CHAPTER 1: INTRODUCTION

1.1 Introduction

A brief analysis of trends in crime-related literature reveals widespread agreement that increases in gang proliferation are evident throughout the United States (Howell, 1994; Stinchcomb, 2002; Tolan & Guerra, 1994).   Youth gang prevalence appears to have spread as a concern from large cities to many small communities as well (Klein, 1995; Spergel, 1995), an issue attributed to the development of local problems versus relocation of urban youth gangs (Esbensen, 2000). Canadian studies note similar concerns of an escalating youth gang problem, with many noting gang activity and recruitment within correctional facilities that then spills over to communties, as significant contributing factors (Astwood Strategy Corporation, 2003; Craig, Vitaro, Gagnon, & Tremblay, 2002; Federation of Canadian Municipalities, 1994; Federation of Saskatchewan Indian Nations, 2003; Manitoba Justice, 2004; Mellor, MacRae, Pauls, & Hornick, 2005). These studies also noted that the majority of research into youth gang issues is American in origin, and may not fully describe the issues that are pertinent to Canadian populations due to the diversity of Canadian urban and rural centres (Mellor et al., 2005), and the diversity of issues faced by each jurisdiction. Limitations in application of American findings to the Canadian youth gang problem were noted particularly in relation to Canadian Aboriginal youth gangs (Astwood Strategy Corporation, 2003; Federation of Saskatchewan Indian Nations, 2003; Grekul & LaBoucane-Benson, 2008). The lack of a standardized national system of reporting of gang-related crimes, and varying definitions of what constitutes a "youth gang" across jurisdictions further complicates the analysis of youth gang trends in Canada (Astwood

1

Strategy Corporation, 2003; Criminal Intelligence Service Saskatchewan, 2005; Mellor et al, 2005).

A survey of Canadian law enforcement agencies conducted in 2002 (Astwood Strategy Corporation, 2003), indicated that 24% of those agencies surveyed (n = 264) reported having active youth gangs in their jurisdictions. According to this report, the law enforcement agencies that were surveyed reported a total of 434 youth gangs, with a total of 7071 youth gang members. Ontario reported the largest concentration of youth gangs (216) and youth gang members (3,320), followed by the province of Saskatchewan (reporting 28 youth gangs and 1,315 youth gang members). On a per capita basis, the survey reported 0.24 youth gang members per 1,000 population, with the highest per capita youth gang members being reported from the province of Saskatchewan (1.34 youth gang members per 1,000 population). This same report indicated that 57% of the survey participants reported the belief that the youth gang problem in their jurisdiction was getting worse. It should be noted that this survey was based solely upon the opinions of law enforcement personnel, and focused only on those youth who had come to the attention of law enforcement agencies.

The diversity of Canadian urban and rural jurisdictions, the lack of standardized definitions and reporting of young gangs and membership, the lack of consensus regarding risk and protective factors, and the relative lack of Canadian-specific research all seem to contribute to an often uncoordinated, unsystematic approach to youth gang intervention (Mellor et al., 2005). While early intervention appears to be key (Mellor et al., 2005; Gatti, Tremblay, Vitaro, & McDuff, 2005), difficulties in identifying who may

be at risk and in identifying dynamic intervention variables remains an area for development.

1.2 Purpose of this Study

The purpose of this study is to contribute to the research regarding adolescent gang affiliation and the identification of individual-level alterable characteristics that may be targeted in prevention and intervention efforts. It is an exploratory study that investigated the relationship of measures of social/emotional competency and aggression to gang affiliation and to group (non-gang) affiliation. Patterns of relationships between genders on the study measures were investigated, as were the significance of differences between outlier groups. The aim is to consider the use of measures of social/emotional competency as tools in informing the development of youth gang affiliation prevention and intervention efforts.

The literature regarding adolescent gang membership appeared to be supportive of a developmental model in which interpersonal, intrapersonal, and community-level processes reciprocally impact one another in either protective or risk-enhancing patterns. While demographic predictor variables have been identified, the literature also emphasized caution in their interpretation due to the fact that the majority of adolescents who fit within these demographic variables did not in fact become gang members. The most consistently identified factor associated with gang membership appeared to be delinquent peer association, which was characterized as both causal of, and potentiated by, gang membership.

Entrenchment in gang association appears to follow a progressive pattern. For example, youth may first start spending time around established gang members, and then

progress to experimentation with the gang persona, long before any transition to being actual gang members. In addition, youth gangs themselves seem to be differentially structured according to increasingly formalized, organized, and criminalized degrees. Association at early stages or with less structured groups tends to be fleeting for some youth. Early association with less organized groups tends to be initiated as a means of meeting needs to belong for some youth with maladaptive coping styles. New gang affiliates may then be socialized into an increasingly criminalized pattern of behavior and association. Early intervention in the transitional stage, or prior to association beginning appears to be key to preventing further entrenchment and stabilization of gang membership.

Studies of youth populations who may be at risk for potential gang involvement, tend to focus heavily on demographic variables, which can be misleading and tend not to focus on alterable characteristics of the individual youth. While rejection by pro-social peers and affiliation with delinquent peers has been identified as a primary predictor of gang affiliation, little attention has been paid to what interpersonal and/or intrapersonal factors or competencies contributed to this differential rejection and affiliation. Youth in the transitional phase of gang membership who have not fully committed to the gang lifestyle were identified as the most amenable to intervention. This study therefore proposes an exploratory design to investigate whether a relationship exists between measures of social/emotional competency and measures of degree of gang affiliation in transition-aged youth. The identification of a relationship between these variables of interest would provide direction for further investigation of risk and protective factors, and would provide a means of identifying behaviors and skills for targeted intervention.

The BarOn EQ-i: Youth Version (Bar-On & Parker, 2000) was selected as a standardized measure of social/emotional competency for this study. In addition, given the research that pointed specifically to interpersonal aggression as a primary factor involved in both peer rejection and gang joining behavior, a measure of aggression – the Aggression Questionnaire (Buss & Perry, 1992) - was also examined for its relationship to degree of gang affiliation. Given the importance of group belonging as a key developmental task in adolescence, and given that the literature queries the role of access to structured activities as a protective factor, then the relationship between general (non-gang) group affiliation and social/emotional competency measures was also investigated. The relationship between non-gang group affiliation and gang affiliation was also examined. Differences between genders were examined in the study, and finally, the significance of differences between outlier groups on the study measures was explored.

1.3 Ethical Considerations

Ethical approval to conduct this study was obtained from the University of Saskatchewan Behavioral Research Ethics Board. See Appendix A. This study was deemed to be of low risk to participants and did not involve deception of participants. Because the study participants were minors, written youth assent and parental consent was obtained for all participants. Appendix B contains the youth assent form and Appendix C contains the parental consent form used for this study. Confidentiality was ensured throughout. All data will be maintained for a minimum of five years in a secured facility, in accordance with University of Saskatchewan regulations.

CHAPTER 2: LITERATURE REVIEW

This chapter contains a summary of an examination of the literature related to adolescent gang affiliation and Social Emotional Competency. Demographics, definitions, risk factors and explanatory models regarding delinquent peer association and gang affiliation are summarized. The concept of social/emotional competency and the link to peer acceptance or rejection and delinquent peer affiliation is examined. Finally, the research hypotheses that were tested in this study are presented.

2.1 Adolescent Gang Affiliation

2.1.1 Demographics

The consensus in the research literature indicated that minority populations are disproportionately represented in gang membership (Flannery, Huff, & Manos, 1998; Howell, 1994). While acknowledging the link between ethnicity and gang-membership, research also pointed out that the ethnic representation within gangs has shifted throughout history (Lahey, Gordon, Loeber, Stouthhamer-Loeber, & Farrington 1999), and it also noted that Caucasian gang members may make up a larger proportion of gang membership in smaller, more ethnically homogeneous communities (Esbensen, 2000). These findings would suggest a more direct link with marginalization and disenfranchisement of youth than with ethnicity. While males continue to make up the majority of gang members (Howell, 1994), it was noted that female gang membership is growing, with estimates indicating that females account for more than one third of youth gang membership (Esbensen, 2000). In their longitudinal study of over 1000 youth (from age 13 to 22 years old) in Rochester, NY, Thornberry, Krohn, Lizotte, Smith, and Tobin

(2003) found that there did not appear to be significant differences in the rates of gang membership between male and female subjects. They did find that female membership appeared to be clustered in early adolescence, with few females transitioning to stable gang membership past one to two years, whereas a higher percentage of males remained gang members beyond early adolescence. The age range of youth gang membership was generally estimated to range from 12 – 24 years of age (Esbensen, 2000; Flannery et al., 1998). Membership has been found to become stable (e.g., youth transitions to maintaining gang membership for more than a year) at age 13 (Craig et al, 2002), with membership beginning as young as 8 years old and peaking at age 17 years (Flannery et al, 1998).

Canadian demographic research into youth gang membership, while limited, indicated a diverse picture. The 2002 Canadian Police Survey report (Astwood Strategy Corporation, 2003) indicated a high concentration of African Canadian/Black youth gang members in Quebec (51%), Nova Scotia (48%), and Ontario (36%); and a high concentration of First Nations youth gang members in Saskatchewan (96%), Manitoba (58%), and Alberta (58%). British Columbia reported the highest concentration of Asian youth gang members (37%), and Ontario reported the highest concentration of East Indian/Pakistani youth gang members. Caucasian/White youth gang members were fairly equally reported in Ontario, Quebec, British Columbia, and Manitoba (ranging from 21% to 26%), with 47% being reported in Nova Scotia, and Saskatchewan and Alberta reporting only 2% and 8%, respectively. The age of youth gang members nationally within Canada was reported by the survey to include 10% of those counted to be under 16 years of age, 39% between the ages of 16 to 18 years, 37% between 19 to 21 years old,

and 14% to be over 22 years of age. Variability was noted between provinces, with the province of Saskatchewan reporting the highest percentage of youth gang members under the age of 18 (67%). A high degree of consistency was noted in gender reporting across jurisdictions, with 94% of Canadian youth gang members reported to be male. The province of British Columbia reported the highest incidence of female youth gang membership (12%). It should also be noted that the numbers reported represent estimates of youth gang members known to police, and provided by the law enforcement personnel who responded to the surveys.

2.1.2 Definitions

Despite the agreement amongst most literature sources that the youth gang issue is a growing area of public concern, there remain variable definitions of what constitutes a gang (Esbensen, 2000; Esbensen, Winfree, He, & Taylor, 2001; Flannery et al., 1998; Gordon, 2000). This lack of consensus regarding basic definitions likely contributes to the range of findings regarding the prevalence of gangs, the contributing factors to gang membership, and to the diverse viewpoints regarding best forms of interventions (Bjerregaard, 2002; Esbensen et al., 2001). The breadth of the definition of youth gangs has also been noted to impact the identified prevalence rates (Esbensen et al., 2001; Bjerregaard, 2002), with reported prevalence of youth gang membership being noted to decrease as the definition becomes more specific and restricted. This relationship is potentially reflective of varying degrees of involvement (Esbensen et al., 2001). Youth who are more peripherally involved do not identify with the more extreme degrees of deviance reflected in the most restrictive definition of youth gang, such as participation in

organized criminal activity, existence of a hierarchical structure, and use of common symbols.

Levels of gang involvement within a specific, organized gang, have been labelled in some research literature as wannabes, associates, and core members (Caldwell & Altschuler, 2001; Spergel, 1995). Core members appear to be those individuals who have clearly adopted the gang lifestyle, engaged in organized criminal activity, have clearly defined roles within the gang's hierarchy, and tend to identify themselves as gang members when the most restrictive definition is applied (Esbenson et al., 2001). Associates are individuals who may participate in gang activities, but who are not fully dedicated to the lifestyle and are not considered key parties in the hierarchy. They may identify themselves as gang members under certain criteria (such as associating with gang members and occasionally wearing gang colors), but not under the most restrictive definition (Esbensenson et al., 2001). Wannabes tend to be younger, and early in their identification with the gang. They may tend to identify only with certain aspects of a gang definition, such as knowing gang members, and hanging out with gang members (Esbenson et al., 2001). Individuals in this category are interested in gang membership but have not yet committed to this lifestyle. Their affiliation may be transient in nature and of the three levels, are likely most amenable to intervention.

Some commonly accepted criteria for a group to meet the definition of a gang are as follows: membership is greater than two, there is recurrent interaction amongst members of the group, the group shares a common sense of identity (e.g., as demonstrated by a shared name, symbols, etc), there is a formal organizational structure, there is an identified leadership hierarchy, the group is usually identified in a specific area

or territory, and members of the group engage in delinquent or criminal behavior together (Bjerregaard, 2002; Esbensen, 2000; Flannery et al., 1998).

In their review of Canadian programs and services targeting the youth gang problem, Mellor et al. (2005) proposed a five-part multi-dimensional conceptual framework that could be used to categorize different types of gangs with whom Canadian youth may be involved. This model was built on work done by Gordon (1993, 2000), and Matthews (1993), who asserted that gang involvement should be considered on a continuum, from informal groups of youth through to criminal organizations. The model proposed by Mellor et al. considered the dimensions of Activity, Motivation to Join, Recruitment, and Exit Strategies, that they proposed could be utilized to identify specific types of gang activity within Canada. Within their model, they identified five distinct group/gang categories. The authors stressed that there was no empirically supported evidence to suggest that youth shift in a step-by-step direction through the categories; however, the model does describe an escalation in degree of criminal activity, hierarchical organization, and intensity of recruitment and exit strategies across the five categories. The five levels they proposed in their study are as follows:

Type A: Group of friends. Type A consisted of a group of youth who regularly spent time together and engaged in little to no criminal activity. Focus was on social relationships and/or participation in organized activities (such as sports teams, extra-curricular activities, etc). Structure was loose and motivation to join included companionship, sense of belonging, and sharing of interests. The authors noted this type of association as healthy and important in making the transition from adolescence to

adulthood. They also noted that such groups could be mislabelled by authorities as a criminal gang.

Type B: Spontaneous group/gang activity. Type B consisted of a group of youth who came together spontaneously, primarily for social activity, and who occasionally engaged in spontaneous, situational criminal activity. No structured hierarchy or formal leadership existed. Motivation to join may be similar to Type A, however also included protection from other youth, and often developed where gang membership was considered normal or part of the neighbourhood culture, and where there was a lack of access to organized activities. Recruitment tended to occur through a process of drifting together of school/neighbourhood peers who shared common interests.

