

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF SOCIOLOGY AND CRIMINOLOGY

PEER NETWORKS: IMPACT ON JUVENILE DELINQUENCY

MICHELLE RONEY
SPRING 2015

A thesis
submitted in partial fulfillment
of the requirements
for a baccalaureate degree in Criminology
with honors in Criminology

Reviewed and approved* by the following:

Wayne Osgood
Professor of Criminology and Sociology
Thesis Supervisor

Stacy Silver
Associate Professor of Sociology and Human Development and Family Studies
Honors Adviser

* Signatures are on file in the Schreyer Honors College

ABSTRACT

This study analyzes the potential relationship between peer friendship networks and juvenile delinquency through secondary analysis of data collected by the PROSPER Peers Project. Although the PROSPER project has collected data from over 11,000 students on five occasions, this research utilizes the final wave of data, collected when participants were in ninth grade. Focus was placed on this grade-level as students are at an age where delinquent behaviors are formed and more likely to occur when compared to other grade-levels. Using this data, the study looked at a number of factors related to peer networks and juvenile delinquency including: size of friendship networks, type of friendship network (cohesive or not) and delinquency of friends. The data analysis was conducted using linear regressions. Some hypotheses required two linear regressions for testing with alternative measures of the key concepts. The results support two of the four hypotheses. They demonstrate a strong positive association between delinquency of friends and juvenile delinquency. In addition, there is small negative association between size of friendship network and juvenile delinquency. This implies that adolescents part of large friendship networks experience a decrease in juvenile delinquency. These findings suggest that addressing peer relations would be a useful direction for developing interventions and preventative programs to combat problem behaviors and juvenile delinquency.

TABLE OF CONTENTS

LIST OF TABLES	iii
ACKNOWLEDGEMENTS	iv
Chapter 1 Introduction	1
Prior Research	2
Chapter 2 Data and Research Methodology	7
Chapter 3 Results	14
Chapter 4 Discussion	20
Chapter 5 Appendix A PROSPER Peers Partnership Codebook.....	23
Appendix B IRB Approval	26
BIBLIOGRAPHY	27

LIST OF TABLES

Table 1: Main PROSPER Dataset Variables	9
Table 2: PROSPER Network Scoring Database Variables.....	9
Table 3: Descriptive Statistics	13
Table 4: Results from Linear Regressions of Delinquency of Friends vs. Juvenile Delinquency	14
Table 5: Linear Regression of Type of Friendship Network vs. Juvenile Delinquency	15
Table 6: Linear Regression of Size of Friendship Network vs. Juvenile Delinquency.....	16
Table 7: Linear Regression of Size of Friendship Network and Type of Friendship Network vs. Juvenile Delinquency.....	17
Table 8: Linear Regression Controls Added.....	19

ACKNOWLEDGEMENTS

This thesis would not have been possible without the guidance and unwavering support of my thesis advisor, Dr. Wayne Osgood. I appreciate the time he took out of his work to share with me his knowledge of peer networks and juvenile delinquency and life, in general. The constant encouragement that he provided throughout this process is greatly appreciated. Additionally, I wish to extend my gratitude to my honors advisor, Dr. Stacy Silver for providing support throughout the entire process and much needed assistance in the first steps of this long process. I would also like to thank the PROSPER Peers project for allowing me to use their data, a vital component to my thesis. Finally, I would like to thank all of my professors at Penn State who have shared their knowledge and wisdom with me and my friends and family for supporting me.

Chapter 1

Introduction

A multitude of studies have been conducted to examine the impact of adolescent peer networks on juvenile delinquency, and this research still continues today. This research is relevant for both the scholarly community and society as a whole, as it provides insight into the social roles of adolescents. Furthermore, results from this research will allow authority figures to better predict adolescents' future deviant behavior when with their peer groups. The analysis of adolescent peer networks is especially relevant to both the academic community and society when developing interventions and preventative programs to combat problem behaviors and juvenile delinquency (Gest et al. 2011).

A theoretical perspective used to guide previous research on this topic, and this study as well, is Sutherland's Differential Association Theory (1947). One of the most popular Learning Theories of deviance, Differential Association Theory focuses less on why individuals become criminal and more on how they learn to become criminals. According to Sutherland's theory, the principal part of criminal behavior occurs within intimate personal groups, and the learning includes techniques of committing crime and the specific direction of motives, drive, rationalizations and attitudes about the behavior (Matsueda 2001). Additionally, a person becomes delinquent because of an excess of definitions favorable to violation of the law over definitions unfavorable to violation of the law. One of the principal assumptions of this theory is

that the process of learning criminal behavior involves all of the mechanisms that are involved in all other kinds of learning (Sutherland 1947).

