Adolescent's involvement in organised sports and leisure activities and its effect on their involvement in delinquent behaviours.

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Abstract

The present study examined the relationship between engagement in organised sport and leisure activities on delinquent behaviours. Prior literature varies on the topic, but most studies agree that in specific social settings, participation in organised sport and/or leisure activities is not only associated with delinquent behaviour, but also predicts lower levels of delinquency. The study aimed to expand upon these findings by investigating whether engaging in organised sport and leisure activities in and outside of school impacts on delinquent behaviour. Participants (N=113) were recruited through snowball sampling via social media before completing an online survey that was administered to them which measured their participation in organised sport and leisure activities along with their history of delinquent behaviours using an edited version of The Youth Survey. Results from a chi square analysis found that engagement in leisure in/outside of school and sport outside of school was significantly associated with delinquency. Organised sport in school, however, was not. Findings from a multiple regression analysis revealed that outside of school leisure and organised sport predicts lower levels of delinquency, whereas those same in-school activities were non-significantly related. The design of criminal policy and prevention measures to combat juvenile crime are discussed as implications.

Introduction

Delinquency is increasingly recognised as a serious and worldwide concern. Antisocial behaviour is defined as actions that harm or violate the basic right of another person whilst being disruptive to others in society (Calkins & Keane, 2009), and delinquency is encompassed within the broad construct of antisocial behaviour (Pulkkinen, 2001). Delinquency can be defined as a criminal behaviour that is carried out by a juvenile (Moore, 2001). Delinquency is problematic to society because delinquent individuals have roughly twice the mortality rates of non-delinquent individuals (Laub & Vallant, 2000). Delinquent individuals also suffer from nearly double the mental illnesses when compared to the non-delinquent population (Winterdyk, 2008). In addition to this, the association between delinquent individuals and substance abuse patterns are incredibly high (Huizinga et al., 1993) which can progress into chronic patterns of substance misuse in later life (Brook et al., 2013). Society should wish to decrease delinquency to prevent early death, mental illnesses surfacing, and substance abuse patterns amongst the population, along with reducing crime rates. Education, recreation, community involvement and functional family therapy are amongst effective programs for juvenile delinquency prevention (Loeber et al., 2003). Of these approaches, involvement in extracurricular leisure activities and organised sport is of particular interest. Leisure activities are broad in its definition as it incorporates sportive activities such as cycling, golfing, swimming, walking, etc, but not all leisure activities are related to sport (Paggi, Jopp & Hertzog, 2016). Painting, reading, drawing, and meditation are also forms of leisure activities (Paggi, Jopp & Hertzog, 2016). Organised sport, on the other hand, can be defined as physical activity that involves formal practice and competition that is directed by adults or youth leaders (Logan & Cuff, 2019).

Several theorists have hypothesised how involvement in organised sports and leisure activities can be a preventative measure on delinquency. Hirschi's (1971) social control

theory suggests that when social bonds are strong, antisocial behaviours become less likely amongst individuals. The four social bonds are attachment, commitment, involvement and belief. When prosocial bonds are present within a sports team, the team's members are more committed to playing for their team and applied more effort (Kavussanu & Al-Yaaribi, 2019). Agnew (1989) agreed with Hirschi's social control theory and believed that organised sport had an influence Hirschi's proposed social bonds. However, several theorists have questioned and developed Hirschi's theory since its emergence. Hirschi (1971) referred to involvement as being a part of a social group. Hawdon (1996) thought the idea of involvement was vague and needed to be more specific. Hawdon (1999) argued that if involvement was re-conceptualised as routine activity patterns, then it would be positively associated with the reduction of delinquent behaviours. In the same vein, Kurbin (2009) argued that time spent within organised sports and leisure activities would only be a preventative measure on delinquency if that time is spent with a committed attitude to the sport and/or activity.

In a related theory, Schafer (1969) argued that individuals partaking in organised sports and leisure activities in school would be less likely to take part in delinquent behaviour. He believed that taking part in delinquent behaviours could harm a students' involvement in these school-based activities and may impact the reputation they had built for themselves within that activity. Activity structure perspective has a similar view in the sense that it theorises that time spent in supervised activities decreases the likelihood of delinquent behaviours occurring, whereas antisocial behaviour is likely to increase in time spent in unsupervised activities (Caldwell & Smith, 2006). Although there are some discrepancies in the literature such as Hawdon disagreeing with Hirschi's definition of involvement, theorists generally agree that organised sports and leisure activities can be a preventative measure on delinquent behaviours.

In relation to committing crimes specifically, routine activity theory, developed by Cohen and Felson (1979), focuses on three aspects that they believe must be present for a crime to occur (Kamalipour, Faizi & Memarian, 2014). Cohen and Felson (1979) believe that a potential offender, a suitable target, and the absence of a capable guardian must be present for a crime to take place. The theory suggests that once youthful groups gather without the supervision of adults, they are more likely to partake in illegal acts. There is significant evidence to support this theory that suggests supervision, tracking and communication with children is linked with lower rates of delinquency and substance use at adolescence (Dishion & McMahon, 1998). This view is supported by Osgood et al. (2004) who argues that peers who socialise without authority figures have an increased amount of unsupervised time available to partake in antisocial behaviours. He also argued that the lack of supervision decreases the likelihood of social control being present.

This concept of social control relates back to Hirschi's theory of social control (1971) in the sense that strong social bonds such as supervision must be present for antisocial behaviours to become less likely amongst individuals. A more recent randomised controlled study (Rorie et al., 2009) provides further support to this view. The study analysed the impact of after-school programs on the routine activities of middle-school students. Rorie et al. (2009) reported that extracurricular leisure activities were a potential solution to prevent socialisation of teens under no supervision. Within the study, it was found that those who attended extracurricular leisure activities experienced less unsupervised socialisation and thus were less prone to committing crimes; therefore, supporting the idea of Dishion and McMahon (1998) and Osgood et al. (2004) that supervised children are more likely to avoid crime related behaviours. Osgood et al's (2004) study on supervised activities and its impact on delinquent behaviour is similarly complemented by Caldwell and Smith's (2006) study that suggests structured activity has been linked to lower levels of delinquent behaviour, and

alternatively high levels of academic achievement (Rutten et al., 2006). Also mentioned in Caldwell and Smith's (2006) study, is that the act of antisocial behaviour is not the only important factor, but also with whom. This relates to an individual's association with their peers.

A large and growing body of literature has investigated the relationship between peer association and its influence on delinquent behaviours amongst adolescents. Peer association is a massive predictor of delinquent behaviours in youth (Skara et al., 2008). Studies have found that individuals who associate with deviant peer groups are more likely to partake in crime themselves (Carrington, 2009). It was also found that antisocial behaviour is more likely to occur in the company of others (Osgood et al., 1996). This finding is backed up by Buck et al. (2003) who discovered that vandalism of vending machines in public areas such as schools, parks and grocery stores, were motivated by the possibility of an audience. It is not only delinquency in the form of property damage that is impacted by peer associations; Lundborg (2006) found that peer groups also have a major influence on substance abuse such as binge drinking, smoking and illicit-drug use among adolescents between the ages of 12 to 18. In the same vein, Garnier and Stein (2002) found that affiliation with deviant peers predicts earlier usage and experimentation with drugs and alcohol.

With regards to substance misuse, Bandura's social learning theory (1977) suggests that the affiliation with delinquent peers increases the likelihood of attributing positive outcome expectancies associated with illicit drug and alcohol use. If the individual expects the potential reward of a behaviour to outweigh the potential negative consequences, the likelihood of the positive behaviour occurring increases (Akers & Jensen, 2010). Human behaviour development theories hypothesise that adolescence is a vulnerable period through which associating with deviant peer groups confers the biggest risk of behavioural problems and substance misuse (Carrington, 2009; Marotta, 2017). Peer association is a big predictor of

delinquent behaviour (Skara at el., 2008; Carrington 2009), particularly in relation to vandalism (Osgood et al., 1996; Buck et al., 2003) and substance misuse (Garnier & Stein, 2002; Lundborg, 2006).

The topic of peer association is important to understand further because supervised peer association has been found to be a preventative measure on delinquent behaviour whereas unsupervised peer association is a predictor of delinquent behaviour (Caldwell & Smith, 2006), so it's important to conclude why supervision in activities such as organised sport and organised leisure activities have that predictive effect.