Type C: Purposive group/gang activity. The group was formed for the purpose of carrying out criminal activity, which may have been motivated by economic and/or idealistic reasons. Type C groups generally had more definite organizational structure than Type B gangs, and tended to be small in size. Motivation to join included basic survival, access to recognition and success, excitement, or seeking justice. Exit strategies included police intervention (e.g. arrest).

Type D: Youth street gang. These groups of youth formed a semi-structured organization for the purpose of engaging in criminal activity for economic gain and/or violence against rival gangs. Organization was hierarchical in nature, and the group may have had links to organized crime, but acted independent from other groups. A code of conduct and multiple levels of involvement existed. Motivation to join included access to money, drugs, power, and protection; a lack of alternatives, belonging, and alienation from the rest of society. Formal initiation and exit strategies existed.

Type E: Structured criminal organization. Groups were highly structured, and formed for the purpose of engaging in planned, organized, profit-driven criminal activity. These groups were highly organized and hierarchical in nature. Criminal activity and violence are central and extreme. The group included national and/or international connections. Leadership positions were generally held by highly criminalized adults. As in type D groups, multiple levels of involvement existed. Recruitment, initiation, and exit strategies were formalized and often extreme in nature.

Mellor et al.'s (2005) description of the range of youth gang affiliation as summarized in the preceding paragraphs serves to illustrate that use of a restrictive definition of a gang will only represent a narrow band within the continuum of gang affiliation. It is also evident that those affiliated with less organized gang groups may not come to the attention of law enforcement officials, however may be amenable to, and may benefit from, prevention and intervention efforts.

2.1.3 Models of Conceptualizing Delinquent and Gang Behavior

A review of the literature indicated variability in the conceptualization of the origins of and contributors to gang joining. This literature ranged from viewing the phenomenon as simply an extreme expression of juvenile delinquency, to theories that sought to identify characteristics specific to youth who join gangs as reflecting patterns that were different than those exhibited by non-gang members. As Mellor et al. (2005) indicated, reasons for joining varied, depending upon the type of group/gang with whom youth affiliated themselves.

Many studies within gang research did not well distinguish between high risk youth who joined gangs, and those who did not (Eitle, Gunkel, & Van Gundy, 2004;

Esbensen, 2000). Studies tended to characterize youth who joined gangs as adolescents further along the continuum of deviance, pointing to the same demographic predictors (e.g., male, low socioeconomic status, family disruption, ethnic minority, etc) for general delinquency. However, it has also been found that a focus on demographic factors alone has not been sufficient, due to the fact that the majority of youth who fit these characteristics do not in fact become gang members (Esbensen, 2000). The lack of a clear differentiation between gang and non-gang members has been attributed to the tendency to focus on retrospective studies of identified gang members, versus prospective studies of groups of adolescents who may or may not become gang members (Eitle et al., 2004). The transactional developmental model described by Dodge & Petit (2003) and Agnew's General Strain Theory (1999) provided several examples that illustrated the application of models of interaction between individual, interpersonal, and contextual/community factors as considerations of youth gang formation and joining. The applicability of these models was supported by more current gang research that described an interaction effect amongst risk factors at the individual, family/peer, and macro-social or community levels (Eitle et al., 2004; Esbensen, 2000; Flannery et al., 1998; Lahey et al., 1999; Spergel & Curry, 1992; Stone, 1999).

2.1.4 Risk Factors for Gang Membership

Risk factors for gang membership at the individual level have been identified as: drug and alcohol use, lack of self esteem, seeking protection (Spergel & Curry, 1992), a history of victimization of violence, poor emotional management, a sense of hopelessness about the future, a use of violence to settle disagreements (Flannery et al., 1998), lesser experience of guilt, greater impulsivity (Esbensen et al., 2001), greater cumulative

exposure to stressful life experiences (Eitle et al., 2004), and deficits in social information processing abilities (Dodge, 1993).   Risk factors at the interpersonal level were identified as: poor parental management, lack of parental control, school failure, rejection by peers (Flannery et al., 1998), family breakdown, and a lack of role models (Spergel & Curry, 1992). Interaction with and commitment to delinquent peers have been identified in several studies as the strongest predictor of adolescent gang membership (Esbensen, 2000; Gordon et al., 2004), although Lahey et al. (1999) claimed that delinquent peer relationships were only predictive of gang membership in early adolescence. Family financial situation (Eitle et al., 2004; Lahey et al., 1999), and level of parental supervision (Esbensen et al., 2001; Lahey et al., 1999) have also been identified as risk factors for gang membership. Macro-level or community/system level risk factors included: poverty, unemployment, increased opportunity for crime, discrimination/racism, lack of community services (including recreation and support options), labelling, neighbourhood resident transience, disorganized neighbourhoods/community, heterogeneity of neighbourhood population (Flannery et al., 1998; Spergel & Curry, 1992), a lack of viable financial and social alternatives (Gordon, 1993, 2000; Grekul & LaBoucane-Benson, 2008; Mellor et al., 2005), and a neighbourhood culture supportive of gang joining (Mellor et al., 2005).

In their longitudinal study of delinquency and youth development in Rochester, Thornberry et al. (2003), also found risk factors for gang membership at various macro and micro levels. They found, however, that these factors differed for male and female subjects in their study. For female subjects, the following factors were found to be statistically significant for gang joining: neighbourhood disorganization, low attachment

to teachers, lack of college aspirations, low college expectations, low parental college expectations, early dating, externalizing behaviors, delinquent beliefs, and a pattern of engaging in general delinquency. For male subjects, the following statistically significant risk factors were identified: subjects were primarily African American, low parental education, family income below the poverty line, both biological parents not present in the home, low parental supervision, an official record of parental mal-treatment, low commitment to school, weak attachment to teachers, low parental expectations of subjects' college attendance, low score on standardized math test, association with delinquent peers, early dating, precocious sexual activity, depression, and exposure to negative life events.

Eitle et al. (2004) found that the exposure to stressors in childhood (such as trauma, abuse, etc) was not a primary predictor for gang membership in adolescence. Rather, they surmised that individuals' experience of stressors early in life acted as a catalyst or marker for engagement in later behaviors that served as stronger predictors for gang membership. For example, they found that youth who later became gang members demonstrated a higher degree of deviant behavior at a young age prior to joining a gang than did youth who did not later join a gang. The authors hypothesized that this factor, in conjunction with other interpersonal and community level factors (such as access to deviant peers), contributed to youth engaging in deviance as a means of coping with stressors. General delinquency and violence risk factors could be seen to also apply in this model in which the individual's social information processing (i.e. the psycho-social lens through which the individual interprets his/her world), individual beliefs regarding the role of violence and aggression, and the lack of effective social skills and social

problem solving strategies were all identified as being linked to aggressive and anti-social behaviors (Dodge, 1993).

A study of youth gang involvement in China tested protective factors associated with social control theory, social learning theory, and cognitive development (Ngai, Cheung, & Ngai, 2007). This study compared results for youth gang involvement in Hong Kong, Shanghai (mainland China), and Guangzhou (mainland China), theorizing that differences would exist due to the diverse socio-cultural contexts of each of the cities. Hirschi (1969) described social control theory as the informal control exerted by an individual's bonds to society (e.g., attachment to parents, school, and peers; involvement in conventional activities; and belief in a common value system). Social Learning Theory would suggest that youth learn delinquent behaviour from like-minded peers, media, and other models of behaviour that reinforce engaging in delinquent behaviour (Akers, 1998). Cognitive Development Theory, as explained by the authors of the Chinese study, refers to an individual's ability to analyze social and individual problems in order to act in a pro-social (non-delinquent) manner. The authors found that in Hong Kong (defined as a more capitalist-individualist society), cognitive development factors and parental influences (social control) had the greatest protective impact on gang-joining behaviors. Within the groups studied in Shanghai and Guangzhou cities (defined by the authors as more socialist-collectivist in context than Hong Kong), professional and community support was identified as most protective. Social learning theory in the form of the impact of friends' moral beliefs was found to have a significant effect in all three cities. This study illustrated the importance of consideration of context when examining risk and protective factors for gang affiliation.

Adaptation to middle school (in the form of peer acceptance, academic success, and refraining from anti-social behaviour) has been found to be protective in regards to gang-joining behaviour (Dishion, Nelson, & Yasui, 2005). As well, relationships with adults and the parenting practices they receive have been found to have moderating effects both on gang joining (Ryan, Miller-Loessi, & Nieri, 2007), and on moderating the degree of delinquency and substance-use youth engage in once they become gang members (Walker-Barnes & Mason, 2004).

Both similarities and differences have been found in regards to reasons why girls and boys join gangs. Both genders report reasons such as access to financial opportunities, protection, and lack of alternative social and recreational opportunities (Stone, 1999). However, according to Stone, girls were more likely to report joining gangs for protection. While girls and boys were equally likely to cite financial reasons for joining a gang, boys who cited this reason were more likely to report feeling that they did not have access to good opportunities or legitimate means of supporting a family. Both genders were equally likely to state that, while a factor, access to alternative social/recreational activities would not have made a difference in their decision to join the gang. According to Thornberry et al. (2003), girls and boys cited similar reasons for joining gangs, reporting being invited to join by friends or family members who were gang members as the most common reason, followed by joining for protection, and joining for access to fun and activities.

2.1.5 Impact of Peer Associations

The impact of peer association was noted throughout the literature as the major predictive factor of gang joining behavior, and as the major socializing factor in youth

gang members' use of violence (Craig et al., 2002; Cureton, 1999; Esbensen, 2000; Gordon et al., 2004; Lahey et al., 1999). The transactional developmental model of anti-social conduct problems described by Dodge and Petit (2003) can be applied to the above factors in which peers from similar circumstances who join gangs together, interpret their social reality through a common lens. The group's defiance of what is experienced as a socially rejecting world is then reinforced.

In regards to gang joining and involvement in group violence, Gordon et al. (2004) proposed an interaction effect between selection and socialization. In this model, more delinquent youth may seek out or be sought out by youth gangs (selection effect). Acceptance by and association with delinquent peers, and consequent exposure to greater opportunities for involvement in criminal behaviour, (socialization), served to reinforce and exacerbate the use of violence and other forms of anti-social behaviors (e.g., drug sales). This study followed others that had examined various models of gang-joining, in which selection (already delinquent/violent youth are attracted to gangs), facilitation (associating with gangs leads young people to engage in crime), and enhancement (a combination of selection and facilitation) factors were considered (Lacourse, Nagin, Tremblay, Vitaro, & Claes, 2003; Thornberry, Krohn, Lizotte, & Chard-Wierschem, 1993). A longitudinal study of 765 boys from disadvantaged areas of Montreal (Gatti, Tremblay, Vitaro, & McDuff, 2005) tested the selection, facilitation, and enhancement models in regards to levels of delinquent behaviors and substance abuse amongst boys who were identified as never having been a gang member, transient gang members, or stable gang members. In their study, Gatti et al. (2005) did not find support for the selection hypothesis. Rather, boys who became transient gang members engaged in

18

similar levels of pre-gang delinquency, as did those who never became gang members. Support was found for the facilitation model for boys who were transient gang members, in which degree of delinquency increased post-gang-joining. Support was found for the enhancement model for boys who became stable (lasting) gang members, in which these boys demonstrated a greater degree of delinquency prior to gang joining, and demonstrated an escalating pattern of delinquency post-gang joining.

Cureton (1999) described a central difference between delinquent youth who joined gangs versus those who did not, as being related to a process whereby youth who join gangs defiantly reject the deprivation of their social world and seek gang membership as a viable means of improving their social and economic position.

A key pathway to stable (lasting) adolescent gang membership was identified by Craig et al. (2002) as involving early development of behavioural problems (externalizing behaviors); low levels of anxiety; failure to learn conventional pro-social behaviours, through association with a delinquent peer group; and a reciprocal influence wherein anti-social behaviors are reinforced and exacerbated through association with delinquent peers.

Differentiation has been made between reasons why youth may join gangs initially, and their subsequent transition to increased involvement in delinquency. Through interviews of then-current and former gang members, Sirpal (1997) identified the top reported reasons for youth joining gangs in the first place, as related to a sense of loneliness and not fitting into society, as well as a lack of recreational opportunities. Once involved in a gang, reasons for staying and transitioning to organized criminal activity became related to the availability of money, the feeling of importance from being

connected with the gang, no fear of punishment due to the gang association, and easy access to weapons.   These findings were also supported by Gordon's (2000) study of Vancouver street gang members. As summarized previously, Mellor et al. (2005) explained the model differently, through the identification of the different types of groups/gangs as having different motivators for joining.

2.1.6 Factors Influencing Delinquent Peer Association

A central task of adolescent development is identified as the formation of a group identity, that is, the development of an understanding of groups, a sense of one's self as a member of a group, and the social and emotional regulation skills required to successfully navigate through one's social world (Newman & Newman, 2001). Accomplishing these tasks provides a stepping-stone for successful transition to the adult social world of work, family, and community roles.

Given the focus on delinquent peer association as the primary predictor of gang membership, the question of what influences some adolescents to abstain from involvement in pro-social peer associations and to instead engage in associations with delinquent peers, becomes important. According to some research (e.g., Gordon et al, 2004), adolescents who joined gangs were both more violent prior to joining and became more violent following joining, supporting the enhancement (combination of selection and socialization) model. Study of personality factors associated with youth delinquency, indicated that avoidant coping styles (e.g., venting, denial, and avoidance) and impulsivity (e.g., tendency to act without thinking, difficulty in managing one's emotions) were the individual factors most strongly tied to delinquent behaviors (Cooper, Wood, Orcutt, & Albino, 2003).