Sutherland's Differential Association Theory is important to understanding peer networks among adolescents and juvenile delinquency due to the fact that friendship groups are one of the more intimate personal groups in the lives of adolescents. Compared to when they were younger, adolescents spend increasing time, unsupervised, with their friends (i.e. peer group). The interactions involved with being a part of the peer group provide an important context for learning, which is a vital component of Differential Association Theory.

Prior Research

There have been numerous studies conducted to analyze the relationship between peer networks among adolescents and juvenile delinquency. As presented in the following paragraphs, all of the studies are unique because they focus on different aspects of either the peer network or juvenile delinquency.

The study "Routine Activities and Individuals Deviant Behavior" conducted by Osgood et al. (1996) extended the routine activity perspective's situational analysis of crime to encompass individual offending and a broad range of deviant behaviors. Based on their findings, they proposed that situations conducive to deviance are prevalent in unstructured socializing activities, especially when they occur in the absence of authority figures (Osgood et al. 1996). Similar to what was discussed above regarding Differential Association Theory, Osgood et al. also concluded that the presence of peers makes it easier to participate in deviant acts and makes them more rewarding. This conclusion is especially relevant as a focus of the current study is the

impact of the delinquency of friends on juvenile delinquency. From the conclusion above, we might find an increase in juvenile delinquency among adolescents who have friends that are delinquent. If it is easier to participate in deviant acts in the presence of peers, we can speculate that it may be even easier to participate if those peers are delinquent.

In the present study, the relationship between type of friendship network (cohesive or not) and juvenile delinquency was also examined. The study “Delinquency and the Structure of Adolescent Peer Groups” conducted by Derek A. Kreager, James Moody and Kelly Rulison, used network methods to test whether groups with higher levels of delinquency were less cohesive, more unstable and less central than less delinquent groups (Kreager et al. 2011). Kreager, Moody and Rulison concluded that drinking (a delinquent act) seems to be positively associated with group cohesion. They also found that “the overall pattern of evidence gives little support to control theory’s claim that delinquent groups lack the coherence needed for social influence among members” (Kreager et al. 2011). One may assume that delinquent groups have more influence among members because they are participating in activities (i.e. drinking) that are labeled as “bad” or “wrong” by society and do not want to get caught. This influence may lead to higher levels of group cohesion. The current study will further analyze this relationship by examining the impact of the type of friendship network (cohesive or not) on juvenile delinquency.

A major topic of the research conducted on peer networks and juvenile delinquency is peer influence. The pressures to fit in and be “popular” create an environment that makes adolescents susceptible to peer influence, whether it is good or bad. If adolescents learn from their peer group that deviant behaviors such as substance use and petty theft will help them fit in, it could have an impact on juvenile delinquency. Differential Association theory would describe

this “desire to fit in” as the drive and rationalization for the deviant behavior. Osgood et al. (2013) states that previous research on this subject suggests that peer influence plays a major role in the formation of friendship networks and adolescents select friends who are similar to themselves. In addition, previous literature also proposes that crime is a collective behavior and juvenile delinquency is no different (Warr, 2002: 58). In “Peers and the Emergence of Alcohol Use: Influence and Selection Processes in Adolescent Friendship Networks,” Osgood et al. (2013) found a relatively strong association between the delinquency of friends and juvenile delinquency, a relationship that is also analyzed in the current study. The evidence they found suggests that adolescents’ drinking has an important influence on their friends’ drinking. Additionally, they found that individuals had a tendency to select friends who were similar to themselves (Osgood et al. 2013). Multiple studies, such as the three referenced above, point to the impact that peer influence has on the formation of peer networks and the activities that occur within the peer group; and therefore, juvenile delinquency.

Background

As seen in the previous section, there is an abundance of research that focuses on the relationship between adolescent peer networks and juvenile delinquency. The data for the current research was collected through the PROSPER Partnership, a collaborative effort whose name stands for Promoting School, Community, University Partnerships to Enhance Resilience. This project consisted of three phases of research, with the ultimate goal to compile and analyze data collected from middle school-aged juveniles in order to develop a new approach to the delivery of programs to prevent substance use and other problem behaviors.

The PROSPER Project is a longitudinal study that consists of five waves of data collected from students in grades six to nine. The present study uses the fifth and final wave of data, collected when the students were in ninth grade. This wave was selected for use in this study because students in ninth grade are more likely to commit delinquent acts compared to students in lower grades. Using this data, the study seeks to analyze the effect of adolescent peer networks on juvenile delinquency.