Engagement in organised sport and delinquent behaviour

Previous studies have reported that there is a lack of reliable evidence on the effectiveness of sports and recreation-based interventions on the prevention of delinquent behaviours (Sherman, 1997; Mulvey et al., 1993). Hartmann and Depro (2006) draws on an extensive range of sources to test that conclusion. Commenting on the previous studies, Hartmann and Depro (2006) believed that the studies were limited and lacking in appropriate scientific controls or comparisons. They decided to reconsider the relationship between engagement in organised sport with delinquent behaviour and crime rates by implementing a Midnight Basketball League program. The program targeted males between 17 and 21 years old, games were held during prime offending hours, and two police officers were present at every match. Due to the league's success in reducing crime rates and delinquent behaviour in Chicago, the league went national. Hartmann and Depro (2006) concluded that a lot more research must be conducted before concluding that the relationship between engagement in organised sport and delinquent behaviour is stable and causal, but results indicate that areas which implemented the Midnight Basketball Leagues had superior declines in overall crime rates in comparison to the areas that decided against introducing the league into their respective city. Since, the Midnight Basketball League program has spread to Australia,

highlighting the effectiveness of the program (Midnight Basketball Australia, 2011). One evaluation from Australia was that the police officers built a rapport with the participants who may typically contribute to delinquenct acts (Meenagh, 2011).

More recently, in 2008, the Football Association of Ireland (FAI) implemented a similar program (FAI, 2017). The Late-Night League program invites those ages between 13 and 21 to take part in the program and it occurs during what are typically antisocial hours in disadvantaged areas around Dublin. According to Healy (2017), the impact on delinquent behaviour and crime rates were immediately noticeable. The reduction of over 50% of antisocial calls were report by the Gardaí in August 2009 in two different areas of Dublin, Ballymun and Tallaght, respectively (Meenagh, 2011). Just like in the Midnight Basketball Leagues in Australia, it was found that the Garda were able to conjure up a rapport with the participants within the league (Meenagh, 2011). In a survey, it was discovered that 89% to 90% of participants admitted they would be partaking in delinquent behaviour or crime if they didn't take part the League (Meenagh, 2011). According to the official Garda Síochána website (2012), public order offences involving youths aged 13-18 years old reduced by 21% across the sub-districts where the Late-Night Leagues were in place in 2011. They also reported that there was a 26% decrease in public order Garda assistance calls where leagues took place.

The Midnight Basketball Leagues and the Late-Night League cannot be solely attributed to the reduction in delinquent behaviours within their respective areas, but the findings cannot be ignored. This information provides a platform for further research to be conducted to evaluate the effectiveness of organised sport as a preventative measure on delinquent behaviour. The broader implications of these findings could result in the implementation of programs such as the Midnight Basketball League and the Late-Night

League worldwide, leading to the potential reduction of delinquent behaviour across the world.

The present study

In summary, delinquency is a worldwide concern, as individuals who partake in delinquent behaviour have strong associations with mental health problems (Winterdyk, 2008), early death (Laub & Vallant, 2000), substance abuse issues (Huizinga et al., 1993; Brook et al., 2013), and getting arrested. Social control theory states that when social bonds are strong, antisocial behaviour becomes less likely (Hirschi, 1971). Involvement in organised sport and leisure activities can be a preventative measure on delinquency (Schafer, 1969) due to the social bonds and supervision present within the activities (Hirschi, 1971; Osgood et al., 2004). Routine Activity Theory (Cohen & Felson, 1979) suggests that the absence of a capable guardian is one of the highest predictors for a delinquent behaviour to take place; and supervision of adolescents has proven to reduce delinquent behaviours (Dishion & McMahon, 1998; Osgood et al., 2004; Caldwell & Smith, 2006; Rorie et al., 2009). Caldwell and Smith's (2006) study show that peer association is a strong predictor of delinquent behaviours in youth (Osgood et al., 1996; Skara et al., 2008; Carrington, 2009). However, organised sport encourages prosocial interactions along with providing a supervised activity for adolescents (Morris et al., 2003). Interventions such as the Midnight Basketball League and the Late-Night League have had a noticeable impact on the prevention of antisocial and delinquent behaviours (Hartmann & Depro, 2006; FAI, 2017).

Although the evidence outlined above shows that there is an association between organised sport and leisure activity when compared to delinquent behaviour, further research is required to determine the validity of the significance of the relationship between the variables because there isn't a large body of research done on the topic, and the research that has been done is varied. This study is important as a reduction in delinquency needs to be

prioritized from a broader societal perspective to address crime rates, and from an individual perspective to address the mental health concerns associated with delinquency (Winterdyk, 2008), early death (Laub & Vallant, 2000), substance abuse issues (Huizinga et al., 1993; Brook et al., 2013), and higher arrest rates. The studies examined within this literature review were primarily international studies and programs due to the lack of research in this area within Ireland. The aim of the current research is to examine the extent on which engaging in organised sport and leisure activities impacts on delinquent behaviour. The current literature primarily centres around organised sport and leisure activities and their relationship with delinquency in general, but little research has examined the differing effects of participation in the activities in and outside of school on delinquency. As such, the study also aims to examine the differing effects of participation in organised sport and leisure activities in and outside of school on delinquency. This study will contribute towards the development of effective interventions to prevent adolescents' participation in delinquent behaviours whilst also adding to the existing literature in the field. From a broader and policy implications point of view, the current study will contribute to the existing literature resulting in more comprehensive research in the field, which will enable the government and schools to make more informed decisions regarding organised sport and leisure activity programs as a preventative measure for delinquency. Specifically, the research questions are 'is there an association between engagement in organised sport and leisure activities and reports of engagement in delinquent behaviours?', and secondly 'does involvement in organised sport and leisure activities in and outside of school predict delinquent behaviour?'

Apropos of previous research it is hypothesised that

(1) there will be a relationship between engagement in organised sport and leisure activities with delinquent behaviours.

(2) engaging in organised sport and/or leisure activities will predict lower levels of delinquent behaviour.

Methodology

Participants

The research sample for the current study consisted of 113 participants. In line with ethical considerations, participants were required to be at least 18 years of age to participate, with one participant being excluded from the results of the questionnaire as a result of not meeting this criterion. Participants were recruited through snowball sampling via social networking on social media outlets such as Facebook, WhatsApp, and LinkedIn. Here, they were introduced to the survey with a brief description of the study and the survey itself. Participants were encouraged to share the survey online to other eligible participants. Participants were also required to provide informed consent before completing the questionnaire. No incentives were used in recruiting participants.

Measures

Demographics. Participants were asked to indicate their gender (male, female, or other), age, and employment status (full/part-time employed, full/part-time student, both student and employed) to help build a general profile for each participant (see Appendix D). Participants answered the rest of the survey as per their time in secondary school, so they qualified as 1) a juvenile and 2) capable of committing a delinquent crime.

Youth Survey. An adaption of The Youth Survey (Meenagh, 2011) was used in order to assess involvement in organised sport and leisure activities along with measures of delinquent behaviour. Meenagh's (2011) study examined youth's involvement in leisure and organised sport and its effect on antisocial behaviour. To the researcher's knowledge, there is a lack of reliable and valid scales in the area of research, hence the usage of a relatively unknown scale. The Cronbach's alpha was (a = .48) which indicates a very low level of internal consistency for the scale. The edit applied to the survey centred around removing qualitative questions along with close-ended or Likert scale questions that didn't relate to the

research questions, aims, and hypotheses of the current study. According to Maxfield and Babbie (2005), close-ended questions are regarded as one of the most reliable type of questions in a questionnaire as they provide standardised responses that are reliably processed, and this was kept in mind when editing the survey. The survey consisted entirely of close-ended and Likert scale questions. As touched on earlier, some basic demographic questions were added in section 1 to the edited version of the survey in order to build a general profile of each participant. Again, the target population of the original Youth Survey was also changed from 14–20-year-olds respectively to anyone 18 years of age or over.

Section two discusses involvement in leisure activities and organised sports in secondary school in order to gauge a profile of those who did, or did not, partake in leisure activities in school, organised sport in school, leisure activities outside of school, and organised sport outside of school, respectively (see Appendix E).

Section three is where the antisocial and delinquent behaviours amongst participants are measured (see Appendix F). Questions were centred around these types of behaviours (smoking, drinking alcohol, taking drugs, suspension rates, expulsion rates, shoplifting, vandalism, and joyriding). Questions varied from Yes and No answers to a 5-point Likert scale from 1 (Very rarely (once a year)) to 5 (Very frequently (once a week)). So, for example, a question was ‘Did you smoke whilst you were a member of your secondary school?’ which was a Yes/No answer. That question was followed by ‘If yes, how frequently did you smoke?’ with the Likert scale answers. ‘Yes’ answers to these specific types of questions indicated involvement in antisocial behaviour, whereas ‘No’ answers did not. As for the Likert scale, the frequency in which one took part in antisocial behaviour was measured. This is how antisocial behaviour was measured in the survey. Again, considering delinquent behaviour was the specific topic of antisocial behaviour, it was necessary that the participants answered the questions as per their time in secondary school to ensure they

appropriately qualify as a juvenile and so they could effectively answer questions in the questionnaire centring around activities in secondary school. This way, any admission to an antisocial act qualifies as delinquent behaviour. Section three goes on to discuss involvement in anti-social behaviour, and it is specified that the section must be answered in relation to when the participant was at secondary school. To conclude, the fourth section centres around involvement with An Garda Síochána (see Appendix G). Again, the participants are required to answer these questions in relation to when they were in secondary school.