Research into childhood peer rejection indicated that the children rejected by their peers include two main groups: those who exhibit aggressive behaviors towards their peers, a disrespect of authority, hostile social withdrawal, and self-management difficulties, and those children who tend towards high anxiety, introversion, and social inhibition (Goldman & Akin-Little, 2002). Aggressive behavior was reported as the pattern most predictive of maintained peer rejection, with the degree of peer rejection increasing the longer the aggressive behavior pattern is maintained (Goldman & Akin-Little, 2002). As described by a reciprocal model of delinquency and gang membership, the more a child is rejected by peers due to inappropriate or aggressive behaviors, the less opportunity he or she has of developing alternative behavior patterns, and the more the rejection is reinforced and maintained. With continued social rejection, the development of self-regulation abilities is impacted negatively, and an increased risk of developing externalizing behaviour difficulties is noted (Newman, Lohman, & Newman, 2007). The more this is the case, the greater the likelihood that such youth will seek one another out as other options for association become limited. The success of interventions that target the building of self-management skills, learning of appropriate social skills and focus on re-attribution training [e.g. addressing patterns of learned helplessness and low sense of socially-related self-efficacy (Goldman & Akin-Little, 2002)] support this theory.

Early identification of peer-rejected children, who may be at risk for engagement in future delinquent peer associations, has been identified as problematic in schools, due to the fact that teacher-nomination of youth at-risk for this behavior pattern has been found to be inconsistent and less reliable than peer nomination (Craig et al., 2002; Goldman & Akin-Little, 2002). Peer-nomination of unpopular students in classes has

been seen to be problematic as well, and it provided little information as to specific, measurable behavioural targets amenable to intervention (Dodge & Murphy, 1984).

<center>2.2 Social/Emotional Competency</center>

Many of the factors identified as contributing to peer rejection and delinquent peer association (e.g., poor emotions management, avoidant coping styles, aggressive interpersonal interactions) can be fit within the constructs of emotional and social competency or social/emotional intelligence. Being able to construct a positive sense of social (group) identity involves the development and use of effective coping skills, problem-solving skills, communication skills, and emotional regulation (Newman et al., 2007). Social competence has been defined in general terms, as the social, emotional and cognitive skills and behaviors that are needed by children and youth for successful social adaptation and acceptance (Welsh & Bierman, 1998). Variations in definition have been noted in the literature regarding social competency (Topping, Bremner, & Holmes, 2000), with current models giving equal consideration to emotional, cognitive, and behavioural components of social competence. Context, has also been identified as an important factor in evaluating social competence, which led to a more specific definition of social competence being developed as "the possession and use of the ability to integrate thinking, feeling, and behaviour to achieve social tasks and outcomes valued in the host context and culture" (Topping et al., 2000, p. 32).

Self –efficacy, or the belief held by the individual that he or she has the skills to achieve a desired social result, was identified in some research as a key component within emotional competence (Buckley, Storino, & Saarni, 2003; Saarni, 2000). Saarni (2000) identified the skills comprising emotional competency as: awareness of one's own

<center>22</center>

emotional experiences; skill in recognizing others' emotions; skill in using the emotional vocabulary and expression common to one's own sub-culture; capacity for empathy; skill in recognizing that internal and external expression of emotional experience are not always congruent or need to be; skill in using self-regulation strategies to cope with distressing emotions; awareness of emotional reciprocity in relationships; and the capacity for emotional self-efficacy. The consequences of possessing emotional competence are defined as being able to skilfully manage one's emotions, having a subjective sense of well-being, and using adaptive resilience in future stressful circumstances (Saarni, 2000).

Patterns of emotional expression, and skills related to the evaluation of self and others in social situations, were identified as important factors in developing peer acceptance, and in forming and maintaining friendships (Izard, 2002). Dodge and Murphy (1984) identified individual traits or skills, and their impact on others in social situations as major components for consideration in a model of social competence. In their model of social information processing, decoding skills (the ability to accurately identify social cues), decision skills (deciding how to respond in a given social situation), and enactment skills (the ability to actually carry out the behaviour decided upon), together with self-regulation and monitoring all contributed to a child's performance in a social situation and the degree to which he or she could be judged to be socially competent.

The Bar-On model of emotional intelligence combined the concepts of emotional and social intelligences into one construct defined as "a cross-section of inter-related emotional and social competencies that determine how effectively we understand and

express ourselves, understand others and relate with them, and cope with daily demands and pressures" (Bar-On, 2004, p. 117). According to the research, average scores and above-average indicated potential effectiveness in social and emotional functioning, whereas below average scores indicated the potential for emotional, social, and behavioural problems (Bar-On, 2000).

The youth version of the BarOn Emotional Quotient Inventory (BarOn EQ-i: YV) is a self-report measure of behavior that provides an estimate of one's emotional and social intelligence (Bar-On & Parker, 2000). Bar-On (2004) identified 10 core competencies (Self-regard, Emotional Self-Awareness, Assertiveness, Empathy, Interpersonal Relationship, Stress Tolerance, Impulse Control, Reality Testing, Flexibility, and Problem-solving), as well as 5 correlates or facilitators of emotionally and socially intelligent behavior (Independence, Social Responsibility, Self-Actualization, Optimism, and Happiness). These 15 factors were clustered according to 5 composite scales: Intrapersonal, Interpersonal, Stress Management, Adaptability, and General Mood. Brief descriptions of the subscales are found in Appendix D. The BarOn EQ-i has been found to have strong predictive validity in regards to successful school performance, successful performance in the work-place, and emotional well-being (Bar-On, 2004). The social/emotional competencies described in Bar-On's model were believed to contribute to the individual's personal effectiveness in relation to others and to self-management, thereby impacting psychological well-being. The social/emotional competencies measured by the BarOn EQ-i that impact one's socially intelligent behaviour included the ability to be aware of, to understand, to control, and to express emotions in an effective manner (Bar-On, 2000). The competencies were identified by

Bar-On as alterable (as demonstrated through responsivity to targeted intervention), and as evolving over time with age and experience.

2.3 Identification of Research Questions

The research hypotheses explored within this study include the following:

(1) There is a significant relationship between degree of gang affiliation and measures of social/emotional competency. Specifically, an inverse correlation between degree of gang affiliation and measures of social/emotional competency was anticipated.

(2) There is a significant relationship between degree of gang affiliation and measures of aggression. Specifically, a positive correlation was anticipated between degree of gang affiliation and measures of aggression.

(3) There is a significant relationship between degree of group affiliation and measures of social/emotional competency. Specifically, a positive correlation between degree of group affiliation and measures of social/emotional competency was anticipated.

(4) There is a significant relationship between degree of group affiliation and measures of aggression. Specifically, an inverse correlation between degrees of group affiliation and measures of aggression was anticipated.

(5) There is a significant relationship between degree of group and gang affiliation measures. Specifically, an inverse correlation between degree of group affiliation and degree of gang affiliation was anticipated.

(6) Significant differences in the above relationships were anticipated between male and female study participants.

(7) Significant differences were anticipated between outlier groups who scored

beyond the mean (either greater than 1 standard deviation above or below the

mean) on group and gang affiliation measures. Specifically, it was anticipated

that subjects in the High Group Affiliation Group would differ significantly from

subjects in the High Gang Affiliation Group on measures of social/emotional

competency and aggression. Subjects in these groups were also expected to differ

significantly from subjects who scored within one standard deviation from the

mean on the group and gang affiliation measures, and from those who scored

below the mean on both group and gang affiliation, and above the mean on both

group and gang affiliation measures.

CHAPTER 3: METHODOLOGY

3.1 Participants

The sample group for this study included adolescents ages 12 years to 15 years old in grades seven and eight from four schools within a western Canadian city school district. Adolescents who were in school versus adolescents in custodial settings were recruited in order to more clearly identify those youth who were likely to be earlier or transitional in their gang affiliation. A range of neighborhood and individual socio-economic status was included in the study design through inclusion of youth from a variety of schools city-wide. Male and female participants were included in the study. Because the BarOn EQ-i: YV normative studies did not include any special education students, youth receiving school-based special education services were excluded from the study. Non-English speakers were also excluded from the study. Exclusion of these groups was determined by distribution of the parental consent and youth assent packages by school personnel. Due to the study participants being adolescents versus adults, both youth assent and parental consent was sought prior to inclusion of individuals within this study. Refer to Appendix B and C for copies of Assent and Consent forms, respectively.

Student assent and parental consent forms were circulated to all students within the participating schools who met the above inclusion (male and female students in grades seven and eight, between the ages of 12 – 15 years old) and exclusion criteria (students receiving special education services and non-English speakers). The researcher attended the schools and spoke to the students in the respective classrooms to provide background information on the study prior to dissemination of the recruitment packages.

Recruitment packages including a description of the study, parental consent, and youth assent forms were delivered to the participating schools by the researcher. A total of 220 recruitment packages were distributed by the schools to eligible students. Distribution of packages was done by the participating schools' personnel in order to ensure that the confidentiality of students and their families was maintained. Names and numbers of students in each class were not shared with the researcher as a further measure of confidentiality. Therefore, the number of packages distributed to students was based on the total number requested by the participating schools. A total of 123 packages were returned complete (representing a 56% return rate), including both signed parental consent and youth assent forms. It is not known if some students requested more than one package (e.g., if the initial package was lost), or if the schools did, in fact, distribute all of the packages delivered to them. Therefore, the return rate of 56% represents an estimate only. Of the 123 students who returned completed assent and parental consent forms, a total of 115 participated in the survey sessions. Of the 115 who participated in the survey sessions, 6 participants were excluded due to an Inconsistency Index score of greater than 10 on the BarOn EQ-i: YV. One of these excluded participants was also missing responses for all of the Aggression Questionnaire items and some of the BarOnEQ-i: YV items. The remaining 109 participants were retained for the study sample.

The gender of participants in this study was closely balanced between male and female subjects, with 57 female participants (52.3%) and 52 male participants (47.7%). Self-reported ethnicity of participants was overwhelmingly Caucasian (94.5 %), and the mean age of the overall sample was reported as 13.51 years old (range of 12.25 years to

15.33 years). The age of participants was distributed over a normal curve within the three

year range, with an approximately equal mean (13.51 years old), median (13.42 years

old), and mode (13.17 years old). The age of female subjects in the sample was slightly

skewed to the right, whereas the age of male subjects displayed little skew. The age

range for the total sample group and by gender is presented in Table 3.1.

Table 3.1

Sample Group Age Ranges

Group	N	Minimum (Years)	Maximum (Years)	Mean (Years)	Median (Years)	Std. Dev. (Years)
Total	109	12.25	15.33	13.51	13.42	0.70
Females	57	12.42	15.33	13.57	13.50	0.71
Males	52	12.25	14.83	13.44	13.29	0.68

3.2 Data Cleaning

3.2.1 Data Verification

All calculations of results from measures were re-checked twice to ensure

accuracy. Following entry of the data in the SPSS data table, ten survey packages were

selected at random. Every item was cross-checked between the questionnaires and the

items entered in the data table. In this verification process, one error in transcription was

noted and corrected. Due to one error being discovered, another fifteen survey packages

were randomly selected and cross-checked. No further errors were found. Therefore no

further packages were cross-checked. The frequency data tables were examined to ensure that the range of minimum and maximum values were within the valid range for each measure. No exceptions were noted.   Two study participants provided incomplete responses to the Aggression Questionnaire survey. Because the Aggression Questionnaire does not include processes for dealing with missing data, the results for the Aggression Questionnaire measures for these two participants were coded as 9999, therefore counted as missing data in the statistical analysis. Sample population sizes therefore differ by two when analyzing the Aggression Questionnaire results versus other measures.

3.2.2 Data Validation

As indicated previously, the Inconsistency Index of the BarOn EQ-i: YV was utilized as a validation index in this study. According to the BarOn EQ-i: YV technical manual, scores greater than 10 on the Inconsistency Index should be examined cautiously, due to the possibility of this score indicating random responding on the measure (Bar-On & Parker, 2000). Therefore, 6 participants were excluded from this study due to Inconsistency Index scores greater than 10. The BarOn EQ-i: YV includes a Positive Impression validity scale that screened for response patterns that were likely indicative of respondents faking-good or faking-bad. This scale was applied to the data obtained for this study, however no participants were excluded on the basis of this validity scale.

3.3 Study Design

3.3.1 Design

This study utilized a primarily correlational design to explore the relationship between measures of social/emotional competence, aggression, and degrees of group and gang affiliation. Male and female adolescent participants were asked to complete survey packages that included measures of their degree of affiliation with gang and non-gang groups, measures of social/emotional competence, and measures of aggression. Independent t-tests were utilized to assess for significance of differences between mean scores for male and female study participants. ANOVAs were utilized to assess for differences amongst outlier groups, on the measures of social/emotional competency and the measures of aggression. Using post-hoc comparisons, significant differences were analyzed between participants who scored greater than one standard deviation above the mean on the group affiliation measure (High Group Affiliation Group), greater than one standard deviation above the mean on the gang affiliation measure (High Gang Affiliation Group), greater than one standard deviation above the mean on both the group and gang affiliation measures (High-High Group), greater than one standard deviation below the mean on both the group and gang affiliation measures (Low-Low Group), and those who scored within one standard deviation of the mean on both the group and gang affiliation measures (Mean Group). Separate ANOVAs and post-hoc analyses were performed to assess for differences between groups on the social/emotional competency measures, and on the aggression measures.

3.3.2 Variables

Independent variables for this study included: (1) Gender (Female/Male), (2) Group (Non-Gang) Affiliation, and (3) Gang Affiliation. Dependent variables are the (1) Intrapersonal, (2) Interpersonal, (3) Stress Management, (4) Adaptability, (5) General Mood sub-scales and (6) Total EQ, of the BarOn EQ-i: YV, and the (7) Verbal Aggression, (8) Physical Aggression, (9) Anger, (10) Hostility, and (11) Total Aggression scores on the Aggression Questionnaire.

