Male	13	0	35
Female	6	26	0
Age	Mean (SD)	Mean (SD)	Mean (SD)
	15.89 (0.459)	15.85 (0.543)	15.74 (0.505)

Attitudinal misperceptions regarding cigarette, alcohol, cannabis and other illicit drugs

Table 2 shows means scores and p-values for self-belief and peer beliefs across all seven paired statements. Comparison of mean scores with regards to cigarette smoking showed that participants misperceived the attitudes of their peer group ($p=0.00$). Students' self-belief was to disagree with the statement "there is nothing wrong with smoking cigarettes" (MS 3.96, SD 1.21). In comparison, self-belief of peers' attitudes showed a lower mean score (MS 2.83, SD 10.16) and, therefore, stronger agreement with the statement.

Participants' own beliefs that "there is nothing wrong with drinking alcohol under 18 years" showed a higher mean score (MS 3.03, SD 1.31) and, therefore, stronger disagreement with the statement in comparison to self-perception of school peers (MS 2.057, SD 1.31). This was statistically significant at the 5%

TABLE 2

Showing mean scores for self-belief and peer belief, including p-value

N=66	Mean (MS)(SD)	P-value
<i>Smoking</i>		
There is nothing wrong with smoking cigarettes	3.96 (1.21)	0.00
In general students at my school believe there is nothing wrong with smoking cigarettes	2.833 (1.01)	
<i>Drinking Alcohol</i>		
There is nothing wrong with people under 18 drinking alcohol	3.03 (1.31)	0.00
In general students at my school believe there is nothing wrong with people under 18 drinking alcohol	2.08 (0.82)	
Getting drunk is acceptable	3.39 (1.21)	0.00
In general students in my school believe that getting drunk is acceptable	2.62 (1.23)	
<i>Smoking cannabis</i>		
There is no harm in smoking cannabis	4.06 (1.17)	0.00
In general students at my school believe there is no harm in smoking cannabis	3.39 (0.95)	
There is no harm in smoking cannabis to find out what it is like	3.56 (1.34)	0.012
In general students in my school believe that there is no harm in smoking cannabis to find out what it is like	3.06 (1.34)	
<i>Illegal drugs</i>		
There is no harm in taking other illegal drugs (e.g. E, cocaine) once or twice to see what they are like	4.28 (0.97)	0.00
In general students in my school believe that there is no harm in taking other illegal drugs (e.g. E, cocaine) once or twice to see what they are like	3.43 (1.02)	
There is nothing wrong with taking illegal drugs once you don't come dependent on them	3.93 (1.21)	0.003
In general students in my school believe that there is nothing wrong with taking illegal drugs once you don't come dependent on them	3.36 (1.13)	

level ($p=0.00$). In addition, participants own beliefs that "*getting drunk was acceptable*" also scored higher (MS 3.39, SD 1.23) and showed stronger disagreement in comparison to self-perceived peer scores (MS, 2.6, SD0.92). Results showed a statistically significant difference between self-belief and peer-belief scores. ($p=0.00$)

There were higher mean scores and stronger disagreement in relation to participants' self-beliefs that "*there is no harm in smoking cannabis*" in comparison to peer beliefs (MS 4.06, SD 1.175). Self-perception of their peers, while it indicated disagreement with the statement, showed lower mean scores (MS 3.39, 0.95). In relation to self-belief that "*smoking cannabis was not harmful once or twice to find out what it was like,*" participants showed higher mean scores and stronger disagreement (MS 3.56, SD1.34) with the statement in comparison to self-perceived peer ratings (MS 3.06, SD 1.07). On analysis, the difference in scores between self-belief and peer belief was statistically significant at the 5% level for both statements related to cannabis ($p=0.00$, $p=0.012$).

Overall, both self-belief and peer-belief scores showed strong disagreement in relation to the statement that "*there is no harm in taking other forms of illegal drugs to find out what they are like.*" Equally, scores also reflected disagreement in relation to the statement "*that there was nothing wrong with taking drugs once you don't become dependent on them.*" Self-belief scores were, however, higher for both statements (MS 4.2, SD 0.97, MS 3.93, SD 1.21) when compared to peer related statements scores (MS 3.43, SD 1.02, MS 3.36 SD 1.13). Both statements showed a statistically significant difference in scores between self-belief and peer belief ($p<0.05$).

Two-way analysis of variance testing was conducted to explore the impact of gender and school type on differences in misperception scores. Across all seven paired-differences, the interaction effect between gender and school was not statistically significant ($p<0.05$). The main effect for gender or school type did not reach statistical significance in any of the seven statements (see Table 3). This indicates that males and females or school type did not differ in terms of misperception scores. Results are shown in Table 3.