Design

A cross-sectional study design was used as all data was collected a specific point in time. A quantitative approach was used in this study, whilst survey research was used to assemble data. There were four predictor variables which were leisure in school, leisure outside of school, organised sport in school, and organised sport outside of school. Chi square analysis was conducted to assess the first hypothesis. The predictor variables were tested against each specific predictor of delinquent behaviour within the analysis ('SkipClass', 'Smoking', 'Drinking', 'Drugs', 'Shoplifting?', 'Vandalise?', 'Joyride?', 'Gardawarning', 'AntisocialBehaviourOrder_ASBO', 'Meeting_JLO', 'GardaJuvenileDiversionProgramme', 'GardaYouthDiversionProjects', 'Custody_Teenager_Garda', 'CriminalOffence_U18', 'Suspended?', 'Expelled?').

To investigate the second hypothesis, multiple regression analysis was used. Measures of delinquency were added up to create one criterion variable named delinquency total. The Cronbach's alpha for the dependent variable scale was (a = .79), indicating an acceptable level of internal consistency within the current sample. The same predictor variables were used once again (leisure in school, leisure outside of school, organised sport in school, and organised sport outside of school).

Procedure

An online questionnaire was set up using google docs to collect the data. Participants were recruited through social networking on Facebook, LinkedIn, and WhatsApp on the researcher's respective social media accounts. Upon seeing the survey, the participants were required to click on the link before seeing an anonymous, self-report questionnaire. The survey started off with an information sheet, followed by a consent form (see appendix B and C, respectively). Participants were made aware of the aim of the study and the contents of the survey within the information sheet. They were also made aware that participation is entirely voluntary, anonymous, and confidential and that they can withdraw from the study at any time as a result of some questions which can potentially invoke sensitive thoughts, emotions and/or memories, which can be a distressing experience. Again, due to the subject matter at hand, the participants were further assured in the consent form that all information is confidential and that there is no risk of identification from disclosing any criminal activity.

Assuming consent is provided, the survey itself begins. All questions in each section apart from the first section are answered using Yes/No or How Frequently questions. The first section of the study, however, questions one's demographics in order to build a general profile of each participant. One's gender, age, and employment/education status were questioned in that section. Involvement in leisure activities and organised sports in secondary school, involvement in delinquent behaviours, and finally involvement with An Garda Síochána is questioned in the subsequent sections.

After the study is completed, a debriefing form is presented to the participant where they are thanked for their participation in the survey along with being made aware of the purpose of the study. Again, it is acknowledged that there may have been some distressing questions, so the contact details of the research, the supervisor, and The Samaritans are

included to aid any potential stress that may have been caused as a result of participation in the study.

Ethical considerations

All data was collected in accordance with the ethical guidelines of the National College of Ireland (NCI). Due to the sensitive nature of the questions in relation to An Garda Síochána involvement and delinquent behaviours, participants were ensured that all data is anonymous so that there is no risk of identification from disclosing any criminal activity. The participants were made aware of the benefits and risks of taking part in the study and relevant sources of help were included in the debrief form (see Appendix H) for those that felt distress as a result of participation in the study.

Results

Descriptive Statistics

Descriptive statistics were performed for all continuous variables including: using school facilities, skipping class, smoking, drinking, doing drugs, shoplifting, vandalising, and joyriding. The current data is taken from a sample of 113 participants (n = 113). Preliminary analysis was performed on the data set and this indicated that all continuous variables followed the assumptions of normality. The results for all continuous variables can be seen below in Table 1. Means, standard deviations, minimum and maximum scores are also presented in Table 1.

Table 1: *Descriptive statistics for all continuous variables, N=113*

	N	Minimum	Maximum	Mean	Std. Deviation
Age	113	18	59	24.96	7.312
Freq use school facilities	89	1	5	1.92	1.316
Freq skip class	64	1	5	2.80	1.514
Freq smoke	43	1	5	3.65	1.730
Freq drinking	97	1	5	3.37	1.064
Freq drugs	30	1	5	3.00	1.339
Freq shoplifting	30	1	5	1.93	1.285
Freq vandalise	21	2	4	2.14	.478
Freq joyride	9	1	5	1.67	1.414
Valid N (listwise)	5				

Descriptive statistics were also performed for all categorical variables as seen below in Table 2, including means, standard deviations, percent and cumulative percentile scores.

Table 2: *Descriptive statistics for all categorical variables, N=113.*

Variable	N=24.96	Percent	Cumulative percent
Gender			
Male	45	39.8	39.8
Female	67	59.3	99.1
Other	1	.9	100
Employment			
Full/Part-time student	14	12.4	12.5
Full/Part-time employed	46	40.7	53.6
Both student and employed	52	46	100
Leisure in school			
No	46	40.7	40.7
Yes	67	59.3	100
Organised sport in school			
No	31	27.4	27.4
Yes	82	72.6	100
Leisure outside school			
No	35	31	31
Yes	78	69	100
Organised sport outside school			
No	34	30.1	31.9
Yes	77	68.1	100
Use local sports facilities			
No	35	31	31.9
Yes	77	68.1	100
Hang out public places			
No	37	32.7	32.7
Yes	76	67.3	100
Skip classes			
No	62	54.9	54.9
Yes	51	45.1	100
Smoke			
No	77	68.1	68.1
Yes	36	31.9	100

Table 2 continued: *Descriptive statistics for all categorical variables, N=113.*

Variable	N=24.96	Percent	Cumulative percent
Did sport influence smoking?			
No	66	58.4	68.1
Yes	36	31.9	100
Drinking			
No	17	15	15
Yes	96	85	100
Did sport influence drinking?			
No	71	62.8	72.6
Yes	31	27.4	100
Drugs			
No	88	77.9	77.9
Yes	25	22.1	100
Did sport influence drugs?			
No	65	57.5	77.9
Yes	25	22.1	100
Suspended?			
No	98	86.7	86.7
Yes	15	13.13	100
Expelled?			
No	110	97.3	98.2
Yes	2	1.8	100
Shoplifting?			
No	89	78.8	78.8
Yes	24	21.2	100
Vandalise?			
No	96	85	85
Yes	17	15	100
Joyride?			
No	108	95.6	95.6
Yes	5	4.4	100
GardaWarning?			
No	101	89.4	89.4
Yes	12	10.6	100
Antisocial behaviour disorder_ASBO			
No	112	99.1	99.1
Yes	1	.9	100
Meeting_JLO?			
No	107	94.7	94.7
Yes	6	5.3	100

Table 2 continued: *Descriptive statistics for all categorical variables, N=113.*

Variable	N=24.96	Percent	Cumulative percent
Garda juvenile diversion programme?			
No	111	98.2	98.2
Yes	2	1.8	100
Garda youth diversion projects			
No	109	96.5	96.5
Yes	4	3.5	100
Custody_Teenager_ Garda			
No	103	91.2	91.2
Yes	10	8.8	100
CriminalOffence_U18			
No	109	96.5	96.5
Yes	4	3.5	100

Inferential statistics

The association between the categorical variables was assessed using the Chi Square test for independence (H1). The following variables were entered into the analysis: the variables Leisure in school, Leisure outside of school, Organised sport in school, and Organised sport outside of school were entered as predictor variables and the variables 'SkipClass', 'Smoking', 'Drinking', 'Drugs', 'Shoplifting?', 'Vandalise?', 'Joyride?', 'Gardawarning', 'AntisocialBehaviourOrder_ASBO', 'Meeting_JLO', 'GardaJuvenileDiversionProgramme', 'GardaYouthDiversionProjects', 'Custody_Teenager_Garda', 'CriminalOffence_U18', 'Suspended?', 'Expelled?' were entered as criterion variables. There was a significant association reported in 13 of the 64 tests run. See Table 3 for the results of the tests that reached significance. None of the remaining 51 associations were significant (all p's > .05) (see Appendix I).