3.4 Measures

3.4.1 Assessment of Group and Gang Affiliation.

The term "gang affiliation" is utilized in this study to refer to adolescents' level of association with gang members versus as a declaration of gang membership. Gang affiliation as a measure of connection to gangs, refers to processes of association - knowing acquaintances/friends/relatives who are involved in gangs - and proximity - living in an area in which gang activity is readily apparent (Cureton, 1999; Ryan et al., 2007), and/or the frequency of participation in gang-related activities such as spending time with gang members, and wearing gang colors (Walker-Barnes & Mason, 2004). Several studies have found the self-report method of identification of gang affiliation to be as equally or more reliable as official records (Bjerregaard, 2002; Curry, 2000; Eitle et al., 2004; Esbensen et al., 2001; Pillen & Hoewing-Robertson, 1992; Ryan et al., 2007). In this study, youth were not asked to specifically identify whether they are/were members of gangs. Rather, they were asked a series of questions reflective of degrees of gang affiliation (e.g., "There are people about my age in my neighborhood who belong to gangs", "I know people who are gang members", "I hang out with people who are gang members.", and "I have worn gang colors on purpose."). The use of similar questions

32

reflective of broad definitions of gang association has been utilized in prior research as a measure of gang affiliation (Dishion, Nelson, & Yasui, 2005; Eitle et al., 2004; Ryan et al., 2007; Walker-Barnes & Mason, 2004) within school populations. These questions were utilized as a means of capturing subjects in the outer bounds of gangs. In this transitional phase of gang membership, individuals may not be identified as full gang members either by themselves or by others; however they would have some degree of initial gang affiliation.

Students were also asked a series of questions evaluating their degree of affiliation to (non-gang) groups, including friends and structured activity groups (school and community sports teams, clubs, choirs, etc), in order to differentiate between non-gang and gang group affiliation. Newman and Newman (2001) identified a number of factors that promoted a sense of group identity amongst adolescents belonging to a variety of socially accepted and delinquent groups, including a shared verbal and non-verbal language, similar behaviors and participation in specific activities, the use of particular spaces/locations, and a shared style of dressing.   Increasing similarities amongst the group members contributed to an increased commitment to shared values, beliefs, and behaviors (Newman & Newman, 2001). The measure of group affiliation utilized in this study included items measuring degree of involvement in organized school and activities, time spent as part of friend-groups, and measures of in-group similarities such as shared fashion.

Items measuring group affiliation and gang affiliation were combined into one form. The use of a Likert rating scale in this measure allowed for further analysis of degrees of association and subsequent correlation with measures of social competence.

Following collection of the survey packages, responses for questions pertaining to group (non-gang) affiliation were summed to yield a total group affiliation score for each study participant. Responses for questions pertaining to gang affiliation were summed to yield a total gang affiliation score for each study participant. A copy of this measure is attached in Appendix E.

Given the relative low frequency of gang affiliation in the general population, it was anticipated that the measure of gang affiliation in this study sample would cluster towards lower ratings, generating an asymmetrical distribution of results. Conversely, given the social nature of young adolescents, it was anticipated that measures of group (non-gang) affiliation would be likely to be more normally distributed, with a greater percentage of respondents endorsing a higher group affiliation score.

A small pilot study was conducted to do a basic test of the reliability of the Group and Gang Affiliation measures. Ten youth between the ages of 12 and 15 volunteered to complete the measure once (A), and then again in two weeks (B). Test – Retest results were analyzed and the comparison of the Group Affiliation measure yielded a correlation co-efficient (r) of .977 ($p = .000$). The Gang Affiliation measure yielded a correlation co-efficient (r) of .918 ($p = .000$).

3.4.2 Measures of Social/Emotional Competence.

As indicated previously, the Bar-On model of emotional intelligence conceptualized emotional intelligence as being comprised of a set of competencies that influence one's pattern of interaction with the social environment (Bar-On & Parker, 2000). The Youth Version of the BarOn Emotional Quotient Inventory (BarOn EQ-i:YV) provided an overall measure (Total EQ score) of an individual's emotional and

social intelligence, as well as measures on specific composite scales. The composite and sub-scales included: the Intrapersonal (e.g., Emotional self-awareness, Assertiveness, Self-regard, Self-actualization, and Independence sub-scales), Interpersonal (e.g., Empathy, Social responsibility, and Interpersonal relationships sub-scales), Adaptability (e.g., Flexibility, Problem-solving, Reality-testing sub-scales), Stress-Management (e.g., Stress tolerance and Impulse control subscales), and General Mood (e.g., Happiness and Optimism sub-scales).

According to the technical manual (Bar-On & Parker, 2000), internal reliability coefficients for the BarOn EQ-i:YV scales for males and females aged 13 – 15 years, ranged from .81 to .90. Test-Retest reliability ranged from .84 to .89, with the exception of .77 on General Mood and Positive Impression scales. The sub-scales correlated low-moderately to moderately with one another (e.g., majority of inter-correlations range between .27 to .31, with Interpersonal and Adaptability sub-scales correlating at .49 for males, and .48 for females). Acceptable concurrent validity was demonstrated through correlational studies of the BarOn EQ-i:YV and other measures of youth behavior and personality (BarOn & Parker, 2000;). While some controversy exists in regards to the degree to which the Bar-On measure correlates with personality measures, recent studies (BarOn, 2004; Van Rooy & Viswesvaran, 2004) suggested this overlap accounts for less than 15% of the EI construct.

3.4.3 Measure of Aggression.

The Aggression Questionnaire (Buss & Perry, 1992) is a self-report instrument consisting of 29 items scored according to a 5-point Likert scale. The questionnaire includes four scales: Physical Aggression, Verbal Aggression, Anger Arousal, and

Hostility, as well as a Total AQ measure. The Aggression Questionnaire and its predecessor, the Buss-Durkee Hostility Inventory (Buss & Durkee, 1957) have been utilized extensively in research studies (Buss & Perry, 1992; Collett, Ohan, & Myers, 2003) with a range of adult and adolescent populations. The four factor structure of the Aggression Questionnaire has been upheld in a variety of studies with adult populations (Buss & Perry, 1992; Gerevich, Bacskai, & Czobor, 2007;) and with adolescent populations (Santisteban, Alvarado, & Recio, 2006; Wittmann, Arce, & Santisteban, 2008). Test-retest reliability coefficients were identified as ranging from .72 to .80 on the individual scales, with a total score test-retest reliability coefficient of .80 (Buss & Perry, 1992). The Aggression Questionnaire was utilized within a 2001 study (Smith, Kern, Curlette, & Mullis) that examined characteristics of adjudicated adolescents (ages 12 – 17 years old) who may have been at risk for future violence. Translations into Spanish have been used to study the relationship between extracurricular activities, impulsivity, anger, and aggression in school-aged (ages 9 to 17 years old) children (Wittman et al., 2008), while an Italian version was utilized to study the link between suicidal ideation and aggression in adolescents ages 15 to 19 years old (Miotto, Coppi, Frezza, Petretto, Masala, & Preti, 2003). Differences have been noted between male and female subjects, with male subjects consistently scoring higher than female subjects on the Physical Aggression factor (Buss & Perry, 1992; Wittmann et al., 2008). The Aggression Questionnaire (1992) has been made available free of charge via the internet by the authors for researchers' use.

3.5 Procedure

Following the collection of the completed parental consent and youth assent forms, the participants completed the survey packages in group sessions within the school setting, during regular school hours. Individual student time to complete survey packages ranged from 30 to 55 minutes. Students were asked to space out their seating to ensure privacy of responding, and were instructed to seal their completed survey forms in the envelopes prior to returning them to the survey administrator (researcher) who supervised the sessions. Instructions were provided to students according to a standard administration protocol in each session (see Appendix F). As per the cover page of the BarOn EQ-i: YV questionnaire, participants were asked to include non-identifying basic demographic data including age, gender, and ethnicity. Forms within the survey packages were labelled with an identification number, corresponding with the code on the outside of the survey package envelopes, for ease of collating data. Students were instructed not to include their names on any forms within the survey packages. Prior to handing them in, students were instructed to check their forms for any missing responses. Students were provided with opportunity to ask general questions following completion and turning in of the packages to the administrator. No indications of negative reactivity or need for debriefing of individual students was observed in the sessions.

CHAPTER 4: RESULTS

Results of this study were presented in three sections. Distributions, means, and standard deviations of the study variables including group affiliation, gang affiliation, social/emotional competency, and aggression measures are presented first within the descriptive statistics section. Next, correlations amongst some of the study variables are presented. Finally, the study hypotheses are tested and presented.

4.1 Descriptive Statistics

4.1.1 Group Affiliation Measure.

As anticipated, results for the group affiliation measure approximated normal distribution across the total sample group, with a slight left skew. Responses ranged between a minimum of 4/36 to a maximum of 34/36, with a mean total group affiliation rating of 24.94, and standard deviation of 5.026. The distribution of results for the group affiliation measure for the total sample group is shown in Figure 4.1.
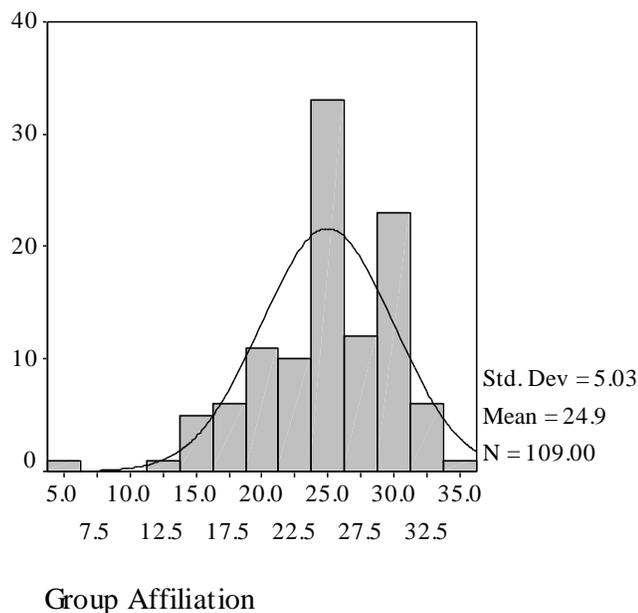
Figure 4.1. Distribution of Group Affiliation Measure (Total Sample).

When separated out according to gender, the distribution of Group Affiliation measure scores for both male and female subjects in the study approximated a normal distribution curve. Any differences between male and female participants are reviewed further in examination of hypothesis six.

4.1.2 Gang Affiliation Measure

Distribution of the responses to the gang affiliation measure was skewed in the anticipated direction across the total sample group. Responses clustered to the low end of the scale, approaching a reverse J-shaped distribution pattern. Responses ranged between a minimum of 0/16 to 7/16. Approximately 74% of respondents endorsed a total gang affiliation score of 2/16 or less, with a mean total gang affiliation rating of 1.70, median and mode of 1.00, and a standard deviation of 1.778. Of note, while the majority of responses were congruent with low gang affiliation, over 70% of the subjects surveyed indicated some awareness of the presence of gang members in their neighbourhood and/or school environment. Distribution of the results for the total study sample is demonstrated graphically in Figure 4.2.

40   Std. Dev = 1.78
30   Mean = 1.7
20   N = 109.00
10
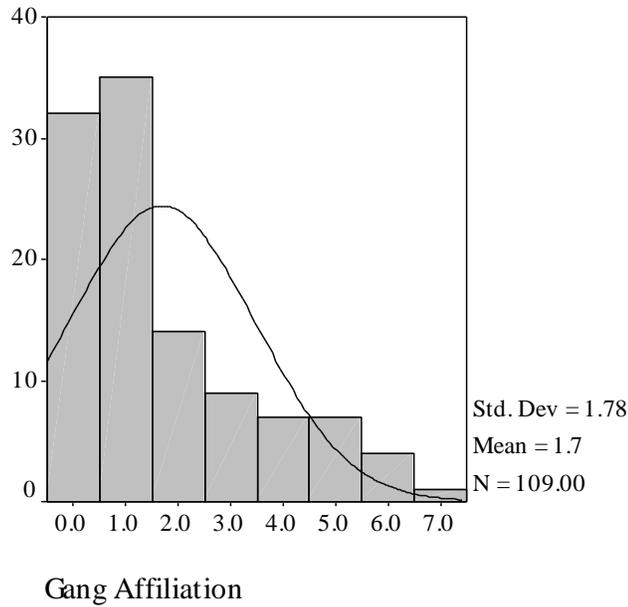
Gang Affiliation

Figure 4.2. Distribution of Gang Affiliation Measure (Total Sample)

When separated according to gender, distribution of scores for both male and female subjects within the study continue to reflected a skew left. Differences between genders are examined further within the presentation of results for hypothesis six.

4.1.3 EQ-i:YV Measures.

The EQ-I: Youth Version composite measures (Intrapersonal, Interpersonal, Stress Management, Adaptability, and General Mood Composites) as well as the Total EQ scores were all distributed normally for the sample population. Table 4.1 outlines the mean and standard deviation for each composite and for the total EQ measure.

Table 4.1

Descriptive Statistics – EQ-i:YV Measures

Variable	n	Mean	SD
Intrapersonal Composite			
Females	57	104.21	13.005
Males	52	99.58	9.872
Total	109	102	11.795
Interpersonal Composite			
Females	57	98.63	12.627
Males	52	93.37	10.794
Total	109	96.12	12.028
Stress Management Composite			
Females	57	96.11	13.452
Males	52	97.90	11.159
Total	109	96.96	12.387
Adaptability Composite			
Females	57	99.56	16.288
Males	52	98.85	14.949
Total	109	99.92	15.595
General Mood Composite			
Females	57	98.05	12.886
Males	52	96.83	12.755
Total	109	97.47	12.779

Total EQ

Females	57	101.04	12.890
Males	52	98.38	11.369
Total	109	99.77	12.205

4.1.4 Aggression Questionnaire (AQ) measures

The Aggression Questionnaire factor scores and total AQ scores for the total sample population were shown, overall, to approximate a normal distribution pattern. Distribution of the Verbal Aggression factor scores was somewhat lepto-kurtotic, with the majority of scores sharply clustered around the mean. Table 4.2 illustrates the mean and standard deviations of the AQ measure scores. Some differences were observed between male and female scores in the various sub-scales. The significance of these differences are explored in the subsequent section of the results presentation.

Table 4.2

Descriptive Statistics – Aggression Questionnaire Measures

Variable	n	Mean	SD
Physical Aggression Sub-Scale			
Females	56	18.38	6.300
Males	51	24.20	6.684
Total	107	21.15	7.085
Verbal Aggression Sub-Scale			
Females	56	13.70	3.828
Males	51	14.27	3.389

Total	107	13.97	3.620
Anger Sub-Scale			
Females	56	17.05	5.738
Males	51	17.02	4.461
Total	107	17.04	5.145
Hostility Sub-Scale			
Females	56	22.32	6.422
Males	51	22.47	5.562
Total	107	22.39	6.000
Total Aggression (AQ)			
Females	56	71.27	18.021
Males	51	78.16	16.099
Total	107	74.55	17.398

4.2 Correlations

Correlations in this study were conducted using the Pearson Product Moment Correlation factor (r). The following section reports summaries of correlations by the variables of age and gender, as well as correlations amongst the EQ-i:YV and Aggression Questionnaire measures. The correlations amongst the remaining variables are examined within the testing of the individual study hypotheses that follows this section.