Objective

Through the study of the relationship between adolescent peer networks and juvenile delinquency, this research will advance the understanding of adolescent friendship networks and identify influential factors for juvenile delinquency. The study analyzes the peer networks and behaviors of ninth grade students, which has been identified as a critical time in an adolescent's life for the formation of delinquent behaviors (Osgood et al. 2005). Throughout adolescence, children spend increasing amounts of time with their peers and the influence of those peers increases as well (Osgood et al. 1996) This research looks at a number of factors related to adolescent peer networks, such as the size of peer networks, the type of peer networks and the delinquency of friends and determines their impact on juvenile delinquency through the analysis of the data collected by the PROSPER Project mentioned above.

The main research questions this study looks to answer include the following: 1) Do adolescents commit delinquent acts because of peer influence? 2) Does the type of peer network (cohesive or not) play a role in juvenile delinquency? 3) Does the size of the peer network impact juvenile delinquency? Based on these questions and prior research, this study tested the following four hypotheses:

- 1) Adolescents who have friends who are delinquent are more likely to be delinquent.
- 2) Members of friendship groups that are not close (are not cohesive) are less likely to be delinquent.
- 3) Adolescents who are part of large friendship networks are less likely to be delinquent.
- 4) Adolescents who are part of small friendship networks that are close (i.e. high level of group cohesion) are more likely to be delinquent.

Chapter 2

Data and Research Methodology

Data Collection and Sample

The PROSPER Peers study was a longitudinal study of adolescents in grades six through nine, the primary period of emergence of substance abuse. The data were collected through the use of a survey/questionnaire given to students by PROSPER research staff during class time. To obtain permission for the students' participation passive consent was used. Information about the study was sent home to students' parents. If parents did not want their child to participate in the study, they signed a form and returned it to school. Not returning the form meant that the child could participate. In order to use this passive consent procedure, researchers also needed approval from the school districts and the research staff was required to complete training so the questionnaire could be administered during class time. Original survey questions and answer choices for the variables explored in the current study are present in the codebook found in Appendix A. The first and second surveys were both completed during the sixth grade, one in the first half, and the second during the final portion of the year. The same students completed the next three waves during the spring of the seventh, eighth and ninth grade years.

The sample includes over 11,000 students from twenty-eight different school districts within small communities in Iowa and Pennsylvania. 85% of students were Caucasian, 5% Hispanic, 3% African-American and 7% were other ethnic groups (Osgood et al. 2006). Due to the use of passive consent to obtain permission for participation, the response rate for the study was high, around 90%.

Strengths of the Dataset

There are many strengths of the PROSPER Peers dataset, one of them being that the study is longitudinal. This allowed researchers to track friendship networks over the critical age period (grades six through nine) in which substance use (a delinquent behavior) emerges. In addition, this sample is much larger than those found in other longitudinal studies on adolescent peer networks. The research also provides thorough coverage of friendship networks because the sample resides in a rural setting where the population is more stable and where schools effectively capture the pool of potential friends. Lastly, the high response rate (90%) makes it easier to successfully map peer relations. In addition, the high response rate makes findings more reliable since the researchers were able to track students throughout the entire duration of the study.

Variables and Measures

After determining the primary research questions and hypotheses, relevant variables were acquired from the PROSPER dataset. Tables 1 and 2 show the variables used from the main PROSPER dataset and the variables used from the PROSPER Network Scoring dataset, respectively. The network variables measure some features of the complex relations in each grade and were created using the students' friendship choices from the same questionnaires as the main dataset.

Table 1: Main PROSPER Dataset Variables

Variable Name	Values	Reason For Use
Deviant Behavior/Delinquency	Range 0-12; sum of dichotomized values	Dependent variable to measure juvenile delinquency
Friends Delinquency	Asked about closest friends: these friends sometimes get into trouble with the police and asked about closest friends: These friends sometimes break the law	Independent variable created to measure the impact of delinquency of friends on overall juvenile delinquency
Gender	Boy =1, Girl = 0	Control Variable
School Adjustment and Bonding	Mean of school adjustment and bonding items	Control Variable
Risk/Sensation Seeking	Range 1-5; mean of three “self-oriented activities”	Control Variable
WAVE	Filtered WAVE variable to only display date for wave = 5	Sample population

Table 2: PROSPER Network Scoring Database Variables

Variable Name	Values	Reason For Use
Friends Delinquency2	Mean of R’s ALL TIE Network for VARDEV	Second independent variable used to measure the impact of delinquency of friends on overall juvenile delinquency
Reciprocation Rate	Proportion of ties made that were reciprocated	Independent variable used to measure type of friendship group/level of cohesiveness
Ego Network Density	Sent or received (all ties)	Independent variable used to measure type of friendship group/level of cohesiveness
Sum of all Network Neighbors	Sent or received	Independent variable used to measure size of friendship group

Measures

Dependent variable (Juvenile delinquency). Juvenile delinquency is the primary focus of this research as we are examining the potential relationship between friendship networks and juvenile delinquency. This variable was created from the sum of 12 dichotomized items that asked respondents about their own delinquent behavior. Examples of questions asked include: “In the past 12 months how many times have you: taken something worth less than \$25 that didn’t belong to you,” “beat up someone or physically fought with someone because they made you angry,” “been picked up by the police for breaking the law,” “ran away from home” and “carried a hidden weapon?” Respondents answered these questions using a scale of 1 (never) to 5 (five or more times).