TABLE 3*Misperceptions main effect, gender and school type*

Category	ANOVA Main effect	
	Gender F (p-value)	School type F (p-value)
Smoking	2.244 (0.139)	1.128 (0.330)
Drinking Alcohol	1.57 (0.215) 1.318 (.255)	1.097 (0.340) 0.454 (0.637)
Smoking cannabis	0.265 (0.609) 0.148 (.702)	0.66 (0.936) 0.428 (0.654)
Illegal drugs	2.304 (0.134) 1.715 (0.195)	1.598(.210) 2.253 (.114)

Misperceptions regarding usage of cigarette, alcohol, cannabis and other illicit drugs

The usage of alcohol was the highest amongst these participants with 60% of the sample using alcohol at some point over the 30 days. Cigarette smoking was considerably less with 33% of the sample having smoked during the 30 day period. Nine percent of the participants admitted to use of cannabis, while 3% of the sample admitted to use of illicit drugs during the 30 day period.

Table 4 shows the frequency and percentage of self and associated peer usage of cigarettes, alcohol, cannabis and other illicit drug usage in the past 30 days. The results indicated an existence of misperception between self usage and peer usage. Chi-squared tests indicated a statistically significant difference between participants' self usage and peer usage in all four questions ($p < 0.05$).

A two-way between-groups analysis of variance was conducted to explore the impact of gender and school types on differences in misperceptions related to usage of cigarettes, alcohol, cannabis and illicit drugs. The interaction effect between gender and school type was not statistically different for all usage types

TABLE 4

Showing participants usage and perceptions of peer usage, including p-value.

N=66	0 days (f) %	1-2 days (f) %	3-5 days (f) %	6-9 days (f) %	10-19 days (f) %	20-29 days (f) %	30 DAYS (f) %	p-value
In the past 30days on how many days have you smoked cigarettes?	(51) 77.3%	(4) 6.1	(0)	(2) 3.0%	(0)	(0)	(9) 13.6%	0.006
In the past 30days on how many days do you think your peers have smoked cigarettes?	(7) 10.6%	(8) 12.1%	(9) 13.6%	(7) 10.6%	(16) 24.2%	(2) 3.0%	(17) 25.8%	
In the past 30days on how many days had at least one drink of alcohol?	(25) 37.9%	(14) 21.2%	(12) 18.2%	(11) 16.7	(3) 4.5%	(0)	(1) 1.5%	0.000
In the past 30days on how many days do you think your peers have had at least one drink of alcohol?	(2) 3.0%	(10) 15.2%	(11) 16.7%	(22) 33.3%	(8) 12.1%	(10) 15.2%	(3) 4.5%	
In the past 30days on how many days have you used cannabis	(60) 90.9%	(2) 3.0%	(1) 1.5%	(0)	(1) 1.5%	(0)	(2) 3.0%	0.000
In the past 30days on how many days do you think your peers have used cannabis?	(24) 36.4%	(20) 30.3%	(8) 12.1%	(3) 4.5%	(9) 13.6%	(1) 1.5%	(1) 1.5%	
In the past 30days on how many days have you used other illegal drugs?	(64) 97%	(0)	(0)	(0)	(2) 3.0%	(0)	(0)	0.000
In the past 30days on how many days do you think your peers have used other illegal drugs?	(27) 40.9%	(24) 36.4%	(5) 7.6%	(6) 9.1%	(3) 4.5%	(1) 1.5%	(0)	

($p < 0.05$). There was a statistically significant main effect for cannabis and school type ($p = 0.017$). This shows differences in misperceptions' scores for cannabis usage is not the same based on school type. The main effects for gender and school type did not reach statistical significance for misperceptions in cigarette smoking, alcohol or illicit drug use. See Table 5

TABLE 5

Misperception for usage, main effect gender and school type

Category	ANOVA Main effect	
	Gender F (p-value)	School type F (p-value)
Smoking usage	0.150 (0.700)	2.44 (0.095)
Alcohol usage	0.002 (.965)	0.497 (0.611)
Cannabis usage	2.050 (0.157)	4.370 (0.017*)
Illegal drugs usage	1.082 (.302)	1.454 (0.241)

* Statistically significant

DISCUSSION

The study was designed to determine if evidence for substance related misperceptions existed among the Irish school going population, with findings utilized for the development of a culturally appropriate, targeted social norms intervention for implementation in South East Ireland. There are certain limitations that need to be considered in relation to our study - findings may be influenced by the convenience nature of the sample, and questionnaires were completed under the supervision of their teachers in the school environment. It should be noted that the sample size is small and, therefore, sub-group analysis was somewhat restricted. The interpretation of the questions also warrants some consideration. It is possible that answers to peer related questions were answered with one or two students in mind and not in relation to the total peer population in general terms. However, the study

was conducted as a preliminary study and it did highlight some of the difficulties with recruitment of student populations and gaining access to schools for research purposes.