4.2.1 Correlations with Age

Within the total sample, only one significant correlation was noted between age and any other factors within this study. This is not unexpected given the limited age range (12 to 15 years old) of subjects included in the study. For the total sample, a significant relationship was found between Age and the EQ-i: YV General Mood scale ($r = .221$, $p = .021$). When separated according to gender, correlations emerged between Age and the EQ-i: YV Adaptability Scale ($r = .272$, $p = .041$), and between Age and the EQ-i:YV General Mood Scale ($r = .340$, $p = .010$) for female subjects (n = 57). No significant correlations were found between age and any other variables for male subjects within the study.

4.2.2 Correlations with Gender

When examined as a total sample, significant correlations were noted between Gender and the EQ-i: YV Intrapersonal scale ($r = -.197$, $p = .040$), between Gender and the EQ-i: YV Interpersonal scale ($r = -.220$, $p = .022$), between Gender and the Aggression Questionnaire - Physical Aggression subscale ($r = .412$, $p = .000$), and between Gender and the Aggression Questionnaire – Total Aggression score ($r = .199$, $p = .040$).

4.2.3 Correlations between BarOn EQ-i: YV and AQ Measures

While not a focus of this study, significant correlations were noted between a number of the BarOn EQ-i: YV subscale measures and the Aggression Questionnaire subscale measures. In examining the total sample, the EQ-i: YV Intrapersonal subscale was the only EQ-i: YV measure that did not correlate with any of the AQ measures. Correlations between each remaining EQ-i: YV subscale measure and AQ subscale

44

measures for the total study sample, are reported in Tables 4.3 through 4.7. Of particular

note, all of the correlations were in the negative direction, which would be anticipated.

Fairly robust correlations are noted between the EQ-i: YV Stress Management subscale

and the AQ Anger subscale ($r = -.662$, $p < .001$), and between the EQ-i: YV Stress

Management subscale and the AQ Total Aggression subscale ($r = -.586$, $p < .001$),

suggesting significant overlap between these two study variables. The inverse

relationship and percent of variance accounted for within the relationships (43.8% and

34.3% respectively) suggests that the measures may be assessing opposite poles of

similar constructs. The remaining correlations, while noted as significant, are low

enough to indicate that different, albeit related, constructs were being measured using the

BarOn EQ-i: YV and Aggression Questionnaire measures.

Table 4.3

Correlations between EQ-i: YV Interpersonal Composite and AQ Subscales

AQ Subscale	N	r	p
AQ Physical Aggression Scale	107	-.292**	.002
AQ Verbal Aggression Scale	107	-.151	.121
AQ Anger Scale	107	-.291**	.002
AQ Hostility Scale	107	-.135	.165
AQ Total Aggression Score	107	-.291**	.002

*$p < .05$, **$p < .01$.

Table 4.4

Correlations between EQ-i: YV Stress Management Composite and AQ

Subscales

AQ Subscale	N	r	p
AQ Physical Aggression Scale	107	-.416**	.000
AQ Verbal Aggression Scale	107	-.414**	.000
AQ Anger Scale	107	-.662**	.000
AQ Hostility Scale	107	-.361**	.000
AQ Total Aggression Score	107	-.586**	.000

*p < .05, **p < .01.

Table 4.5

Correlations between EQ-i: YV Adaptability Composite and AQ Subscales

AQ Subscale	N	r	p
AQ Physical Aggression Scale	107	-.244*	.011
AQ Verbal Aggression Scale	107	-.170	.080
AQ Anger Scale	107	-.353**	.000
AQ Hostility Scale	107	-.317**	.001
AQ Total Aggression Score	107	-.370**	.000

*p < .05, **p < .01.

Table 4.6

Correlations between EQ-i: YV General Mood Composite and AQ Subscales

AQ Subscale	N	r	p
AQ Physical Aggression Scale	107	-.354[**]	.000
AQ Verbal Aggression Scale	107	-.266[**]	.006
AQ Anger Scale	107	-.419[**]	.000
AQ Hostility Scale	107	-.388[**]	.000
AQ Total Aggression Score	107	-.475[**]	.000

[*]$p < .05$, [**]$p < .01$.

Table 4.7

Correlations between EQ-i: YV Total EQ and AQ Subscales

AQ Subscale	N	r	p
AQ Physical Aggression Scale	107	-.380[**]	.000
AQ Verbal Aggression Scale	107	-.291[**]	.002
AQ Anger Scale	107	-.474[**]	.000
AQ Hostility Scale	107	-.320[**]	.001
AQ Total Aggression Score	107	-.483[**]	.000

[*]$p < .05$, [**]$p < .01$.

4.4 Hypothesis Testing

4.4.1 Hypothesis 1 - There is a significant relationship between degrees of gang affiliation and measures of social/emotional competency.

Table 4.8 demonstrates correlations between the gang affiliation measure and measures of social/emotional competency for the total sample population. When considering the sample as a whole, a significant relationship was found between gang affiliation and the EQ-i: YV Interpersonal composite measure ($r = -.233$, $p < .05$), and the EQ-i: YV Adaptability composite measure ($r = -. 203$, $p < .05$). The correlations were in the anticipated direction, demonstrating an inverse relationship between the measure of gang affiliation and scores on the Interpersonal and Adaptability composites. The remaining EQ-i: YV subscales were not found to correlate significantly with the measure of gang affiliation within the total sample.

Table 4.8

Correlations between Gang Affiliation and EQ-i: YV composites (Total Sample)

		Gang Affiliation	Intrapers. Scale	Interpers. Scale	Stress Manage. Scale	Adaptability Scale	General Mood Scale	Total EQ
Gang Affiliation	r	1	.043	-.233[*]	-.037	-.203[*]	-.149	-.161
	Sig.		.658	.015	.705	.035	.122	.095
	N		109	109	109	109	109	109
Intrapersonal	r		1	.346[**]	.141	.257[**]	.358[**]	.610[**]
	Sig.			.000	.145	.007	.000	.000
	N			109	109	109	109	109
Interpersonal	r			1	.250[**]	.541[**]	.597[**]	.733[**]
	Sig.				.009	.000	.000	.000
	N				109	109	109	109
Stress Man.	r				1	.293[**]	.495[**]	.602[**]
	Sig.					.002	.000	.000
	N					109	109	109

Adaptability	r			1	.584**	.773**
	Sig.				.000	.000
	N				109	109
Gen. Mood	r				1	.722**
	Sig.					.000
	N					109
Total EQ	r					1
	Sig.					
	N					

*p < .05, **p < .01.

When separated by gender, the EQ-i: YV Interpersonal and Adaptability composite scales were found to correlate significantly with Gang Affiliation ($r = -.323$, $p < .05$, and $r = -.347$, $p < .01$, respectively) for female participants. In addition, the Total EQ score was found to correlate significantly with the Gang Affiliation measure ($r = -.321$, $p < .05$) for female subjects. In examining results for male subjects in the study, no significant relationships were found between any of the EQ-i: YV measures and gang affiliation. Correlations by gender between the EQ-i: YV measures and gang affiliation are presented in Table 4.9. Results for female subjects were presented above the diagonal, while male results for male subjects were presented below the diagonal.

Hypothesis number one was therefore partially met, as a significant relationship was found between degrees of gang affiliation and some (but not all) measures of social/emotional competency for the overall sample and for female subjects (but not for male subjects alone). Moreover, the correlation was in the anticipated direction.

Table 4.9

Correlations between Gang Affiliation and EQ-i: YV Composites by Gender

Female \ Male		Gang Affiliation	Intrapers.	Interpers.	Stress Manage.	Adaptability	General Mood	Total EQ
Gang Affiliation	r	-	-.058	-.323[*]	-.175	-.347[**]	-.250	-.321[*]
	Sig.		.668	.014	.192	.008	.061	.015
	N		57	57	57	57	57	57
Intrapersonal	r	.222	-	.210	-.032	.088	.182	.501[**]
	Sig.	.113		.117	.810	.513	.176	.000
	N	52		57	57	57	57	57
Interpersonal	r	-.103	.499[**]	-	.272[*]	.586[**]	.623[**]	.752[**]
	Sig.	.466	.000		.041	.000	.000	.000
	N	52	52		57	57	57	57
Stress Manage.	r	.149	.492[**]	.276[*]	-	.267[*]	.480[**]	.574[**]
	Sig.	.292	.000	.048		.045	.000	.000
	N	52	52	52		57	57	57
Adaptability	r	-.018	.526[**]	.500[**]	.337[**]	-	.621[**]	.752[**]
	Sig.	.899	.000	.000	.014		.000	.000
	N	52	52	52	52		57	57
Gen. Mood	r	-.028	.617[**]	.578[**]	.532[**]	.539[**]	-	.726[**]
	Sig.	.846	.000	.000	.000	.000		.000
	N	52	52	52	52	52		57
Total EQ	r	-.058	.775[**]	.701[**]	.677[**]	.806[**]	.719[**]	-
	Sig.	.681	.000	.000	.000	.000	.000	
	N	52	52	52	52	52	52	

*p < .05, **p < .01. (2-tailed)

4.4.2 Hypothesis 2 - There is a significant relationship between degrees of gang affiliation and measures of aggression.

Table 4.10 illustrates the correlations between degree of gang affiliation and measures of aggression for the total sample population. For the total sample, a significant relationship was found between gang affiliation and the AQ Physical Aggression subscale score. This correlation ($r = .215$, $p < .05$) is also in the anticipated direction, with both measures varying in the same direction.

Table 4.10

Correlations between Gang Affiliation and Aggression Questionnaire Subscales (Total Sample)

		Gang Affiliation	AQ Physical Aggression	AQ Verbal Aggression	Aggression Q Anger	Aggression Q Hostility	AQ Total Aggression
Gang Affiliation	r	1	.215[**]	.041	.131	-.041	.118
	Sig.		.026	.675	.180	.673	.228
	N		107	107	107	107	107
AQ Physical	r		1	.554[**]	.632[**]	.362[**]	.841[**]
	Sig.			.000	.000	.000	.000
	N			107	107	107	107
AQ Verbal	r			1	.521[**]	.452[**]	.750[**]
	Sig.				.000	.000	.000
	N				107	107	107
AQ Anger	r				1	.470[**]	.824[**]
	Sig.					.000	.000
	N					107	107
AQ Hostility	r					1	.722[**]
	Sig.						.000
	N						107
AQ Total	r						1

Sig.

N

---

*p < .05, **p < .01. (2-tailed)

When the data were separated by gender, no significant relationships were found between gang affiliation and any of the aggression measures for female or male subjects in the study. For male subjects, the correlation could be said to be potentially approaching significance between gang affiliation and the AQ Physical Aggression subscale; however, the correlation did not meet the level of significance deemed acceptable in this study. Refer to Table 4.11 for correlations between aggression measures and gang affiliation by gender.

Table 4.11

Correlations between Gang Affiliation and Aggression Questionnaire Subscales by Gender

Female Male		Gang Affiliation	AQ Physical Aggression	AQ Verbal Aggression	AQ Anger	AQ Hostility	AQ Total Aggression
Gang Affiliation	r	1	.186	.092	.205	.113	.188
	Sig.		.170	.501	.130	.406	.165
	N		56	56	56	56	56
AQ Physical	r	.245	1	.576**	.674**	.404**	.831**
	Sig.	.083		.000	.000	.002	.000
	N	51		56	56	56	56
AQ Verbal	r	-.035	.578**	1	.619**	.484**	.790**
	Sig.	.808	.000		.000	.000	.000
	N	51	51		56	56	56
AQ Anger	r	.021	.741**	.371**	1	.497**	.856**
	Sig.	.883	.000	.000		.000	.000

	N	51	51	51		56	56
AQ Hostility	r	-.252	.382**	.407**	.429**	1	.750**
	Sig.	.075	.006	.003	.002		.000
	N	51	51	51	51		56
AQ Total	r	.008	.879**	.696**	.822**	.712**	1
	Sig.	.958	.000	.000	.000	.000	
	N	51	51	51	51	51	

$*p < .05, **p < .01$ (2-tailed)

In summary, the only significant correlation found between gang affiliation and any measures of aggression in the study was between gang affiliation and the AQ Physical Aggression subscale for the sample as a whole, but not when separated by gender. Hypothesis number two is therefore partially met as a significant relationship was found between a (but not all) measure of aggression and degree of gang affiliation. This correlation was also in the expected direction.

4.4.3 Hypothesis 3 - There is a significant relationship between degree of group affiliation and measures of social/emotional competency.

Significant relationships were found between the measure of group affiliation and measures of social/emotional competency in this study, when looking at the total sample and when separated by gender. For the total sample, significant relationships were found between the measure of Group Affiliation and all of the EQ-i: YV sub-scales, as outlined in Table 4.12. The correlations with the EQi: YV Intrapersonal Scale ($r = .335, p < .01$), Interpersonal Scale ($r = .385, p < .01$), Stress Management Scale ($r = .257, p < .01$), Adaptability Scale ($r = .344, p < .01$), General Mood Scale ($r = .384, p < .01$), and Total

EQ ($r = .445$, $p < .01$) and the Group Affiliation measure are all in the positive direction,

as anticipated.