Table 3: *Chi Square analysis to test if there is a relationship between engagement in organised sport and leisure activities with delinquent behaviours.*

	No who endorsed behaviour	No	Yes	Pearson -Chi Square	df	Sig.	Phi Value
Leisure in School							
Smoking	36	21 (58.3%)	15 (41.7%)	6.800	1	.009	-0.245
Suspended	15	10 (66.7%)	5 (33.3%)	4.829	1	.028	-0.207
Leisure Outside of School							
Skip Classes	51	22 (43.1%)	29 (56.9%)	6.433	1	0.011	-0.239
Smoking	36	18 (50%)	18 (50%)	8.945	1	0.003	-0.281
Drugs	25	12 (48%)	13 (52%)	4.353	1	.037	-0.196
Vandalism	17	10 (58.8%)	7 (41.2%)	7.259	1	.007	-0.253
Garda Juvenile Diversion Programme	2	2 (100%)	0 (0%)	4.537	1	.033	-0.200
Custody Teenager Garda	10	8 (80%)	2 (20%)	12.334	1	.000	-0.330
Suspended	15	8 (53.3%)	7 (47.7%)	4.045	1	.044	-0.189
Organised Sport outside school							
Vandalism	17	12 (70.6%)	5 (29.4%)	15.667	2	.000	0.372
Meeting JLO	5	2 (33.3%)	3 (66.7%)	8.273	2	.016	0.271
Garda Juvenile Diversion Programme	1	0 (0%)	1 (100%)	27.470	2	.000	0.493
Custody Teenager Garda	10	7 (70%)	3 (30%)	8.345	2	.015	0.272

*Phi Value of .20-.29 = weak association; .30-.39 = moderate association; .40-.69 = strong association; .70+ = very strong association. N=113

Multiple regression analysis was performed to determine how well engagement in organised sport and/or leisure activities in and outside of school predicted delinquent behaviours (H2). Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. Although the test of normality was not normal, the regression can still be run as it's robust to violations of normality. A total score was calculated by adding each of the 16 delinquent scale variables to create an overall delinquent behaviour variable. This variable (DELINQ_TOTAL) was used as the dependent variable in the analysis. Additionally, the correlations between the predictor variables included in the study were examined. All correlations were weak, ranging between $r = .03$, $p < .001$ and $r = .88$, $p < .001$. Multicollinearity was unlikely to be a problem as a result of this indication. Leisure outside of school ($p = .026$) and organised sport outside of school ($p = .041$) were statically significant whereas leisure in school ($p = .378$) and organised sport in school ($p = .229$) were not statistically significant (see Table 4 for full details).

Since no a *priori* hypotheses had been made to determine the order of entry of the predictor variables, a direct method was used for the analysis. The four predictor variables explained 14% of variance in delinquent behaviour ($F(4, 106) = 4.38$, $p < .01$).

Table 4: *Standard multiple regression model predicting organised leisure and organised sport in and outside of school's impact on delinquent behaviour*

	$\mathbf{R}^2$	β	t	B	SE	CI 95% (B)	P
Model	.142						.882
Leisure in school		.1	.89	1.29	1.46	-1.6 / 4.18	.378
Organised sport in school		-.13	-1.21	-1.89	1.56	-4.7 / 1.2	.229
Leisure outside of school		.25	2.25	3.54	1.57	.42 / 6.67	.026
Organised sport outside of school		.22	2.07	3.05	1.47	.134 / 5.97	.041

Note. $\mathbf{R}^2$ = R-squared; β = standardized beta value; B = unstandardized beta value; SE = Standard errors of B; N = 113; Statistical significance: *p < .05; **p < .01; ***p < .001

A post-hoc analysis was conducted to determine whether a multiple regression model including only the two 'outside of school' predictor variables would be a stronger predictor of delinquent behaviour than the model above including all four predictors. The R2 value for the model with four predictors was 0.142; while the R2 for the model with only two predictors (Leisure outside of school and Organised sport outside of school) was 0.126. This suggests that the two outside of school predictor variables are not a stronger predictor of delinquent behaviour than all four predictor variables together.

To summarise, there is a significant association between engagement in leisure in and outside of school with delinquent behaviour. Organised sport outside of school was also significantly associated with delinquency, whereas organised sport in school was non-significantly associated with the criterion variable. There was a significant negative association between the predictor variables in 13 of the 64 tests run; specifically, for example, those that engaged in leisure activities in school were less likely to smoke or to get suspended. The multiple regression analysis found that leisure outside of school and

organised sport outside of school were found to effectively predict lower levels of delinquent behaviours, whereas in-school activities were statically non-significant, and therefore didn't effectively predict delinquent behaviour.

Discussion

The objective of the current study centred around examining the extent on which engaging in organised sport and leisure activities impacts on delinquent behaviour. The study also aimed to examine the differing effects of participation in organised sport and leisure activities in and outside of school on delinquency. The current study sought to provide a greater understanding of each topic. In order to achieve this, the association between the variables were examined along with analysing whether involvement in organised sport and leisure activities in and outside of school predict delinquent behaviour. However, before the findings are discussed, it's important to note that the Cronbach's Alpha for the association between the predictor and criterion variables in the first analysis was very low (a = .48), so the findings in relation to the associations between the variables must be interpreted with caution.

Through the usage of chi square analysis, the results of the first test within the study show that there is a significant relationship between engagement in organised sport outside of school and leisure activities in and outside of school with delinquent behaviours, indicating that the 3 out of 4 predictor variables are related to delinquent behaviours. Organised sport in school had no association with delinquency. It appeared that leisure in/outside of school had the greatest impact on the significant variables when compared to organised sport in/outside of school. However, leisure in/outside of school didn't appear to impact on delinquent behaviours such as drinking, shoplifting, joyriding, being expelled, receiving a Garda warning, a criminal offence order, an Antisocial Behaviour Disorder, a JLO, or being referred to a Garda youth diversion project. Organised sport in/outside of school, on the other hand, only contributed to 4 significant associations, with none of those coming from organised sport in school. When comparing in school activities and outside of school activities, the

results show that outside leisure and outside organised sport had the most significant relationship with delinquent behaviours overall.

It was hypothesised, based on previous literature, that (H1) there would be a relationship between engagement in organised sport and leisure activities with delinquent behaviours. The hypothesis was partially supported in that there is an association between engagement in organised sport and leisure activities with some delinquent behaviours but not all, as only 13 of 64 relationships were significant. However, causation cannot be inferred within those 13 relationships as the findings within this study are correlational. Findings are consistent with and provide support to previous research which has suggested that involvement in organised sport and leisure activities are related to delinquent behaviours (Schafer, 1969; Hirschi, 1971; Osgood et al., 2004).

Secondly, through the usage of multiple regression analysis, the results of the study show that the outside of school predictor variables (leisure outside of school and organised sport outside of school) effectively predicted delinquent behaviours, whereas the inside of school predictor variables (leisure in school and organised sport in school) did not. These findings indicate that a tendency towards participation in leisure activities outside of school and organised sport outside of school can predict lower levels of delinquent behaviours. Alternatively, engagement in leisure activities and/or organised sport inside of school did not predict delinquent behaviours. For H2, it was hypothesised that engaging in organised sport and/or leisure activities will predict lower levels of delinquent behaviour. The second hypothesis was partially supported as engagement in leisure activities and organised sport outside of school predicts lower levels of delinquent behaviour. However, participation in leisure activities in school and organised sport in school was statistically non-significant with delinquent behaviours. Again, findings are consistent with previous literature which has suggested that involvement in organised sport and leisure activities can be a preventative

measure on delinquency (Schafer, 1969; Hirschi, 1971; Osgood et al., 2004). However, more specifically, the overall findings within this study suggest that involvement in leisure and organised sports outside of school is most significantly related to delinquency but is also linked with lower levels of delinquency.

The literature in this area is inconsistent in general, and the findings within this study are inconsistent in relation to existing literature as a result of that. Some research suggests that involvement in leisure and organised sport outside of school is related to lower levels of delinquency (Rorie et al., 2009; Tiet et al., 2010; Han et al., 2017), whereas others report that there's both deterring and facilitating effects on delinquent behaviours (Miller et al., 2007), with some research, albeit limited, even going as far as saying it's related to higher levels of delinquency (Mahoney et al., 2001; Farineau & McWey, 2011). The current study is consistent with some studies and differs from other studies due to the high level of heterogeneity within the literature in general. Some studies suggest that the relationship is dependent on the specific type of activity (Sokol-Katz et al., 2006), the types of peers involved in the activities (Rogers, 2008), and the quality of the supervision and coaches (Mahoney & Stattin, 2000), respectively or taken together. The level of stress involved within the competitive academic or athletic expectations may entice participants to engage in delinquency to reduce that strain (Agnew, 2007). Again, methodological designs must be considered as lots of studies within the literature have found significant correlations between participation in leisure and organised sport outside of school with delinquency, such as this study, but less studies have found causal relationships between the predictor variables and delinquency (Han et al., 2017). Most of the literature associate's participation in leisure and organised sport outside of school with reduced delinquency, but it appears specific activities and particular social settings can result in an increase in delinquent behaviour. Although the

literature is inconsistent overall, the general agreement that social context matters greatly to the relationship between the variables is expressed widely throughout the research.

On the other hand, the non-significant findings within the current study suggest that organised sport in school is not related to delinquency and that in-school activities do not effectively predict delinquent behaviours. Although the existing literature in this area is limited due to a lack of research done on the topic, the findings of this study contradict the majority of previous literature done to date and contradicts Schafer's (1969) theory which suggests that individuals partaking in organised sports and leisure activities in school would be less likely to take part in delinquent behaviour.. The literature suggests that participation in sport and leisure within in-school settings is related to, and predicts, lower levels of delinquency when compared to those same outside of school activities (Spruit et al., 2016). This was attributed to the level of skilled coaches in school environments whereas the out-of-school setting generally consists of volunteers who may lack necessary coaching skills or qualifications (Spruit et al., 2016). Typically, within a school setting, the coaches will often consult with the school in an effort to contribute to a positive effect on the participants general development (Perkins & Noam, 2007). Despite the difference in findings in relation to the existing literature, this study has contributed to new insights which suggests that organised sport in school is not associated with delinquent behaviours and that in-school activities do not predict future delinquency.