The existence of attitudinal and behavioural misperceptions amongst the sample are evident, with significant differences found between: participant's personal attitudes and their perceptions of peer attitudes relating to cigarette, alcohol, cannabis and other illicit drugs; and between participants personal self reported substance use and the perceptions of their peer substance use. Participants from all three schools overestimated the permissiveness of peer attitudes and behaviors in respect to cigarette, alcohol, cannabis and other illicit drug use. The findings also suggest evidence for pluralistic ignorance, with a majority believing that their peers thought and acted differently from them particularly with regards to cigarettes and illicit drug use, when in actual fact they were similar. It was encouraging to see that overall, when compared to the participants' attitudes and behaviors on issues relating to alcohol, the participants' attitudes and behaviors in relation to cigarettes and other illicit drugs tended to be more conservative. A large portion of the participants in this study were non-smokers and these results may be due to the continuing decline in the number of smokers aged between 15-17 years (Kelly et al., 2012). In addition, compared to cigarette and alcohol usage amongst the participants, the study found that there was a higher percentage of non drug users, with the majority of participants not using drugs within the past 30 days. This, yet again, is an encouraging finding and underscores the need for targeted social norms' interventions designed to delay onset of drug experimentation. Indeed, pluralistic ignorance develops most commonly under circumstances in which there are widespread misperceptions of private views (Prentice & Miller, 1996).

The findings support evidence for the false consensus (Berkowitz, 2004) with the majority of participants overestimating the degree of acceptance of underage drinking, and prevalence of alcohol use amongst their peers. However, the findings support previous Irish school based data on adolescent substance use (Kelly et al., 2012), which indicates high rates of Irish youth alcohol consumption. Similar research has documented identical patterns for smoking, with smokers overestimating smoking prevalence more than non-smokers (Sussman, Dent, Mestel-Rauch, Johnson, Hansen & Flay, 1988), and gamblers overesti-

mating gambling and favorable attitudes towards gambling more than non-gamblers (Larimer & Neighbors, 2003). Toch & Klofas (1984) noted that the strongest, most vocally expressed views in a community are often held by those who engage in false consensus. Social norms interventions have the potential to correct false consensus misperceptions and have been successful in reducing heavy drinking in a number of studies (Trochel et al., 2003; Fabiano, 2003). Lastly, while the study found evidence of the existence of misperceptions, it found no significant evidence to suggest that normative attitudes and behaviors varied according to gender. This is a particularly useful outcome for the design of future social norms' interventions in the area. In addition, while the study found that attitudinal and behavioral norms were similar across the three schools, no significant differences were found in relation to smoking, alcohol and illicit drug use. A statistically significant difference was observed for cannabis use and it was found that 16% of the students in the male school were using cannabis in comparison to 8% in the mixed school and 0% in the female school. One cannot underestimate how the school context and youth attachment to the school influences normalization of certain forms of substance use.

The results of this pre development study are encouraging and warrant the development of a targeted-group social norms' intervention. This is indicated by the potential use of social norms feedback, as misperceptions of close friends' behavior is highly correlated with personal substance use (Far & Miller, 2003). Unlike the social norms' marketing campaign, the targeted intervention provides information about the actual group norms in small interactive group discussions, workshops, or academic classes (Peeler, Far, Miller & Brigham, 2000). It is a flexible, cost effective and appropriate form of social norms intervention for the school going population (Perkins & Craig, 2003; Hancock et al., 2002; Foss, Deikman, Goodman & Bartley, 2003). In contrast, individualized social norms' interventions are designed mainly to deal with high risk users (Neighbors, Larimer & Lewis, 2004; Walters, Vader & Harris, 2007). However, one should note that the existing evidence based on social norms' interventions is equivocal. Cochrane Reviews has commented on the positive outcomes for targeted social norms' interventions, particularly in reducing binge drinking, quantity of alcohol consumed, and misperceptions of drinking, and have highlighted the need for further research (Moreira, Smith, & Foxcroft, 2009). Equally,

Russell, Clapp & De Jong (2005) norms' campaigns reported no reductions in drinking, with DeJong et al., (2007) reporting no reductions in drinking as a result of their intervention, but observing a potential for prevention of increased drinking from baseline.

The findings were used to contribute to the design of a phased, social norms' intervention currently tracking participants from Grade 6 through to Grade 10, and incorporating a novel mix of individual, group and internet based normative educational sessions. This interactive approach was boosted by the inclusion of a '*Snow Ball Survey*,' a tactic often used in targeted social norms' programs (Gitchell & Zeleny, 2005). The '*Snowball Survey*' is interactive and provides students with creditable and accurate information about data collection and process evaluation for social norms' interventions. It provides students with the opportunity to think critically and discuss their perceptions in a supportive environment, and allows students to more closely examine their peer groups' norms first-hand. This is particularly important when considering the presence of certain '*faking good and bad*' tendencies, coupled with self report limitations and internal bias. As final comment, it is important to emphasize that the facilitators must be well trained and allow participants to discuss their thoughts and beliefs in a non-threatening, neutral environment (Christensen, 2005; Gitchell & Zelezeny, 2005).

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