Table 4.12

Correlations between Group Affiliation and EQ-i: YV Composites (Total Sample)

		Group Affiliation	Intrapersonal	Interpers.	Stress Management	Adaptability	General Mood	Total EQ
Group Affiliation	*r*	1	.335**	.385**	.257**	.344**	.384**	.445**
	Sig.		.000	.000	.007	.000	.000	.000
	N		109	109	109	109	109	109
Intrapersonal	*r*		1	.346**	.141	.257**	.358**	.610**
	Sig.			.000	.145	.007	.000	.000
	N			109	109	109	109	109
Interpersonal	*r*			1	.250**	.541**	.597**	.733**
	Sig.				.009	.000	.000	.000
	N				109	109	109	109
Stress Management	*r*				1	.293**	.495**	.602**
	Sig.					.002	.000	.000
	N					109	109	109
Adaptability	*r*					1	.584**	.773**
	Sig.						.000	.000
	N						109	109
General Mood	*r*						1	.722**
	Sig.							.000
	N							109

Total EQ	*r*		1
	Sig.		
	N		

When separated by gender, significant relationships with the Group Affiliation measure were found for both male and female subjects, as illustrated in Table 4.13 (Results for female subjects are presented above the diagonal, results for males presented below the diagonal). For female subjects, significant correlations were found with the EQ-i: YV Interpersonal Scale (*r* = .297, *p* < .05), General Mood Scale (*r* = .345, *p* < .01), and with the Total EQ (*r* = .388, *p* < .01). No significant relationships were found between the Group Affiliation measure and the Intrapersonal, Adaptability, or Stress Management scales for female subjects. For male subjects in the study, significant relationships were found between the Group Affiliation measure and all of the EQ-i: YV subscales: Intrapersonal Scale (*r* = .571, *p* < .01), Interpersonal Scale (*r* = .566, *p* < .01), Adaptability Scale (*r* = .473, *p* < .01), General Mood (*r* = .440, *p* < .01), and Total EQ (*r* = .545, *p* < .01).

Given that significant relationships were found between the measure of Group Affiliation and all measures of social/emotional competency in this study, and given that all of the relationships were in the expected direction, hypothesis number three is considered to be fully met.

Table 4.13

Correlations between Group Affiliation and EQ-i: YV Subscales by Gender

Females / Males		Group Affiliation	Intrapersonal	Interpersonal	Stress Manage.	Adaptability	General Mood	Total EQ
Group Affiliation	r	1	.216	.297*	.252*	.241	.345**	.388**
	Sig.		.107	.025	.058	.071	.009	.003
	N		57	57	57	57	57	57
Intrapersonal	r	.571**	1	.210	-.032	.088	.182	.501**
	Sig.	.000		.117	.810	.513	.176	.000
	N	52		57	57	57	57	57
Interpersonal	r	.566**	.499**	1	.272*	.586**	.623**	.752**
	Sig.	.000	.000		.041	.000	.000	.000
	N	52	52		57	57	57	57
Stress Management	r	.256	.492**	.276*	1	.267*	.480**	.574**
	Sig.	.067	.000	.048		.045	.000	.000
	N	52	52	52		57	57	57
Adaptability	r	.473**	.526**	.500**	.337*	1	.621**	.752**
	Sig.	.000	.000	.000	.014		.000	.000
	N	52	52	52	52		57	57
General Mood	r	.440**	.617**	.578**	.532**	.539**	1	.726**
	Sig.	.001	.000	.000	.000	.000		.000
	N	52	52	52	52	52		57
Total EQ	r	.545**	.775**	.701**	.677**	.806**	.719**	1
	Sig.	.000	.000	.000	.000	.000	.000	
	N	52	52	52	52	52	52	

*$p < .05$, **$p < .01$ (2-tailed)

4.4.4 Hypothesis 4. There is a significant relationship between degree of group affiliation and measures of aggression.

For the total sample, significant correlations were found between the measure of group affiliation and several of the Aggression Questionnaire subscale measures, as illustrated in Table 4.14.

The correlations between the group affiliation measure and the Verbal Aggression subscale ($r = -.193$, $p < .05$), the Anger subscale ($r = -.314$, $p < .01$), and the Total AQ score ($r = -.269$, $p < .01$), were all in the anticipated negative direction. A significant correlation was not found between the group affiliation measure and the AQ Physical Aggression subscale, nor the AQ Hostility subscale and the group affiliation measure for the total sample. In the female subject group, significant relationships were found between Group Affiliation and the AQ Physical Aggression subscale ($r = -.304$, $p < .05$), Verbal Aggression subscale ($r = -.297$, $p < .05$), Anger subscale ($r = -.329$, $p < .05$), and Total Aggression ($r = -.325$, $p < .05$). Significant relationships were not found between Group Affiliation and the Hostility subscale for female subjects. For male subjects, only the AQ Anger subscale ($r = -.299$, $p < .05$) and the AQ Hostility subscale ($r = -.286$, $p < .05$) were found to relate significantly with the Group Affiliation measure. Correlations by gender between the Group Affiliation and aggression measures are presented in Table 4.15, with results for female subjects presented above the diagonal, and results for males presented below the diagonal.

Table 4.14

Correlations between Group Affiliation and Aggression Questionnaire Subscales (Total Sample)

		Group Affiliation	AQ Physical Aggression	AQ Verbal Aggression	AQ Anger	AQ Hostility	AQ Total Aggression
Group Affiliation	r	1	-.179	-.193[*]	-.314[**]	-.188	-.269[**]
	Sig.		.066	.046	.001	.053	.005
	N		107	107	107	107	107
AQ Physical	r		1	.554[**]	.632[**]	.362[**]	.841[**]
	Sig.		.	.000	.000	.000	.000
	N			107	107	107	107
AQ Verbal	r			1	.521[**]	.452[**]	.750[**]
	Sig.				.000	.000	.000
	N				107	107	107
AQ Anger	r				1	.470[**]	.824[**]
	Sig.					.000	.000
	N					107	107
AQ Hostility	r					1	.722[**]
	Sig.						.000
	N						107
AQ Total Aggression	r						1
	Sig.						
	N						

*$p < .05$, **$p < .01$ (2-tailed)

Table 4.15

Correlations between Group Affiliation and Aggression Questionnaire Subscales by Gender

Females / Males		Group Affiliation	AQ Physical Aggression	AQ Verbal Aggression	AQ Anger	AQ Hostility	AQ Total Aggression
Group Affiliation	r	--	-.304*	-.297*	-.329*	-.114	-.325*
	Sig.		.023	.026	.013	.404	.014
	N		56	56	56	56	56
AQ Physical	r	-.146	--	.576**	.674**	.404**	.831**
	Sig.	.307		.000	.000	.002	.000
	N	51		56	56	56	56
AQ Verbal	r	-.079	.578**	--	.619**	.484**	.790**
	Sig.	.581	.000		.000	.000	.000
	N	51	51		56	56	56
AQ Anger	r	-.299*	.741**	.371**	--	.497**	.856**
	Sig.	.033	.000	.007		.000	.000
	N	51	51	51		56	56
AQ Hostility	r	-.286*	.382**	.407**	.429**	--	.750**
	Sig.	.042	.006	.003	.002		.000
	N	51	51	51	51		56
AQ Total	r	-.245	.879**	.696**	.822**	.712**	--
	Sig.	.083	.000	.000	.000	.000	
	N	51	51	51	51	51	

*p < .05, **p < .01 (2-tailed)

Given that a significant relationship was demonstrated between the group affiliation measure and the AQ aggression measures in the study, and the relationships were in the expected inverse direction in all cases, Hypothesis 4 was considered to be fully met.

4.4.5 Hypothesis 5. There is an inverse relationship between group and gang affiliation measures.

No significant correlation was found between the measures of Group and Gang affiliation themselves, for either the total sample, nor when separated by gender. It appeared that when separated by gender, the relationship between Group and Gang affiliations was potentially approaching the threshold ($r = -.254$, $p = .069$ for males, and r = -251, p = .060 for females), however does not meet the acceptable level of significance ($p < .05$) for this study. As indicated in the testing of other study hypotheses, both the Group and Gang Affiliation measures were found to correlate significantly with several EQ-i: YV and AQ measures. There did not appear to be a significant relationship (in either direction) between the group and gang affiliation measures for either the total sample, nor when separated by gender in this study.   Hypothesis 5 was therefore not met.

4.4.6 Hypothesis 6. The above relationships are expected to differ for male and female adolescents.

Hypotheses one through four utilized correlational analysis to examine the relationships between the study variables. In addition, each of the Group Affiliation, Gang Affiliation, Social/Emotional competency measure, and Aggression measure variables were examined using Independent Samples t-tests to determine whether any significant differences in means occurred on the basis of gender. Levene's test of Homogeneity of Variance was applied to assess for equality of variance for each factor.

Group and Gang Affiliation. Levene's statistic indicated equality of variance in both the Group Affiliation variable and in the Gang Affiliation variable, allowing the null

hypothesis of equal variance to be retained in both cases. Analysis of the t-test results indicated no significant differences between male and female subjects in either the Group Affiliation variable [t (107) = -.795, p = .429], or the Gang Affiliation variable [t (107) = -.454, p = .651].

Social/emotional competency measures. Levene's test of equality of variance was met for all EQ-i: YV measures, with the exception of the Intrapersonal Scale. In this case, the null hypothesis of equality of variance was rejected [F (1, 106) = 7.549, p < .01], and Welch's statistic was applied to analyze significance of difference between male and female subjects. Using this statistic, a significant difference between male and female participants' scores on the Intrapersonal Scale variable was found [t (103.671) = 2.106, p < .05]. A significant difference between genders was also found for the EQ-i: YV Interpersonal scale at the .05 level of significance [t (107) = 2.329, p = .022]. The remaining EQ-i: YV variables did not demonstrate significant differences between male and female subjects within the study.

Aggression measures. Levene's test of homogeneity was conducted and the null hypothesis of equality of variance was retained for the AQ Physical Aggression, AQ Verbal Aggression, AQ Anger, and Total AQ variables. The assumption of homogeneity of variance was not met for the AQ Hostility variable [F (1,104) = 5.561, p < .05]. The null hypothesis was rejected in this case, and the Welch statistic was applied for analysis of differences in means. According to this analysis, there was no significant difference in means between male and female participants on the AQ Hostility variable [t (104.747) = -.128, p = .899]. Significant differences were found for the AQ Physical Aggression variable [t (105), = -4.637, p < .01], and for the Total AQ variable [t (105) = -2.077, p <

.05]. The analysis of the remaining aggression variables did not reveal any significant differences between male and female subjects.

When looking at gender differences in the measures used in this study, significant differences between male and female subjects were found for the EQ-i: YV Intrapersonal Scale and Interpersonal Scale, as well as for the AQ Physical Aggression and Total AQ variables. As indicated in the preceding sections, the patterns of relationship between degree of gang affiliation and social/emotional competency, and between degree of gang affiliation and aggression differed between male and female subjects. Significant relationships were found between degree of gang affiliation and EQ-i: YV Interpersonal, Adaptability, and Total EQ scales for female participants. However, no significant relationships were found between measures of social/emotional competency and gang affiliation for male subjects in this study. When looking at the relationship between measures of aggression and gang affiliation, no significant relationships were found for males or females between degree of gang affiliation and any aggression measures, although a significant relationship was found between gang affiliation and the AQ Physical Aggression subscale when examining the total sample.

Different patterns of significant relationships were found between the genders when considering the relationship between degree of group affiliation, and social/emotional competency and aggression measures in this study. When looking at female subjects alone, significant relationships were found between degree of group affiliation and the EQ-i: YV Interpersonal Scale, General Mood Scale, the Total EQ variable, the AQ Physical Aggression scale, Verbal Aggression scale, Anger Scale, and Total Aggression Scale. By comparison, when looking at male subjects alone, significant

relationships were found between degree of group affiliation and the EQ-i: YV Intrapersonal Scale, Interpersonal Scale, Adaptability Scale, General Mood, the Total EQ variable, the AQ Anger scale, and the AQ Hostility scale.

Based upon the above comparisons by gender, Hypothesis 6 was considered to be met.

4.4.7 Hypothesis 7. Significant differences are anticipated between outlier groups who score beyond the mean (either greater than 1 standard deviation above or below the mean) on group and gang affiliation measures.

A Oneway-ANOVA was performed in order to investigate this hypothesis. Outliers were divided into four groups and compared with each other and with a group of subjects who scored within one standard deviation of the mean on the group and gang affiliation measures (total of five groups). The four outlier groups included the following: (1) High Group Affiliation group – comprised of subjects who scored greater than one standard deviation above the mean on the Group Affiliation measure (n = 19); (2) High Gang Affiliation group – comprised of subjects who scored greater than one standard deviation above the mean on the Gang Affiliation measure (n = 16); (3) High High group – comprised of subjects who scored greater than one standard deviation above the mean on both the Group Affiliation and Gang Affiliation measure (n = 3); and (4) Low Low group – comprised of subjects who scored lower than one standard deviation below the mean on both the Group Affiliation and Gang Affiliation measures (n = 11). The fifth group (Mean group) was comprised of subjects who scored within one standard deviation of the mean on both the Group Affiliation and Gang Affiliation measures (n = 14). Two separate ANOVAs and post-hoc comparisons were performed to

investigate significant differences between the groups when compared on the aggression measures (AQ) and the social/emotional competency measures (EQ-i: YV) utilized in this study. Due to the unequal sample sizes in each of the groups, the Bonferroni method of post hoc comparison was utilized.

Social/Emotional Competency Measures. Using Levene's test, the assumption of homogeneity of variance was met for all EQ-i: YV measures. According to the ANOVA results, significant differences were found between groups for the Intrapersonal composite scale [F (4, 58) = 5.147, $p < .01$], the Interpersonal composite scale [F (4,58) = 7.255, $p < .01$], the Adaptability composite scale [F (4, 58) = 2.879, $p < .05$], the General Mood composite scale [F (4, 58) = 3.765, $p < .01$], and for the Total EQ [F (4, 58) = 7.220, $p < .01$]. Table 4.16 presents a summary of only the significant results of the post hoc comparisons. Due to the length of the complete table, the entire post-hoc comparison results are presented in the Appendices (Appendix G) .