Independent variable (Delinquency of friends). Delinquency of friends was one of the explanatory variables utilized in this study and was measured using two different items, one taken from the main dataset and the other from the network scoring dataset. The variable from the main dataset was computed using two items. These two items asked participants about their closest friends: “these friends sometimes get into trouble with the law” and “these friends sometimes break the law.” Respondents answered on a scale from 1 (strongly agree) to 5 (strongly disagree). The second item used to measure delinquency of friends came from the network scoring codebook. This measure was also used because it provides information about the delinquency of the friendship network based on what the respondents’ friends said rather than respondents’ reports about their friends.

Independent variable (Size of friendship network). Size of the friendship network is another explanatory variable used in this study. The two items used for this variable were

extracted from the network scoring dataset. When completing the questionnaire, participants were asked to write the names of their closest friends (i.e. nominate). The first item measures the sum of reciprocated friendship nominations within the network and the second item measures the sum of all network neighbors, sent or received. The sum of all network neighbors represents the friendship nominations sent out by the respondent and the nominations received from his/her friends.

Independent variable (Type of friendship network). The last explanatory variable, type of friendship network, was also measured using two variables from the network scoring dataset. The first variable measures the reciprocation rate within the network. This variable reports the proportion of nominations that were reciprocated. The second variable, Ego Network Density, reports the proportion of pairs within the network that are tied to each other.

Control variables (Gender, school adjustment, and risk/sensation seeking). Three control variables were utilized in this study and all were extracted from the main dataset. The first variable, gender, was measured by asking participants if they were male and female. Male was coded as 1 and female as 0. The second variable, school adjustment and bonding, was measured by taking the mean of eight of the school adjustment and bonding items present in the questionnaire. Examples of questions asked for this item include: “I like school a lot,” “grades are very important to me,” “I try hard in school” and “I get along well with my teachers.” Respondents answered on a scale from 1 (never true) to 5 (always true). The last variable, risk/sensation seeking, was measured by taking the mean of three “self-oriented activities.” Examples of questions asked for this item include: “how often do you: do what feels good, regardless of the consequences,” “do something dangerous because someone dared you to do it,”

and “do crazy things just to see the effect on others.” Respondents answered on a scale from 1 (never) to 5 (always).

Data Analysis

This study utilized multiple linear regressions to conduct the secondary analysis of the PROPSEER Peer datasets to uncover the answers to the three primary research questions. Hypotheses one and four used two linear regressions to measure the relationships and hypotheses two and three each used one. Two regressions were conducted for both hypotheses one and four because the two measures of delinquency of friends had to be tested separately. In all of the regressions the dependent variable or outcome was always juvenile delinquency. In order to analyze specific interactions between the size of the friendship network and juvenile delinquency, alterations were made to the size of friendship variable (sum of all network neighbors). This variable had a range of 1-19, 1 being the smallest number of network neighbors and 19 being the largest. After establishing cutoffs for small (0-5), medium (6-10) and large (11-19), two dichotomies, LargevNot and SmallvNot, were created. Once created, the dichotomies were multiplied by the measures of friends’ delinquency and included in the linear regression models used in the data analysis to test the interactions between the size of friendship networks (small or large) and juvenile delinquency.

Table 3: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
WAVE	13852	5	5	5.00	0.00
Gender	12349	0	1	.50	0.50
Risk/sensation seeking	10573	1.00	5.00	2.33	1.02
School adjustment & bonding	10859	1.00	5.00	3.57	0.74
Deviant behavior/Juvenile delinquency	10808	0	12	1.84	2.70
Friends' delinquency, reported by respondents	10800	1.00	5.00	2.07	1.13
Friends' delinquency, reported by friends	9898	0.00	12.00	1.79	1.68
Sum reciprocated nominations	10321	0	7	1.69	1.16
Proportion of ties made that were reciprocated	8866	0.00	1.00	.50	0.34
Sum of all network neighbors, sent or received	10321	0	19	5.12	2.84
Ego network density, sent or received	9221	0.00	1.00	.22	0.20
Valid N (listwise)	8315				

Chapter 3

Results

H1: *Adolescents who have friends who are delinquent are more likely to be delinquent.*

Table 4 shows the results of the two separate linear regressions conducted to measure the relationship between delinquency of friends and juvenile delinquency. The coefficient (Coef.) represents the strength and direction of the association between the chosen variables, and the standard error (S.E.) that represents the accuracy of this estimate is included as well.