Taken together, the overall findings suggest that social settings are key to the relationship between organised sport and leisure activities in and outside of school on delinquency. The research also suggests that the quality of the coaches and the supervision is consistent as an important factor when linking and predicting delinquency, which supports Cohen and Felson's (1979) routine activity theory and Hirschi's theory of social control (1971) in the sense that strong social bonds such as supervision are key to prevent

adolescents from partaking in illegal acts. This could point towards the importance of the seriousness in which the participants take the sport or leisure activity, backing up Kurbin's (2009) theory which argued that time spent within organised sports and leisure activities would only be a preventative measure on delinquency if that time is spent committed to the sport and/or activity. The research has shown that qualified coaches and strict supervision are important factors on the social setting, so, based on that, it could be derived that the more serious the activity, the more likely participants are to deviate from delinquent behaviours. The inconsistencies within the non-significant findings compared to the existing literature could be attributed to each studies sample populations commitment towards leisure activities and/or organised sport or the quality of supervision and coaches present in each respective activity.

In the development of future sports and leisure-based crime intervention programs, the programs should be delivered by pedagogically strong coaches and supervisors. Future research would benefit from experimental research designs with context measures included in order to find out which organised sports and leisure-based crime preventions programmes are most effective. This can enable the improvement of organised sport and leisure-based interventions but also build on the research by further understanding under which environments organised sport and leisure has its biggest impact on delinquency.

The current study contributes to the existing literature as it's amongst the first to examine the impact of leisure and organised sport in and outside of school on delinquency. The findings suggest that participation in leisure and organised sport outside of school predict lower levels of delinquent behaviour. On the other hand, the specific in-school activities discussed are non-significant predictors of delinquency, with organised sports in school having a non-significant association with delinquency. These findings contribute to an existing gap in most of the literature which doesn't account for in and outside of school

activities. Prior literature looks at leisure and organised sport's impact on delinquency in general, but less so in relation to in and outside of school activity specifically. The current study also provides support to the literature which has found that organised sport and leisure activities are related to delinquent behaviours, and that participation in those two activities outside of school predicts lower levels of delinquency amongst participants.

Again, in relation to the non-significant findings, the novel aspect of this research in relation to previous literature suggests that in-school leisure and organised sport does not predict delinquent behaviours and that in-school organised sport is not associated with delinquency. This is a new finding in what is a limited field of research. Future research could look at leisure and organised sport in/outside of school specifically in relation to delinquency to expand on this research.

Implications

The current study has obtained findings that have important theoretical and practical implications. The present study demonstrates the importance of participation in organised sport and leisure activities outside of school. The findings suggest that if an adolescent doesn't take part in organised sport and leisure activities outside of school then they are more likely to take part in delinquent behaviours. This points to the importance of having structured activities outside of school in order to prevent being side-tracked into antisocial behaviours.

On an individual level, adolescents can develop interventions to prevent participation in delinquency by engaging in leisure activities and/or organised sport outside of school. From a societal perspective, parents can learn about effective interventions and encourage their children to take part in these activities. It could also enable parents who are unsure about what activities they'd like their children to take part in to make a more informed decision because they know now what typically can and can't impact on delinquent behaviours.

Again, teachers could also play a role in encouraging students to take part in outside of school leisure and/or organised sport activities.

The current study's findings are in line with previous large-scale interventions that were implemented in America, Australia, and Ireland which suggest that participation in leisure and organised sport outside of school can result in a major decrease in delinquent behaviours within the participating areas (Hartmann & Depro, 2006; Midnight Basketball Australia, 2011; FAI, 2017). Based on that, on a broader scale, the Association of Secondary Teachers in Ireland (ASTI) could increase the amount of after-school leisure and/or organised sport activities available in secondary schools in an effort to reduce delinquency as a whole. Leisure education in schools would also be beneficial in promoting the development of well-being, general health, and the reduction of delinquent behaviours. Schools, and organised sport and leisure programs in general, would also benefit from attempting to create a strict, well-coached, highly supervised, and committed sporting or leisure environment to create what the literature suggests as being optimal surroundings in that specific setting to prevent future delinquency. Again, based on the previous literature and the current study, the government could raise awareness in relation to organised sport and leisure outside of school. The government could also implement new leisure and organised sport schemes to reduce delinquency as a whole, just like they did with the Late-Night League. To combat juvenile crime, these factors should also be considered when designing criminal policy and prevention measures.

Strengths and limitations

The way in which the current study attempts to contribute to previous literature in a novel manner is one of the strengths of the study. Previous studies are sparse in their research of organised sport and leisure activities in and outside of school’s impact on delinquency. The study adds to the current literature which has found that outside-of-school organised

sport and leisure can predict lower levels of delinquency, but it also contributes to a new finding in the literature which suggests that organised sport in school isn't associated with delinquency, nor is in-school leisure/organised sport an effective predictor of delinquent behaviours. However, there are a number of limitations that need to be addressed.

The scale to test for the relationship between the predictor and criterion variables had a Cronbach's alpha of (a = .48) within the current sample. This is a very low level of internal consistency for this scale suggesting that the results should be interpreted with caution as a result of this. The scale was an edited version of The Youth Survey (Meenagh, 2011) which is not a standardised and validated scale within the area of research. However, to the researcher's knowledge, this is one of the only scales available within the field. In order to potentially improve the reliability of the scale, future studies could provide a reward or an incentive for participation. It's possible that the participants may have misunderstood or deviated from what was meant to be measured, and an incentive to participate will help them concentrate on the survey. Again, based on the findings, it could be beneficial for future scales to include a question on how serious participants took organised sport and leisure activities. Qualified coaches, strict supervision, and an overall committed environment within the respective social setting proved to be a significant predictor of lower levels of delinquency across the literature, indicating that the more serious the activity, the less likely delinquency was to take place. An indication as to how seriously participants took the organised sport and/or leisure activities they took part in may be beneficial for future research.

The scale was also a self-report scale based on memory. Participants may have forgotten answers to questions because they were asked to answer the question based on their adolescent years. Again, due to the sensitive nature of the material, participants may have

also had a bias to report positively on themselves which has proven to have a large impact on the validity of questionnaires and surveys (Furnham, 1986).

Another limitation of the study is that findings gathered in the present research was based on a cross sectional design, meaning that no casual relationships can be inferred. However, delinquency is multi-faceted and complex, indicating that causality is not a necessity to make societal changes that could improve upon delinquency in general. As mentioned earlier, future research would benefit from using an experimental design to better infer causation.

Conclusion

The study found that leisure in and outside of school along with organised sport outside of school is associated with delinquent behaviours. However, organised sport in school was non-significantly related to delinquency. Again, the study found that in-school participation in leisure and organised sport was not a predictor of delinquency, but participation in those same activities outside-of-school was a predictor of lower levels of delinquent behaviour. The study adds to the existing literature which suggests that participation in leisure and organised sport is associated with, and predicts, lower levels of delinquent behaviour, but contradicts research that suggests in-school leisure and organised sport predicts lower levels of delinquency when compared to the same activities outside of school. The contradictory research is novel, and is a strength of the study, but limitations within the study include the possibility of bias amongst the participants, the scales lack of reliability, and the design which prevents the inference of better causation. Future research is required to improve upon these limitations, but also to add to the limited existing research on leisure and organised sport in and outside of school's impact on delinquency. In relation to applied settings, future sports and leisure-based crime intervention programs should be delivered by qualified coaches and supervisors.

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Appendices

Appendix A

Evidence of SPSS data sets (full data sets are available upon request).