Table 4.16

Summary - Multiple Comparisons Between Outlier Groups on the EQ-i: YV (Bonferroni statistic)

Dependent Variable	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
Intrapersonal	High Group (N = 19)	Low Low (N = 11)	17.48**	4.309	.002
	High High (N = 3)	Low Low (N =11)	23.94*	7.407	.020
	Mean (N = 14)	Low Low (N = 11)	14.84*	4.582	.020
Interpersonal	High Group (N = 19)	High Gang (N = 16)	15.10**	3.444	.000
		Low Low (N = 11)	17.61**	3.845	.000
		Mean (N = 14)	10.93*	3.575	.034

64

Adaptability	High Group (N = 19)	Low Low (N = 11)	17.63*	6.015	.048
Gen. Mood	High Group (N = 19)	Low Low (N = 11)	16.75**	4.802	.009
Total EQ	High Group (N = 19)	High Gang (N = 16)	11.19*	3.625	.031
		Low Low (N = 11)	20.04**	4.048	.000
	High High (N = 3)	Low Low (N = 11)	22.39*	6.959	.021

*p < .05, **p < .01

According to the post hoc testing, significant differences were found between the High Group Affiliation group and the Low Low group (*p* < .01), between the High High group and the Low Low group (*p* < .05), and between the Mean group and the Low Low group (*p* < .05) on the Intrapersonal composite scale. Significant differences were found between the High Group Affiliation group and the High Gang Affiliation group (*p* < .01), between the High Group Affiliation group and the Low Low group (*p* < .01), and between the High Group Affiliation group and the Mean group (*p* < .05) on the Interpersonal composite scale. Significant differences were found between groups on the Adaptability composite scale, between the High Group Affiliation group and the Low Low group (*p* < .05). On the General Mood Scale, significant differences were found between the High Group Affiliation group and the Low Low group (p < .01). As for the Total EQ measure, significant differences were found between the High Group Affiliation group and the High Gang Affiliation group (p < .05), between the High Group Affiliation group and the Low Low group (p < .01), and between the High High group and the Low Low group (p < .05). No significant differences were noted between groups on the Stress Management composite scale.

Aggression Measures. According to Levene's statistic, the assumption of homogeneity of variance was met for all five Aggression Questionnaire (AQ) measures (Physical Aggression, Verbal Aggression, Anger, Hostility, and Total Aggression). Therefore, the ANOVA was proceeded with to test for significance of differences between means for the five groups on the various AQ measures. According to the ANOVA results, significant differences existed between groups on the AQ Physical Aggression scale [F (4, 58) = 3.172, $p < .05$], the AQ Anger scale [F (4, 58) = 3.113, $p < .05$], and the AQ Total Aggression scale [F (4, 58) = 3.648, $p < .05$]. No significant differences were found between groups for the Verbal Aggression or Hostility scales. Post hoc comparisons were conducted, however the only significant differences to emerge in post hoc comparisons were between the High Group Affiliation group (N = 19) and the Low Low group (N = 11) on the AQ Anger scale (Mean difference of -5.75, $p = .046$), and the High Group Affiliation group (N = 19) and the Low Low group (N = 11) on the AQ Total Aggression score (Mean difference of -19.97, p = .031). Due to the length of the tables, the post hoc comparisons for the AQ measures are presented in the Appendices (Appendix H). Due to lack of significant differences identified in the ANOVA, post hoc comparisons of the AQ Verbal Aggression and AQ Hostility subscales were omitted.

Based upon the above results in which significant differences were found amongst the outlier and mean groups on both the measures of social/emotional competency and aggression utilized in this study, Hypothesis 7 was considered to be met.

CHAPTER 5: DISCUSSION

The discussion of results begins with a summary and discussion of each finding within this study, including an explanation of the finding, the convergence and divergence of the finding with past literature, limitations related to the specific finding, and specific research needed to clarify or extend each finding. Subsequent subsections of this chapter include a discussion of the general implications of the study's findings, followed by a discussion of the general limitations of the study, and a discussion of future directions to be considered.

5.1 Summary and Discussion of Findings

The underlying premise for this study was that a significant relationship exists between individuals' social/emotional competency and degree of gang affiliation. This premise was supported by the findings of this study, in addition to concurring with findings of other studies regarding the link between gang affiliation and interpersonal aggression. The identification of the relationship between social/emotional competency and gang affiliation is potentially important in view of being able to inform the design of interventions to target alterable characteristics of individual youth, impacting both prevention and intervention efforts regarding the youth gang issue. Similar to the findings of other studies, this study identified differences in patterns of relationships amongst the variables when separated by gender, suggesting intervention efforts may need to differ between genders. Findings in this study diverge from those of other studies, in which a link had been made between gang affiliation and the lack of available alternative group belonging and activities. In this study, there was a lack of significant relationship between measures of gang and group (non-gang) affiliation. When

examining outliers in this study, some significant differences between groups did emerge. This suggested that at the extremes of group and gang affiliation, differences in performance on social/emotional competency measures and on aggression measures are likely to exist. Of interest, however, these differences were fairly discreet, and were not found across all measures in this study. The findings in this study overall were considered exploratory in nature, and consideration will need to be given to replication of the results and limitations of the study design and measures prior to generalization. The findings, their implications, limitations, and future directions will be discussed in the proceeding sections of this report.

5.1.1 Finding 1: There is a significant relationship between degree of gang affiliation and measures of social/emotional competency.

Significant relationships were found to exist between degree of gang affiliation and the measures of social/emotional competency used in this study. Specifically, significant relationships were found between gang affiliation and the EQ-i: YV Interpersonal Composite scale, and the EQ-i: YV Adaptability Composite scale for the total sample. When separated by gender, there did not appear to be a significant relationship between gang affiliation and measures of social/emotional competency for male subjects in the study. Female subjects demonstrated a significant relationship between gang affiliation and the afore-mentioned social/emotional competency measures as well as the Total EQ measure. While the relationships were noted to be statistically significant, the degree of correlation between the social/emotional competency factors and gang affiliation was modest.

According to the Bar-On model (2004), the EQ-i: YV Interpersonal Composite measures an individual's self-assessed social-awareness and interpersonal relationships (Bar-On & Parker, 2000). The Interpersonal Composite is comprised of Empathy, Social Responsibility, and Interpersonal Relationship sub-scales. Empathy is defined in the model as the capacity to be aware of and to understand how others feel. Social responsibility is defined as the capacity to identify with one's social group and to cooperate with others. Interpersonal Relationship refers to the capacity to establish mutually satisfying relationships and to relate well with others. According to the current study's findings, adolescent girls who participated in the study and who self-report a higher gang affiliation, also self-report having lower abilities within the Interpersonal Composite. Therefore female participants' self assessment of their ability to get along well with others, to understand how others feel, and to establish mutually satisfying relationships appears to vary inversely with their self-reported degree of gang affiliation.

While this finding is not causative in nature, a potential explanation for this relationship is that adolescent girls who have difficulty getting along with others and who have difficulty understanding how others feel in interactions, may tend to become involved in conflict with their peers. Involvement in frequent conflict with peers has been found to lead to rejection by more interpersonally competent youth, and isolation from the normative peer group. This situation in turn may lead to less opportunity for the individual to develop alternative behavior patterns, which subsequently may lead to the continued rejection by pro-social peers (Goldman & Akin-Little, 2002). In the absence of strong connections with the mainstream peer group, the individual may tend to seek out affiliation with an alternative peer group of similarly rejected adolescents (Dodge & Petit,

69

2003). As indicated in the literature, this fact may lead to increased affiliation with peers

involved in delinquent activity and to increased affiliation with youth gang members

(Craig et al., 2002; Cureton, 1999; Gordon et al., 2004). This relationship may be

reflected in the finding observed in this study. In addition, youth who are involved in

delinquent acts, themselves, and/or who are not strongly connected to a pro-social peer

group may be sought out by established gang members (Gordon et al., 2004).

The Adaptability Composite within the EQ-i: YV refers to the individual's self-

assessment of his/her capacity to manage change (Bar-On & Parker, 2000). The

composite includes the Reality - Testing subscale (the capacity to objectively validate

one's feelings and thinking with external reality), the Flexibility subscale (the capacity to

adapt and adjust one's feelings and thinking to new situations), and the Problem-solving

sub-scale (the capacity to effectively solve problems of a personal and interpersonal

nature). According to this study's findings, therefore, female participants who scored

higher on the gang affiliation measure, were also less likely to view themselves as

capable of beneficially adapting to new situations and less likely to view themselves as

being able to effectively problem-solve in interpersonal situations.   This relationship

bears further examination, as viewing oneself as less capable of adapting to new

situations and to effectively problem solve may lead adolescents to perceive themselves

as socially vulnerable. This vulnerability in turn may lead adolescent girls to seek out the

structure and protection afforded to those who are gang affiliated, as has been

demonstrated by Stone (1999).

Difficulties with social problem-solving has been identified elsewhere in the literature as being linked to the development of anti-social behaviors (Dodge, 1993), and specifically to gang affiliation (Ngai, Cheung, & Ngai, 2007).

Of note, the correlation between the EQ-i: YV Adaptability composite and Gang Affiliation for female participants was the strongest relationship with gang affiliation noted in this study ($r = .347$, $p < .01$), suggesting that this factor may be of particular importance in future research.

The link between gang affiliation and the Total EQ measure was expected within this study. The Total EQ composite is a measure of overall social/emotional competencies that determine how individuals understand and relate to themselves and others and how individuals cope with issues of day-to-day living (Bar-On, 2004). The issue of poor emotional management, impulsivity, and weak social information processing abilities are individual-level risk factors connected to gang affiliation commonly identified in the literature (Dodge, 1993; Esbensen et al., 2001; Flannery et al., 1998).

The relationship between gang affiliation and the combined individual level factors as measured by the Total EQ composite, while not causative / predictive in nature, converges with findings reported in the studies noted above. The impact of self-regulation deficits on interpersonal relationships has also been well documented in the literature on peer rejection (Goldman & Akin-Little; Newman et al., 2007). Interpersonal level risk factors for gang affiliation include rejection by pro-social peers and interaction with delinquent peers (Gordon et al., 2004; Esbensen, 2000), particularly in early adolescence (Lahey et al., 1999). The finding supporting the relationship

between degree of gang affiliation and the Total EQ composite converges with the results of prior research. Further examination of this relationship, and examination of differences amongst groups, may demonstrate that adolescents who exhibit difficulties in self management may also be at greater risk for gang affiliation.

As the Total EQ score represents a combination of all of the factors measured by the EQ-i: YV, the composite scores (e.g., Interpersonal composite and Adaptability composite) provide a more specific profile of competencies to consider when designing intervention programs. The scores obtained by youth on other EQ-i:YV composites that were not found to have a significant relationship with gang affiliation in this study (e.g., Intrapersonal, Stress Management, and General Mood composites) may point to areas of strength that can be capitalized on when planning interventions at the individual level.

The fact that the Intrapersonal and Stress Management composites did not correlate significantly with the gang affiliation measure in this study may not represent a divergence from the literature, because engagement in delinquent acts has been hypothesized by some authors as a method of coping with stressors (Eitle et al., 2004). The availability of youth gangs may represent a viable opportunity for some youth who view affiliation with a gang as a means of alleviating stressors such as poverty and threats to safety. If this affiliation is viewed as an adaptive coping response in this sense, a significant inverse relationship would not be anticipated between gang affiliation and stress management. Likewise, some youth may refuse to accept the deprivation associated with poverty and limited community options, and may choose to pursue affiliation with gangs as a viable means of achieving economic success within their community context. These youth may not score any differently on the Intrapersonal

composite than would youth who do have access to viable community alternatives and who do not become gang affiliated.

While statistically significant, the strength of the relationship found between measures of social/emotional competency and gang affiliation identified in this study is not large. The variance accounted for by this relationship (e.g., 12% for gang affiliation and the Adaptability composite for females in this study) suggests that other variables need also to be considered. Some of these variables may be those not addressed in this study, such as: degree of parental supervision, relationship to parents, school performance, family financial situation, and the interaction between the variables. The fact that both the gang affiliation and social/emotional competency measures used in this study were self-reported measures also presents some limitations. Congruency with parent, teacher, and peer ratings of social/emotional competency would also be important points to consider.

The lack of significant relationship found between gang affiliation and social/emotional competency measures for boys in this study was interesting, and is considered further in discussion of Finding 6 as follows.

5.1.2 Finding 2: There is a significant relationship between degree of gang affiliation and measures of aggression.

This finding converges with the literature identifying aggressive interpersonal interaction styles as related to both pro-social peer rejection, and consequently to involvement in delinquent behaviors and delinquent peer associations (Flannery et al., 1998; Goldman & Akin-Little, 2002; Gordon et al., 2004). This finding supports those

previous studies, which have found significant positive relationships between gang affiliation and the use of interpersonal aggression. Youth who engage in interpersonal aggression may be shut out of pro-social peer groups and interactions over time, providing limited opportunities for developing alternate interaction styles and emotional regulation. A need for belonging to a peer group may be related to youth interacting with deviant groups, including youth gangs.

The fact that for the total sample, a relationship existed only between gang affiliation and the Physical Aggression factor, but not with the other aggression measure factors was interesting. This relationship, while not causative in nature, may suggest an area for further examination. It may be that the use of physical aggression is both less accepted than other forms of aggression by most pro-social peer groups (and is linked to rejection by these groups), and physical aggression may also be sought after by members of youth gangs, contributing to increased likelihood of gang affiliation. The use of physical aggression is also likely to result in more significant consequences (such as suspension from school, restriction from activities, and involvement with law enforcement and justice agencies), resulting in further alienation from the general peer group. The use of verbal aggression may be tolerated, or may even be considered normal to a greater degree within general adolescent peer groups, and may also lead to fewer or less stringent consequences from those in a position of authority. The Anger and Hostility factors can be viewed as less overt measures of aggression (e.g., representing emotional and cognitive factors, versus behavioral factors), and therefore may not be significantly related to peer rejection or socialization into a delinquent peer group such as a youth gang.

Within this study, the relationship between aggression measures and gang affiliation disappeared when the sample was separated according to gender. While this finding may be an issue of insufficient power to detect relationships of significance (e.g., due to small sample size), it may also be related to differences in socialization for males and females.

As will be explored in discussion of finding number six, male and female participants were found to differ significantly on measures the AQ Physical Aggression measure, with males tending to score significantly higher than females on this sub-scale. Despite this tendency towards greater self-reported use of physical aggression for males, this item was not significantly correlated with gang affiliation. This item may suggest a greater social tolerance of a higher degree of physical aggression exhibited by males versus by females. The examination of the relationship between physical aggression and gang affiliation amongst males with stronger gang affiliation than reported in this study may provide further insight. The gender differences observed in this relationship are explored further in discussion of Finding 6.