Significance in this analysis and all of the analyses that follow is measured at the $p < .05$, $p < .01$, and $p < .001$ alpha levels. As demonstrated in Table 5, adolescents who reported that their friends were delinquent also reported high levels of deviant or delinquent behavior themselves. These results are significant at the $p < .001$ level. Although the relationship is slightly weaker when using the delinquency of friends network variable (what their friends said about themselves), there is still a strong positive association when looking at both variable types used to measure delinquency of friends. Thus, this supports my first hypothesis.

Table 4: Results from Linear Regressions of Delinquency of Friends vs. Juvenile Delinquency

Variable	Coef.	S.E	Standardized Coef.	Sig.
Friends Delinquency, reported by respondent	1.279	.020	.533	***
Friends Delinquency, reported by friends (Network Variable)	.453	.015	.286	***

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

H2: Members of friendship groups that are not close (are not cohesive) are less likely to be delinquent

Table 5 shows the results of the linear regression model used to measure the impact of the type of friendship network (cohesive or not) on juvenile delinquency. Examining the effect that the proportion of ties that were reciprocated has on juvenile delinquency revealed that there is very little relationship between the two variables. In addition, the small negative association that is present is not statistically significant. There is a stronger negative correlation between ego network density and juvenile delinquency and this correlation is found to be significant at the $p < .001$ level. This suggests that members of friendship networks that are close or are cohesive experience a decrease in juvenile delinquency. This does not support my hypothesis.

Table 5: Linear Regression of Type of Friendship Network vs. Juvenile Delinquency

Variable (Type of Friendship Network)	Coef.	S.E	Standardized Coef.	Sig.
Proportion of ties that were reciprocated	-.034	.087	-.004	
Ego Network Density	-.807	.150	-.061	***

*Note: * $p < .05$; ** $p < .01$; *** $p < .001$*

H3: Adolescents who are part of large friendship networks are less likely to be delinquent

Table 6 shows the results of the linear regression conducted to measure the relationship between size of friendship networks and juvenile delinquency. Although the results are statistically significant at the $p < .001$ level, there is a relatively small negative association

between the size of friendship networks and juvenile delinquency. This finding holds for both measures of network size, sum of all network neighbors and sum of reciprocated nominations, there is a small negative association. These results suggest that adolescents who are part of friendship networks with more reciprocated nominations (i.e. large friendship networks) experience a decrease in juvenile delinquency. Therefore, this supports my hypothesis.

Table 6: Linear Regression of Size of Friendship Network vs. Juvenile Delinquency

Variable (Size of Friendship Network)	Coef.	S.E	Standardized Coef.	Sig.
Sum of all network neighbors	-.048	.012	-.050	***
Sum reciprocated nominations	-.140	.021	-.084	***

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

H4: Adolescents who are part of small friendship networks that are close (i.e. high level of group cohesion) are more likely to be delinquent

Table 7 shows the results of the linear regressions used to test the interactions between size and type of friendship network and juvenile delinquency. Two separate regressions were conducted, one for each of the two different items used to measure delinquency of friends. The top of Table 7 contains the results for the delinquency of friends, reported by respondents. These regressions also used the variables specifically created to test interactions between small and large friendship networks and juvenile delinquency. Out of the four variables tested in the regression, the only variable that was statistically significant was delinquency of friends. For both small and large friendship networks, the size of the network has little effect on the relationship of friends' delinquency to respondents' own juvenile delinquency. The bottom of Table 7 shows the results for the delinquency of friends, reported by friends. In this case, the

results are similar to the findings for the other delinquency of friends variable. Thus, the results do not support the hypothesis that the relationship would be different depending on the size of friendship group.