Data_Set_MR.sav [DataSet4] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Graphs Utilities Extensions Window Help

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	Q1.Gender	Numeric	6	0	Q1. Gender	{1, Male}...	None	6	Right	Nominal	Input
2	Q2.Age	Numeric	8	0	Q2. Age	None	None	12	Right	Scale	Input
3	Q3.Employment	Numeric	25	0	Q3. Employment	{1, Full/Part...	None	12	Right	Nominal	Input
4	LeisureInSchool	Numeric	3	0	LeisureInSchool	{1, Yes}...	None	8	Right	Nominal	Input
5	OrganisedSportSchool	Numeric	3	0	OrganisedSport...	{1, Yes}...	None	8	Right	Nominal	Input
6	LeisureOutsideSchool	Numeric	3	0	LeisureOutside...	{1, Yes}...	None	8	Right	Nominal	Input
7	OrganisedSportOutsideSchool	Numeric	3	0	OrganisedSport...	{1, Yes}...	None	4	Right	Nominal	Input
8	UseLocalSportsFacilities	String	3	0	UseLocalSport...	{No, 2}...	None	4	Left	Nominal	Input
9	FreqUseSchoolFac	Numeric	8	0	FreqUseSchool...	{1, Very rar...	-99	16	Right	Scale	Input
10	HangOutPublicPlaces	String	3	0	HangOutPublic...	{No, 2}...	None	5	Left	Nominal	Input
11	SkipClasses	String	3	0	SkipClasses	{No, 2}...	None	6	Left	Nominal	Input
12	FreqSkipClass	Numeric	33	0	FreqSkipClass	{1, Very rar...	-99	20	Right	Scale	Input
13	Smoke	String	3	0	Smoke	{No, 2}...	None	5	Left	Nominal	Input
14	FreqSmoke	Numeric	33	0	FreqSmoke	{1, Very rar...	-99	33	Right	Scale	Input
15	DidSportInfluenceSmoking	String	3	0	DidSportInfluen...	{No, 2}...	None	3	Left	Nominal	Input
16	Drinking	String	3	0	Drinking	{No, 2}...	None	3	Left	Nominal	Input
17	FreqDrinking	Numeric	33	0	FreqDrinking	{1, Very rar...	-99	33	Right	Scale	Input
18	DidSportInfluenceDrinking	String	3	0	DidSportInfluen...	{No, 2}...	None	3	Left	Nominal	Input
19	Drugs	String	3	0	Drugs	{No, 2}...	None	3	Left	Nominal	Input
20	FreqDrugs	Numeric	33	0	FreqDrugs	{1, Very rar...	-99	33	Right	Scale	Input
21	DidSportInfluenceDrugs	String	3	0	DidSportInfluen...	{No, 2}...	None	3	Left	Nominal	Input
22	Suspended	String	3	0	Suspended?	{No, 2}...	None	3	Left	Nominal	Input
23	Expelled	String	3	0	Expelled?	{No, 2}...	None	3	Left	Nominal	Input
24	Shoplifting	String	3	0	Shoplifting?	{No, 2}...	None	3	Left	Nominal	Input
25	FreqShoplifting	Numeric	33	0	FreqShoplifting	{1, Very rar...	-99	33	Right	Scale	Input
26	Vandalise	String	3	0	Vandalise?	{No, 2}...	None	3	Left	Nominal	Input
27	FreqVandalise	Numeric	33	0	FreqVandalise	{1, Very rar...	-99	33	Right	Scale	Input
28	Joyride	String	3	0	Joyride?	{No, 2}...	None	3	Left	Nominal	Input
29	FreqJoyride	Numeric	29	0	FreqJoyride	{1, Very rar...	-99	29	Right	Scale	Input
30	GardaWarning	String	3	0	GardaWarning?	{No, 2}...	None	3	Left	Nominal	Input
31	AntisocialBehaviourOrder_A...	String	3	0	AntisocialBeha...	{No, 2}...	None	3	Left	Nominal	Input
32	Meeting_JuvenileLiaisonOffi...	String	3	0	Meeting_JLO?	{No, 2}...	None	3	Left	Nominal	Input
33	GardaJuvenileDiversionProgr...	String	3	0	GardaJuvenileD...	{No, 2}...	None	3	Left	Nominal	Input

Data_Set.sav [DataSet3] - IBM SPSS Statistics Data Editor

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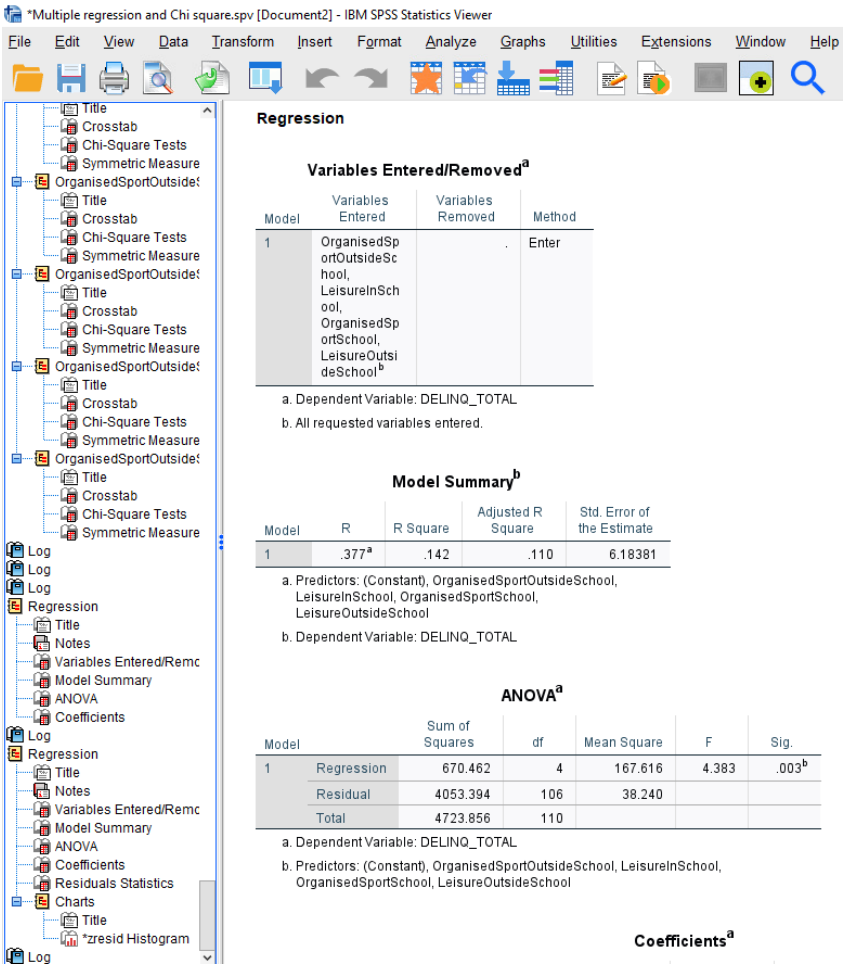
	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	Q1.Gender	Numeric	6	0	Q1. Gender	{1, Male}...	None	6	Right	Nominal	Input
2	Q2.Age	Numeric	8	0	Q2. Age	None	None	12	Right	Scale	Input
3	Q3.Employ...	Numeric	25	0	Q3. Employment	{1, Full/Part...	None	12	Right	Nominal	Input
4	LeisureInSc...	String	3	0	LeisureInSchool	None	None	6	Left	Nominal	Input
5	OrganisedS...	String	3	0	OrganisedSport...	None	None	4	Left	Nominal	Input
6	LeisureOuts...	String	3	0	LeisureOutside...	None	None	4	Left	Nominal	Input
7	OrganisedS...	String	3	0	OrganisedSport...	None	None	4	Left	Nominal	Input
8	UseLocalSp...	String	3	0	UseLocalSport...	None	None	4	Left	Nominal	Input
9	FreqUseSc...	Numeric	8	0	FreqUseSchool...	{1, Very rar...	-99	10	Right	Scale	Input
10	HangOutPu...	String	3	0	HangOutPublic...	None	None	5	Left	Nominal	Input
11	SkipClasses	String	3	0	SkipClasses	None	None	6	Left	Nominal	Input
12	FreqSkipCla...	Numeric	33	0	FreqSkipClass	{1, Very rar...	-99	20	Right	Scale	Input
13	Smoke	String	3	0	Smoke	None	None	5	Left	Nominal	Input
14	FreqSmoke	Numeric	33	0	FreqSmoke	{1, Very rar...	-99	33	Right	Scale	Input
15	DidSportInfl...	String	3	0	DidSportInfluen...	None	None	3	Left	Nominal	Input
16	Drinking	String	3	0	Drinking	None	None	3	Left	Nominal	Input
17	FreqDrinking	Numeric	33	0	FreqDrinking	{1, Very rar...	-99	33	Right	Scale	Input
18	DidSportInfl...	String	3	0	DidSportInfluen...	None	None	3	Left	Nominal	Input
19	Drugs	String	3	0	Drugs	None	None	3	Left	Nominal	Input
20	FreqDrugs	Numeric	33	0	FreqDrugs	{1, Very rar...	-99	33	Right	Scale	Input
21	DidSportInfl...	String	3	0	DidSportInfluen...	None	None	3	Left	Nominal	Input
22	Suspended	String	3	0	Suspended?	None	None	3	Left	Nominal	Input
23	Expelled	String	3	0	Expelled?	None	None	3	Left	Nominal	Input
24	Shoplifting	String	3	0	Shoplifting?	None	None	3	Left	Nominal	Input
25	FreqShoplift...	Numeric	33	0	FreqShoplifting	{1, Very rar...	-99	33	Right	Scale	Input
26	Vandalise	String	3	0	Vandalise?	None	None	3	Left	Nominal	Input
27	FreqVandalise	Numeric	33	0	FreqVandalise	{1, Very rar...	-99	33	Right	Scale	Input
28	Joyride	String	3	0	Joyride?	None	None	3	Left	Nominal	Input
29	FreqJoyride	Numeric	29	0	FreqJoyride	{1, Very rar...	-99	29	Right	Scale	Input
30	GardaWarning	String	3	0	GardaWarning?	None	None	3	Left	Nominal	Input
31	AntisocialB...	String	3	0	AntisocialBeha...	None	None	3	Left	Nominal	Input
32	Meeting_Juv...	String	3	0	Meeting_JLO?	None	None	3	Left	Nominal	Input
33	GardaJuveni...	String	3	0	GardaJuvenileD...	None	None	3	Left	Nominal	Input



Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	OrganisedSportOutsideSchool, LeisureInSchool, OrganisedSportSchool, LeisureOutsideSchool[b]	.	Enter

a. Dependent Variable: DELINQ_TOTAL

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.377[a]	.142	.110	6.18381

a. Predictors: (Constant), OrganisedSportOutsideSchool, LeisureInSchool, OrganisedSportSchool, LeisureOutsideSchool

b. Dependent Variable: DELINQ_TOTAL

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	670.462	4	167.616	4.383	.003[b]
	Residual	4053.394	106	38.240		
	Total	4723.856	110			

a. Dependent Variable: DELINQ_TOTAL

b. Predictors: (Constant), OrganisedSportOutsideSchool, LeisureInSchool, OrganisedSportSchool, LeisureOutsideSchool

Coefficients[a]

Appendix B

Participation Information Sheet – National College of Ireland
Title of Project: Youth's involvement in organised sports and leisure activities and its effect on their involvement in anti-social behaviour

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being conducted and what it will involve. Please take the time to read the following information carefully and decide if you want to take part in this study. Please feel free to ask questions if there is anything that is not clear or if you would like more information.

The aim of the research is to examine the extent on which engaging in organised sport and leisure activities impacts on delinquent behaviour. You will be asked to perform a survey where you will be assessed on 3 different sections. Firstly, you will be asked whether or not you took part in leisure activities and/or organised sport, inside and/or outside of school. The second section questions delinquent behaviours such as skipping school, smoking, drinking alcohol, taking drugs, suspension rates, expulsion rates, shoplifting, vandalism and joyriding. The final section centres around criminal offences, antisocial behaviour from a legal standpoint and your history with An Garda Síochána involvement. You will tick the box to answer each question.

Do I have to take part?
Participation in this study is totally voluntary, and you are under no obligation to take part in this study. The data that you provide will be very useful for our study. If you decide to take part this information sheet is readily available to you online at any point. You will be asked to sign a consent form. Certain questions may potentially invoke sensitive thoughts, emotions and/or memories, which can be a distressing experience. You have the right to withdraw from the study any time before or during the study, without giving a reason, as a result of this. However, you will not be able to withdraw from the study after your data is submitted because it will be unidentifiable within the data set.

What happens to the information I provide?
The information you provide will be confidential. No one apart from the researcher and principal investigator (names given below) will have access to the information you provide. There is no risk of identification from disclosing any criminal activity. Your consent form will be kept separate from the observations collected during the course of the study. Data will be stored for a maximum of five years in accordance with the National College of Ireland's data storage policy. Once the data is analysed a report of the findings may be submitted for publication. Only broad trends will be reported and it will not be possible to identify any individuals. A summary of the results will be available from the researcher on request once the study is complete.

If you have any questions or require any further information, please contact
the researcher or research supervisor.
Name of researcher: Enda Brannock
E-mail: x18461384@student.ncirl.ie
Name of supervisor: Aine Maguire
E-mail: Aine.Maguire1@ncirl.ie

Thank you for taking the time to read this Participant Information Form and considering taking part in the study. This Participant Information Form is for you to Keep if you wish to download it. If you do wish to take part in the study, please sign the consent form.

Appendix C

Consent Form

Thank you for your interest in this project. Just to remind you, the data you provide in the course of this project will be treated in the strictest confidence and will be used for research purposes only. Furthermore, as a participant in this research you will never be identified in any outputs (e.g., reports, research articles) that arise from this project and your data will never be identifiable or viewed by any other party outside the research team. All information which you provided in this questionnaire will remain anonymous and your information will not be identifiable. There is no risk of identification from disclosing any criminal activity.

CONSENT FORM

(The participant should complete the whole of this sheet himself/herself)

Title of Experiment: Youth's involvement in organised sports and leisure activities and its effect on their involvement in anti-social behaviour
Name of researcher: Enda Brannock
Please tick boxes
1. I confirm that I have read and understand the information sheet for the above experiment.

2. I have had opportunities to ask questions and my questions have fully been answered.

3. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

4. I have received enough information about the experiment.

5. I agree to take part in the above experiment.
"This experiment has been explained to me to my satisfaction, and I agree to take part. I understand that I am free to withdraw at any time."

By clicking next, you are providing informed consent to participate in this study.

Appendix D

Section 1: Demographics

Q1. Gender

Male

Female

Other

Q2. Age

Your answer _____

Q3. Employment

Full/Part-time employed

Full/Part-time student

Both student and employed

Appendix E

Section 2: Involvement in Leisure Activities and Organised Sports in Secondary School

Q1. Were you involved in leisure activities in school? (debate club, choir, etc)

Yes

No

Q2. Were you involved in organised sports in school?

Yes

No

Q3. Were you involved in leisure activities outside of school? (Piano lessons, swimming etc)

Yes

No

Q4. Were you involved in organised sports outside of school?

Yes

No

Q5. Did you use your local/ community sports facilities whilst in school?

Yes

No

Q6. If yes, how often did you use your local facilities whilst in school?

Very Frequently (once a week)

Frequently (once every two weeks)

Occasionally (once a month)

Rarely (once every six months)

Very rarely (once a year)

Appendix F

Section 3: Involvement in Anti-Social Behaviour. Please answer this section in relation to when you were at secondary school.

When you were at school (a teenager):

Q1. Did you hang out in public places like parks or outside shops etc without apparent purpose?

Yes

No

Q2. Did you skip classes/school?

Yes

No

Q3. If yes, how frequently did you skip classes/school?

Very frequently (once a week)

Frequently (once every two weeks)

Occasionally (once a month)

Rarely (once every six months)

Very rarely (once a year)

Q4. Did you smoke whilst you were a member of your secondary school?

Yes

No

Q5. If yes, how frequently did you smoke?

Very frequently (once a week)

Frequently (once every two weeks)

Occasionally (once a month)

Rarely (once every six months)

Very rarely (once a year)

Q6. If you were involved in sports or leisure activities, did your involvement have any effect on your choice to smoke or not to smoke?

Yes

No

Q7. Did you drink alcohol whilst in secondary school?

Yes

No

Q8. If yes, how frequently did you drink alcohol in secondary school?

Very frequently (once a week)

Frequently (once every two weeks)

Occasionally (once a month)

Rarely (once every six months)

Very rarely (once a year)

Q9. If you were involved in sports or leisure activities, did your involvement have any effect on your choice to drink or not to drink alcohol?

Yes

No

Q10. Did you take any illegal drugs in secondary school?

Yes

No

Q11. If yes, frequently did you take illegal drugs?

Very frequently (once a week)

Frequently (once every two weeks)

Occasionally (once a month)

Rarely (once every six months)

Very rarely (once a year)

Q12. If you were involved in sports or leisure activities, did your involvement have any effect on your choice to take illegal drugs?

Yes

No

Q13. Were you ever suspended from school?

Yes

No

Q14. Were you ever expelled from a school?

Yes

No

Q15. During your time in secondary school, did you ever shoplift?

Yes

No

Q16. If yes, how frequently did you shoplift?

Very frequently (once a week)

Frequently (once every two weeks)

Occasionally (once a month)

Rarely (once every six months)

Very rarely (once a year)

Q17. Did you vandalise public or private property?

Yes

No

Q18. If yes, how frequently did you vandalise public or private property?

Very frequently (once a week)

Frequently (once every two weeks)

Occasionally (once a month)

Rarely (once every six months)

Q19. Did you joyride?

Yes

No

Q20. If yes, how frequently did you joyride?

Very frequently (once a week)

Frequently (once every two weeks)

Occasionally (once a month)

Rarely (once every six months)

Very rarely (once a year**)**

Appendix G

Section 4: Involvement with An Garda Síochána. As above, please answer these questions in relation to when you were in secondary school (a teenager):

Involvement with An Garda Síochána, and Peer Influences

Q1. Have you ever been issued a behaviour warning by a member of An Garda Síochána? (A behaviour warning is issued by a member of An Garda Síochána includes the following: A statement that the child has behaved in an anti-social manner, the type of behaviour and when and where it took place, a demand that the child cease the behaviour, a notice that failure to comply with a demand to cease the behaviour may result in an application being made to the court for a behaviour order)

Yes

No

Q2. Have you ever been issued an anti-social behaviour order (ASBO) by a member of An Garda Síochána? (An ASBO is issued by the Children's Court when a member of the Garda Síochána applies to the court for an order which prohibits a child from doing anything specified in the order)

Yes

No

Q3. Have you ever had a meeting with a Juvenile Liaison Officer (JLO)?