Table 7: Linear Regression of Size of Friendship Network and Type of Friendship Network vs. Juvenile Delinquency

Variable	Coef.	S.E	Standardized Coef.	Sig.
Friends Delinquency, reported by respondent	.853	.027	.370	***
Sum of all network neighbors (size)	-.005	.014	-.005	
SmallFriendsDel	.005	.028	.002	
LargeFriendsDel	-.072	.059	-.012	
Friends Delinquency, reported by friends (network variable)	.358	.024	.209	***
Sum of all network neighbors (size)	-.029	.013	-.028	*
SmallFriendsDel 2	-.044	.027	-.026	
LargeFriendsDel 2	.072	.070	.011	

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 8 shows the results of the linear regression conducted to test the effect of the control variables on the relationships tested in the previous hypotheses. Two separate regressions were conducted, one for each of the two different measures of delinquency of friends. In both regressions there was a positive association between friends' delinquency and juvenile delinquency and the results were significant at the $p < .001$ level. For size of friendship network and juvenile delinquency, the results showed a small negative association in both regressions. In

both cases, the results were not statistically significant. Similarly, examining the impact of the type of friendship network when measured using Ego Network Density shows a negative association in both regression models. The results in Model 1 (top half of Table 7) are significant at the $p < .01$ level and the results in Model 2 (bottom half of Table 7) are significant at the $p < .10$ level. When type of friendship network is measured using the proportions of ties that were reciprocated, there is a negative association between type of friendship network and juvenile delinquency. These results are found in Model 1 and are significant at the $p < .10$ level. The results for the same measurement in Model 2 are not significant and differ from Model 1. They show a positive association between type of friendship network and juvenile delinquency.

Analyzing the results for the control variable gender also shows a difference in the results between models. In Model 1, where friends' delinquency is reported by respondents, there is a small positive association between gender and juvenile delinquency. The exact opposite is found in Model 2. In both cases, the results are not significant. The results for the remaining control variables, school adjustment and bonding and risk/sensation seeking are consistent across models. There is a positive association between risk/sensation seeking and juvenile delinquency and this is significant at the $p < .001$ level. The negative association between school adjustment and bonding and juvenile delinquency is also significant at the $p < .001$ level.

Table 8: Linear Regression Controls Added

Variable	Coef.	S.E	Standardized Coef.	Sig.
Friends Delinquency, reported by respondent	.853	.023	.369	***
Sum of all network neighbors (size)	-.012	.009	-.012	
Ego Network Density	-.321	.122	-.024	**
Proportion of ties that were reciprocated	-.141	.072	.018	*
Gender	.039	.046	.008	
Risk/sensation seeking	.529	.025	.208	***
School adjustment/bonding	-.680	.036	-.189	***
Friends Delinquency, reported by friends (network variable)	.331	.017	.193	***
Sum of all network neighbors (size)	-.012	.010	-.012	
Ego Network Density	-.252	.128	-.019	*
Proportion of ties that were reciprocated	.112	.075	.015	
Gender	-.018	.048	-.003	
Risk/sensation seeking	.762	.025	.300	***
School adjustment/bonding	-.929	.037	-.259	***

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Chapter 4

Discussion

This research seeks to provide answers to the following questions: 1) Do adolescents commit delinquent acts because of peer influence? 2) Does the type of friendship network play a role in juvenile delinquency? And 3) Do the size of friendship groups have an impact on juvenile delinquency? Of the four hypotheses examined in this research, two are supported by the data and subsequent analysis.

The first hypothesis: *adolescents who have friends who are delinquent are more likely to be delinquent*, is supported by the data. The strong positive association demonstrates that adolescents who report having friends who are delinquent experience an increase in juvenile delinquency. These results support previous research conducted in this area that found that crime is a collective behavior and juvenile delinquency is no different (Warr, 2002: 58). Additionally, they lend credence to one of the main parts of Differential Association Theory that states “the principal part of criminal behavior occurs within intimate personal groups.” Within friendship networks with delinquent members adolescents can learn the techniques of committing crime and the specific direction of motives, drive and rationalizations and attitudes about the behavior (Matsueda 2001).

The second hypothesis: *members of friendship groups that are not close (are not cohesive) are less likely to be delinquent*, is not supported data. The negative association between the type of friendship network and juvenile delinquency implies that those who are part of

friendship networks that are close (are cohesive), experience a decrease in juvenile delinquency. Kreager, Moody and Rulison reached similar conclusions when they studied group cohesion and juvenile delinquency. They determined that delinquent groups have weaker structural properties than non-delinquent groups (Kreager et al. 2011). This is similar to the findings of the present study.

The third hypothesis: *adolescents who are part of large friendship networks are less likely to be delinquent*, is supported by the analysis. Although the negative association is small, the results suggest that adolescents part of large friendship networks experience a decrease in juvenile delinquency. The fourth and final hypothesis: *adolescents who are part of small friendship networks that are close (i.e. high level of group cohesion) are more likely to be delinquent*, is not supported by the analysis. The results demonstrate that in both small and large friendship networks, there is little difference in the effect on juvenile delinquency when their friends are delinquent.