Yes

No

Q4. Have you ever been referred to a Garda Juvenile Diversion Programme? (The Juvenile Diversion Programme is a programme which diverts youth from the formal criminal justice system by means of cautioning and supervision as opposed to prosecution)

Yes

No

Q5. Have you ever been referred to a Garda Youth Diversion Projects? (Garda Youth Diversion Projects are local community based activities which work with children. These projects aim to help children move away from behaving in a way that might get them or their friends into trouble with the law)

Yes

No

Q6. Were you ever taken into custody (as a teenager) by a member of An Garda Síochána?

Yes

No

Q7. Have you been charged with a criminal offence before the age of 18 (exclusive)?

Yes

No

Appendix H

Debrief Sheet

Title of project: Adolescent's involvement in organised sports and leisure activities and its effect on their involvement in delinquent behaviours.
Name of researcher: Enda Brannock.

Thank you for taking part in this study. The sheet will provide you with full details of the study in which you participated.

The purpose of the study was to investigate a typical adolescent's involvement in organised sports and leisure activities and its effect on their involvement in delinquent behaviours. This study is concerned with investigating if there will be a relationship between engagement in organised sport and leisure activities with delinquent behaviour. Secondly, the study is concerned with the following question: does involvement in organised sport and leisure activities in and outside of school predict delinquent behaviour?'

How was this tested?
You were asked to complete a questionnaire comprising three sections. The first section included questions centred around one's involvement in organised sports and/or leisure activities in school. The second section questions one's involvement in delinquent behaviours when they were in school. And finally, the third section questions one's history in criminal offences and delinquent behaviour.

What did this research expect to find?
This research expects to find that there will be a relationship between engagement in organised sport and leisure activities with delinquent behaviour. It also expects to conclude that there will be higher levels of antisocial behaviour in those who do not, or did not, engage in organised sport and/or leisure activities.

Why is this important to study?
Previous research has been shown to indicate that involvement in organised sports and leisure activities, along with supervision and prosocial peer influence has a preventative impact on antisocial behaviour. However, more research is needed that looks at this area in more detail, particularly in Ireland.

Confidentiality
All information which you provided in this questionnaire will remain anonymous and your information will not be identifiable. There is no risk of identification from disclosing any criminal activity. The results obtained in this research will be submitted to The National College of Ireland for my final year thesis.

If you are experiencing distress as a result of participation or if you have concerns regarding participation please contact Enda Brannock (x18461384@student.ncirl.ie) or the supervisor for this research, Aine Maguire (aine.maguire1@ncirl.ie). If you are experiencing any distress as a result of participating in this study, please do not hesitate to contact the researcher or supervisor of this research. It is also advised that you contact The Samaritans 116 123 which is a charity aimed at providing support for any form of distress. Thank you for your participation.

Appendix I: *non-significant chi-square findings when testing for the relationship between engagement in organised sport and leisure activities with delinquent behaviours.*

	No who endorsed behaviour	No	Yes	Pearson-Chi Square	df	Sig.	Phi Value
Leisure in School							
Skip class	51	25 (49%)	26 (51%)	2.660	1	1.03	-.153
Drinking	96	39 (40.6%)	57 (59.4%)	.002	1	.966	.004
Drugs	25	14 (56%)	11 (44%)	3.110	1	.078	-.166
Shoplifting	24	11 (45.8%)	13 (54.2%)	.332	1	.565	-.054
Vandalise?	17	9 (52.9%)	8 (47.1%)	1.241	1	.265	-.105
Joyride?	5	3 (60%)	2 (40%)	.807	1	.369	-.084
Garda warning?	12	4 (33.3%)	8 (66.7%)	.303	1	.582	.052
Antisocial Behaviour Order?	1	0 (0%)	1 (100%)	.693	1	.405	.078
Meeting _ JLO?	6	4 (66.7%)	2 (33.3%)	1.769	1	.184	-.125
Garda Juvenile Diversion Programme	2	2 (100%)	0 (0%)	2.966	1	.085	-.162
Garda Youth Diversion Project	4	2 (50%)	2 (50%)	.148	1	.700	-.036
Custody Teenager	10	5 (50%)	5 (50%)	.392	1	.531	-.059
Garda Criminal Offence _U18	4	3 (75%)	1 (25%)	2.020	1	.155	-.134
Expelled?	2	2 (100%)	0 (0%)	3.622	2	.163	.179
Leisure Outside of School							
Drinking	96	31 (32.3%)	65 (67.7%)	.519	1	.471	-.068
Shoplifting ?	89	10 (41.7%)	14 (58.3%)	1.630	1	.202	-.120

Appendix I (continued): *non-significant chi-square findings when testing for the relationship between engagement in organised sport and leisure activities with delinquent behaviours.*

	No who endorsed behaviour	**No**	**Yes**	**Pearson-Chi Square**	**df**	**Sig.**	**Phi Value**
Joyride?	5	3 (60%)	2 (40%)	2.062	1	.151	-.135
Garda Warning	12	5 (41.7%)	7 (58.3%)	.718	1	.397	-.080
Antisocial Behaviour Order	1	0 (0%)	1 (100%)	.4531	1	.501	.063
Meeting _ JLO	6	4 (66.7%)	2 (33.3%)	3.776	1	.052	-.183
Garda Youth Diversion Programme	4	3 (75%)	1 (25%)	3.760	1	.053	-.182
Criminal Offence _U18	4	3 (75%)	1 (25%)	3.760	1	.053	-.182
Expelled?	2	2 (100%)	0 (0%)	4.955	2	.084	.209
Organised Sport in school							
Skip Class	51	17 (33.3%)	34 (66.7%)	1.625	1	.202	-.120
Smoke	36	12 (33.3%)	24 (66.7%)	.924	1	.337	-.090
Drinking	96	24 (25%)	72 (75%)	1.898	1	.168	.130
Drugs	25	6 (24%)	19 (76%)	.190	1	.663	.041
Shoplifting ?	24	9 (37.5%)	15 (62.5%)	1.551	1	.213	-.117
Vandalise?	17	5 (29.4%)	12 (70.6%)	.039	1	.843	-.019
Joyride?	5	0 (0%)	5 (100%)	1.978	1	.160	.132
Garda Warning?	12	3 (25%)	9 (75%)	.040	1	.842	.019
Antisocial behaviour order	1	0 (0%)	1 (100%)	.381	1	.537	.058
Meeting _ JLO	6	0 (0%)	6 (100%)	2.395	1	.122	.146
Garda JDP	2	0 (0%)	2 (100%)	.770	1	.380	.083

Appendix I (continued): *non-significant chi-square findings when testing for the relationship between engagement in organised sport and leisure activities with delinquent behaviours.*

	No who endorsed behaviour	**No**	**Yes**	**Pearson-Chi Square**	**df**	**Sig.**	**Phi Value**
Garda Youth Diversion Project	4	2 (50%)	2 (50%)	1.061	1	.303	-.097
Custody Teenager	10	5 (50%)	5 (50%)	2.806	1	.094	-.158
Garda Offence _U18	4	2 (50%)	2 (50%)	1.061	1	.303	-.097
Suspended?	15	7 (46.7%)	8 (53.3%)	3.214	1	.073	-.169
Expelled?	2	2 (100%)	0 (0%)	5.732	2	.057	.225
Organised sport outside school							
Skip classes	49	16 (33%)	33 (67%)	2.643	2	.267	.153
Smoke	35	14 (40%)	21 (60%)	2.409	2	.300	.146
Drinking	94	26 (28%)	68 (72%)	2.948	2	.229	.162
Drugs	24	11 (45.8%)	13 (54.2%)	4.194	2	.123	.193
Shoplifting?	24	11 (45.8%)	13 (54.2%)	3.923	2	.141	.186
Joyride?	5	3 (60%)	2 (40%)	2.256	2	.324	.141
Garda Warning?	12	5 (41.7%)	7 (58.3%)	1.025	2	.599	.085
Antisocial behaviour order	1	0 (0%)	1 (100%)	.472	2	.790	.065
Garda Youth Diversion Projects	4	3 (75%)	1 (25%)	3.986	2	.136	.188
Criminal Offence _U18	4	2 (50%)	2 (50%)	.820	2	.664	.085
Suspended?	15	6 (40%)	9 (60%)	1.039	2	.595	.096
Expelled?	2	2 (100%)	0 (0%)	5.167	4	.271	.214

*Phi Value of .20-.29 = weak association; .30-.39 = moderate association; .40-.69 = strong association; .70+ = very strong association. N=113