Implications for Future Research

Like with all research, this study can be improved by making changes in the future. First, the sample of the PROSPER dataset only contains data from largely rural communities in Iowa and Pennsylvania. Therefore, the generalizability of the findings may be more limited than a study with a more representative sample. It is suggested that researchers sample from urban communities as well to get a more representative sample of the target population. Additionally, the PROSPER study was implemented in areas with predominantly Caucasian-American populations. Because of this, there is the risk that the data is not representative of minority peer networks or populations. Increasing the number of urban communities included in the data

collection process should help create a sample that is more representative of minority populations.

Future research should also analyze other factors that could explain the relationship between friendship networks and juvenile delinquency. The three factors, delinquency of friends, size of friendship network and type of friendship network, discussed in this study are only a few of the many complexities of friendship networks. Examining the roles of parental monitoring and how much unsupervised time adolescents spend with friends could also help better the understanding of the relationship between friendship networks and juvenile delinquency (Osgood et al. 1996).

Conclusion

The current study aimed to add to the extensive research already conducted examining the relationship between friendship networks and juvenile delinquency. Adolescents are an important resource for understanding the origins of deviant and criminal behavior. The present study seeks to provide insight into adolescent's intimate personal networks (i.e. friendship networks) to better the understanding of how deviant behavior is learned and where it starts. This information is important when developing interventions and preventative programs to combat problem behaviors. The deviant behaviors adolescents learn now may stay with them for the rest of their lives. Because of this, it is of the utmost importance that this research on friendship networks continues to develop and grow in order to prevent future cases of juvenile delinquency.

Chapter 5 Appendix A

PROSPER Peers Partnership Codebook Questions and Answers

1. Measure: Juvenile Delinquency

CVARDEV (Sum of dichotomized items CDEVB01 – CDEVB13)

Question: In the past 12 months, how many times have you:

CDEVB01 – Taken something worth less than \$25 that didn't belong to you?

CDEVB02 - Taken something worth more than \$25 that didn't belong to you?

CDEVB03 – Beat up someone or physically fought with someone because they made you angry?

CDEVB04 – Purposely damaged or destroyed property that did not belong to you?

CDEVB05 – Broken into or tried to break into a building just for fun or to look around?

CDEVB06 – Thrown objects such as rocks or bottles at people to hurt or scare them?

CDEVB07 – Been picked up from the police for breaking the law?

CDEVB08 – Ran away from home?

CDEVB09 – Skipped school or classes without an excuse?

CDEVB10 – Carried a hidden weapon?

CDEVB11 – Avoided paying for things such as movies, rides, food or computer services?

CDEVB12 – Taken something from a store that you did not pay for?

CDEVB13 – Tried cutting yourself?

Answer choices:

- 1 – Never
- 2 – Once
- 3 – Twice
- 4 – Three or four times
- 5 – Five or more times

2. Measure: Delinquency of friends, reported by respondents

Question: Asked about closest friends:

CDVPRL1 – These friends sometimes get into trouble with the police.

CDVPRL2 – These friends sometimes break the law.

Answer choices:

- 1 – Strongly agree
- 2 – Disagree
- 3 – Neutral
- 4 – Agree
- 5 – Strongly disagree

3. Measure – School adjustment and bonding

Question: True (?)

CSCAT01 – I like school a lot.

CSCAT04 – School bores me.

CSCAT05 – I don't feel like I really belong in school.

CSCAT07 – I get along well with my teachers.

CSCAT10 – I feel that teachers are picking on me.

4. Measure – Risk/sensation seeking

Question: How often do you do:

CSENSK1 – what feels good, regardless of the consequences?

CSENSK2 – something dangerous because someone dared you to do it?

CSENSK3 – crazy things just to see the effect on others?

Answer choices:

1 – Never

2 – Occasionally

3 – Sometimes

4 – Usually

5 - Always

Appendix B

IRB Approval

Portal | PASS Explorer | ANGEL | My Utilities

Message

[<< back to inbox](#)

Message 1 of 18

Read

Mark as  Mark

Move to

[Reply](#) [Reply to All](#) [Forward](#) [Delete](#) [Full Headers](#) [Printer Friendly](#) [Previous](#) [Next](#) [Index](#)

From irb@psu.edu @
To mmr5313@psu.edu @
Subject STUDY00001274 has been approved
Date Tue, Dec 9, 2014 08:17 AM
Safe View On [\[Turn Off\]](#) [What is 'Safe View'?](#)
 Template:IRB_T_Post-Review_Approved

This is an official Penn State communication from CATS IRB - Penn State's Centralized Application Tracking System for Institutional Review Board applications. Do not reply directly to this e-mail.

Notification of Approval

To: Michelle Roney

Link: [STUDY00001274](#)

P.I.: [Michelle Roney](#)

Title: Thesis: Peer Networks

This submission has been approved. You can access the correspondence letter using the following link:

Description: [Correspondence for STUDY00001274.pdf\(0.01\)](#)

To review additional details, click the link above to access the project workspace.

Warning: This is a private and confidential message from Penn State's Centralized Application Tracking System (CATS) and is intended for the specified recipient only. If message is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this information is STRICTLY PROHIBITED. If you receive error, please contact the Office for Research Protections or the Human Subjects Protection Office (contact information below) to report the error. Thank you.

Office Contacts: This is a system-generated email. **Do not reply directly to this email.** If a reply is necessary, please reply directly to the Office for Research Protections or the Human Subjects Protection Office (contact information below). For best service, please directly contact the IRB Coordinator assigned to your submission - this info is found by clicking on the above link to your submission.

University Park and other campuses:

[Office for Research Protections Human Research Protection Program](#)

BIBLIOGRAPHY

1. Coleman, James S. *The Adolescent Society; the Social Life of the Teenager and Its Impact on Education*. New York: Free of Glencoe, 1961. Print.
2. Crosnoe, Robert. *Fitting In, Standing Out: Navigating the Social Challenges of High School to Get an Education*. Cambridge: Cambridge UP, 2011. Print.
3. Gest, Scott D., D. Wayne Osgood, Mark E. Feinberg, Karen L. Bierman, and James Moody. "Strengthening Prevention Program Theories and Evaluations: Contribution from Social Network Analysis." *Prevention Science* 12.4 (2011): 349-60. Web.
4. Haynie, Dana L. "Reconsidering Peers and Delinquency: How Do Peers Matter?" *Social Forces* 84.2 (2005): 1109-130. JSTOR. Web. 17 Mar. 2014.
5. Kreager, Derek A., Kelly Rulison, and James Moody. 2011, "Delinquency and the Structure of Adolescent Peer Groups", *Criminology*, 49: 95-127.
6. Matsueda, R. L. "The Current State of Differential Association Theory." *Crime & Delinquency* 34.3 (1988): 277-306. Print.

7. Osgood, Wayne, Daniel T. Ragan, Lacey Wallace, Scott D. Gest, Mark E. Feinburg, and James Moody. "Peers and the Emergence of Alcohol Use: Influence and Selection Processes in Adolescent Friendship Networks", *Journal of Research on Adolescent Health*, 501-12.
8. Osgood, Wayne, Mark E. Feinburg, Scott D. Gest, James Moody, Daniel T. Ragan, Richard Spoth, Mark Greenberg, and Cleve Redmond. 2013, "Effects of PROSPER on the Influence Potential of Prosocial Versus Antisocial Youth in Adolescent Friendship Networks", *Journal of Adolescent Health*, 174-79.
9. Osgood, Wayne D., Janet K. Wilson, Patrick M. O'Malley, Jerald G. Bachman, and Lloyd D. Johnston. 1996, "Routine Activities and Individual Deviant Behavior", *American Sociological Review*, 61: 635-655.
10. Osgood, D. Wayne, Amy L. Anderson, and Jennifer N. Shaffer. 2005. "Unstructured Leisure in the After-School Hours." In *Organized Activities as Contexts of Development: Extracurricular Activities, After-School and Community Programs*, Joseph L. Mahoney, Reed W. Larson, and Jacquelynne S. Eccles, Eds., p. 45-64. Mahwah, NJ: Lawrence Erlbaum.
11. Ragan, Daniel T., Wayne Osgood, and Mark E. Feinberg. "Friends as a Bridge to Parental Influence: Implications for Adolescent Alcohol Use." *Social Forces* (n.d.): n. page.

12. Warr, Mark. *Companions in Crime: The Social Aspects of Criminal Conduct*. Cambridge,

UK: Cambridge UP, 2002. Print.

ACADEMIC VITA

Michelle Roney
818 Bellaire Ave, Apt T212 State College, PA 16801
mmr5313@psu.edu

Education:

- The Pennsylvania State University – University Park, PA
- Bachelor of Arts in Criminology
- Bachelor of Science in Security Risk Analysis
- Honors in Criminology, Schreyer Honors College
- Thesis Title: Peer Networks: Impact on Juvenile Delinquency

Honors and Awards:

- Dean's List – Spring 2012, Fall 2012, Spring 2013, Fall 2013, Spring 2014, Fall 2014
- National Society of Collegiate Scholars (NSCS)

Professional Experience:

- Intern at the Federal Government - Summer 2014, Summer 2015
- Direct Care Support Staff - Success Rehabilitation Inc. at Rock Ridge

Activities:

- Member of Penn State Justice Association

Skills:

- Proficiency in Java and C++ programming languages
- Understanding of Common Criteria language and Protection Profile (PP) development
- Strong written and oral communication skills