Again, the measures utilized to support this finding were self-report measures. The inclusion of objective measures of aggression, such as teacher, peer, and parental reports would be useful in lending further credibility to the findings. That said, the link between interpersonal aggression and gang affiliation has been corroborated within the research literature, as has the fairly robust correlation between self and collateral reports of aggression. The use of a simple, self-report measure such as the Aggression Questionnaire appears to serve well as an efficient means of identifying those youth who tend to engage in a higher degree of interpersonal aggression. The Aggression

Questionnaire utilized in this study (Buss & Perry, 1992) has been updated by the AQ authors in recent years, utilizing even simpler language and design than its predecessor. The newer version of the Aggression Questionnaire has also been rigorously studied, and it includes norms for individuals aged 9 to 88 years old (Buss & Warren, 2000). Future studies may benefit from utilization of this updated version of the measure.

5.1.3 Finding 3 – There is a significant relationship between degree of group affiliation and measures of social/emotional competency.

This finding converges with that of other studies in which integration with one's peer group is strongly related to the development and use of core social/emotional competencies, such as social problem-solving, communication, and emotional regulation skills (Newman et al., 2007). In fact, prior studies have identified integration with one's peer group in adolescence as a protective factor in the development of behavior problems (Newman et al., 2007). Functioning and being accepted as a member of a group seems to require certain social, emotional, and cognitive skills, as assessed by the EQ-i: YV measure used in this study. The significant, positive relationship found in this study between the measures of social/emotional competency and degree of group affiliation would appear therefore to make sense in light of prior research on the matter. Whereas exclusion from social peer groups may be associated in the literature with the development of problems in personal adjustment and self-regulation (Goldman & Akin-Little, 2002; Newman et al., 2007; Newman & Newman, 2001), social inclusion provides opportunity for practice of social skills, and exposure to reinforcement of the use of adaptive coping skills.

76

Within the current study, youth who reported a higher degree of group affiliation, also endorsed higher social/emotional competency scores as measured by the EQ-i: YV. For the total sample, this relationship was evident for all of the EQ-i: YV composites (Intrapersonal, Interpersonal, Adaptability, General Mood) and for the total EQ score. Youth participating in this study who identified themselves as participating in a variety of group contexts (including organized recreational activities and friendship groups) were more likely to identify themselves as competent in interpersonal situations. The percent of variance accounted for by this relationship is also seen as fairly robust for some factors (accounting for 19.8% percent of the variance for the Total EQ factor).

While the current study identifies a relationship only, and cannot speak to causative factors, it is likely that group affiliation and social/emotional competency skills may be mutually reinforcing. That is, that youth who affiliate more with pro-social peer groups have greater opportunity to practice and develop their social and personal coping skills, and youth who demonstrate greater competencies in these areas to begin with are likely to be more readily accepted and sought out by their peer group members. This relationship points to several areas conducive to intervention, including the importance of providing a range of suitable opportunities for youth to associate with structured activity groups, as well as monitoring and teaching alterable social, interpersonal, and intrapersonal coping and problem-solving skills.

Limitations of this study specific to this finding include the fact that the importance of group belonging for the individual was not measured. This factor was identified by Newman et al. (2007) as important to consider in evaluating the relationship between peer group membership and adolescent behavior problems. Their study noted

that adolescents differ in the degree of importance that is assigned to group affiliation. Those youth who attached a high degree of importance to group belonging, and who experienced exclusion from their peer group, tended to self-report greater degrees of problematic internalizing and externalizing behaviors as compared to peers who may well also demonstrate a low peer group affiliation, but did not attach a high degree of importance to group belonging. Further, findings in the current study were not separated according to the importance of friend versus structured activity groups.

It may well be that more than one distinct factor is being assessed by the measure of group affiliation used in this study. That is, the measures of social/emotional competency may be differentially related to degree of affiliation to friend groups and degree of affiliation to structured activity groups. As well, the measures utilized in the study are self-report measures, and therefore represent the individual's self-perceived level of affiliation and self-perceived social/emotional competence, which may not coincide with other measures (such as peer or teacher nominations, or objective measures of competency). This would have implications for intervention planning, in which targeted intervention may not be as effective as interventions geared towards the collective, as some youth or areas of need may be missed in targeted intervention efforts.

Gender differences were noted in regards to the relationship between Group Affiliation and measures of social/emotional competency, and are explored in discussion of Finding 6.

5.1.4 Finding number 4. There is a significant inverse relationship between degrees of group affiliation and measures of aggression.

This finding converged somewhat with findings from other studies in which youth who exhibited low group belonging, tended to report or exhibit higher degrees of externalizing behavioral problems, such as anger and aggression (Goldman & Akin-Little, 2002; Newman et al., 2007). While also not causative in nature, this is likely a reciprocal relationship, in which youth who exhibit greater degrees of interpersonal aggression are also more likely to be rejected by peers; and in which youth who are limited in their opportunities to interact with their peers, have less opportunity to learn effective social and problem-solving skills, all resulting in a higher degree of interpersonal conflict. As also previously pointed out, this relationship is likely to be even more significant for those youth who attach a high degree of importance to belonging to a group (Newman et al., 2007). The factor of degree of importance of group belonging was not measured in this current study. Future studies may wish to include this factor, as well as considering collateral measures of aggression and group belonging rather than having sole reliance on self-report measures.

Of interest, the findings in this present study diverge from findings in other studies in regards to physical aggression. That is, in this study, for the total sample, the AQ Physical Aggression subscale did not correlate significantly with the measure of group affiliation. Rather, only the Verbal Aggression, Anger, and Total Aggression sub-scales were found to demonstrate an inverse relationship with group affiliation in the total sample group. It is possible that the study lacked sufficient power to identify any relationship between Physical Aggression and group affiliation. It is also possible that within the sample population, physical aggression was either not significantly present or reported by participants, or it may have in fact been tolerated to a greater degree than

79

anticipated, thereby not strongly related to group affiliation. The Aggression

Questionnaire does not include any validity scales (such as positive impression scales);

therefore, it is not possible to speculate from the test scores whether participants may

have tended to under-report on this scale or not. It is an area, however, that does bear

further examination.

5.1.5 Finding number 5. An inverse relationship was not found between measures of

group and gang affiliation in this study.

This finding was contrary to what was expected, and gives rise to other

considerations. A central finding in the literature regarding gang affiliation has been the

link between rejection by pro-social peer groups and affiliation with delinquent and gang-

involved peers (Craig et al., 2002; Cureton, 1999; Esbensen, 2000; Gordon et al., 2004).

A number of studies have also noted the link between a lack of access to structured

recreational activities and gang affiliation (Stone, 1999; Thornberry et al., 2003).

However, this current study did not replicate these findings. Instead, no significant

relationship was found between group affiliation and gang affiliation as measured in this

study. This lack of significant relationship could indicate a flaw in the basic premise that

youth who are affiliated with gangs are likely to be lacking a sense of belonging to other

groups, or may have been rejected by other pro-social groups. Instead, these findings

may suggest that youth may have opportunity for affiliation with other groups, however

also choose affiliation with gangs. This phenomenon may be the case in communities

where gang affiliation is common, in which gang affiliation may be viewed as important

for protection or for economic reasons. In this case, access to other structured activities

and friend groups may well be available, but is perceived as insufficient to meet the youths' survival needs. In this sense, gang affiliation could be viewed as adaptive in nature.

The finding of a lack of relationship between group and gang affiliation in this study may also be indicative of the low degree of gang affiliation measured within the overall sample. This study was specifically targeting youth who would be considered earlier and more likely transient in their gang affiliation, in which case lesser degrees of affiliation were anticipated. In addition, adolescents within this earlier, less intense stage of gang affiliation may also still be involved in other activities and groups as they experiment with the gang persona. Alternatively, as found in Mellor et al.'s study (2005), degrees of youth gangs themselves exist, and the youth in this study may have been more likely to be affiliated (if at all) with a more spontaneous or loosely organized gang / group (Mellor et al.'s Type B), whose primary purpose of coming together is social in nature. In this case, the lack of relationship between group and gang affiliation measures may well be anticipated, as the two measures would represent affiliation to the same group, or groups, and youth with some gang affiliation are not likely to be strongly loyal to this group, nor exclusive in their group membership. Examination of the relationship between group and gang affiliation measures in samples including youth who are more strongly affiliated with an organized gang group (e.g., Mellor et al.'s Type C or Type D), may tend to reveal the anticipated inverse relationship.

The lack of relationship found in this study may not be indicative of a flaw in the premise or a bias in the study sample, but may instead reflect weaknesses in the measures themselves. While the items included in the gang affiliation measure were adapted from

81

items utilized in other studies measuring gang affiliation, and can be considered to have some face validity, the group affiliation measure items were generated specifically for this study. Without more extensive exploration and validation studies, it is difficult to state definitively that the group affiliation items measure one distinct construct. There may in fact be different factors being measured, including friendships, participation in structured recreational activities, and potential differences between in-school and out-of-school group affiliations. The combination of multiple factors may lead to a dilution of the overall group affiliation measure. In addition, in some cases, the friendship items may in fact measure affiliation with peers who are gang affiliated, which would further dilute any potential relationship between group and gang affiliation.

5.1.6 Finding 6. The relationships examined in this study differ according to gender.

Independent sample T-tests conducted in this study indicated that male and female participants differed significantly on the EQ-i: YV Intrapersonal and Interpersonal composites (with females scoring higher on these measures), as well as the AQ Physical Aggression and Total Aggression sub-scales (with males scoring higher on these measures). No significant differences were found between genders on any of the other measures utilized in this study, including the Group Affiliation and Gang Affiliation measures. When separated by gender, however, different patterns of correlations emerged for males and females between the measures of social/emotional competency, aggression, degrees of group affiliation, and degrees of gang affiliation.

For females in this study, significant inverse relationships were found between gang affiliation and the EQ-i: YV Interpersonal, Adaptability, and Total EQ measures,

whereas no significant relationships were found between gang affiliation and any of the EQ-i: YV measures for male subjects in this study. When separated according to gender, no significant relationships were found between the measure of gang affiliation and any of the aggression measures in this study for either male or female participants. This lack of relationship may reflect a Type II error in which the sample sizes were insufficient to reflect relationships of significance; however it may also reflect other issues of significance.

The lack of relationship between aggression and gang affiliation for males diverges from results of other studies, in which interpersonal aggression was found to be a strong correlate of adolescent gang membership (Craig et al., 2002; Flannery et al., 1998; Gordon et al., 2004). Of note, Thornberry et al., (2003) found a significant relationship between externalizing behaviors (e.g., anger and use of interpersonal aggression) and gang membership for female adolescents, a relationship that was not evident for female subjects in this study. The lack of finding for a relationship between physical aggression and gang affiliation for males in this study, refutes the selection hypothesis (Gordon et al., 2004), in which males who engage in greater physical aggression have been found to seek out or be sought out by gang members. As indicated in the literature (Goldman & Akin-Little, 2002), youth who engage in interpersonal aggression are more likely to be rejected by pro-social peer groups, which may lead to a greater likelihood of affiliation with gang groups. Therefore, the lack of significant relationship for males or females in this study is interesting.

Some studies have found that girls and boys join gangs for different reasons. For example, joining a gang for the purpose of finding protection has been found in some

studies to be more commonly cited by girls than by boys (Stone, 1999). Other studies (Thornberry et al., 2003) found that seeking protection was equally reported by boys and girls as a reason for joining a gang. In this current study, the fact that girls with higher degrees of gang affiliation did not also report a higher physical aggression score may converge with the research suggesting differences. It is possible that girls who affiliate with gangs may not be more prone to physical aggression, themselves, but rather they may turn to the gang in order to access the protection afforded by belonging to an established group.

The lack of a relationship found for males in this study between gang affiliation and measures of social/emotional competency is unexpected. This finding suggests that for males in this study, gang affiliation or lack thereof is unrelated to the individuals' level of self-reported social/emotional competencies. Although the study is purely correlational in nature, the lack of significant findings in this area could suggest that other factors may be at play in regards to male youth's affiliation with gangs. Rather than being reflective of competencies found at an individual level, the youth's confidence in macro-level (community) competencies may be a more significant variable that bears future consideration and testing. Stone (1999) noted that males were more likely than females to cite lack of viable financial and employment opportunities available to them in their community as reasons for joining a gang. In this vein, future studies may measure the degree to which youth (males and females) perceive their community as capable of affording them opportunity for financial and social success, and how important this form of success is for them. Regardless of their own individual level competencies, those youth who do not perceive viable pro-social opportunities available to them within their

broader community, and who place a high value on avoiding further deprivation, may seek out alternatives found within the alternative gang community. As previously noted in the literature, those youth who engage in a greater degree of interpersonal aggression may both seek out and/or be sought out by delinquent and gang groups. In this sense, interpersonal aggression may be perceived as an asset by youth who perceive gang affiliation as providing an opportunity for success that may otherwise be denied to them.

Differential patterns of correlations were also evident when comparing relationships for males and females between group affiliation and measures of social/emotional competency and aggression. There was a significant positive relationship between group affiliation and self-reported Intrapersonal, Interpersonal, Adaptability, General Mood, and Total EQ scales for males, whereas only the relationships between group affiliation and the Interpersonal, General Mood, and Total EQ scales emerged as significant for females. The AQ Physical Aggression, Verbal Aggression, Anger, and Total Aggression sub-scales were found to correlate inversely with group affiliation for female participants, whereas only the AQ Anger and Hostility subscales were found to correlate significantly (in an inverse direction) with group affiliation for male participants. Again, some of this may be accounted for by issues with insufficient power due to small sample sizes, however some may also be accounted for by differences in the males and females themselves and how important different factors are to group affiliation for the two genders.

The relationship between group affiliation and the Intrapersonal composite for male participants in the study is fairly robust ($r = .571$, $p < .01$), making the lack of significant relationship for females all the more interesting. The Intrapersonal composite

is said to measure the following factors according to Bar-On (2004, p. 138): Self Regard ("the ability to accurately view, assess, and accept oneself including one's emotions"), Emotional Self – Awareness ("the ability to be aware of and understand one's emotions"), Assertiveness ("the ability to express one's emotions and oneself nondestructively"), Independence ("the ability to be self-reliant and free of emotional dependency on others in the way one thinks and behaves"), and Self-Actualization "the ability to set personal goals and the drive to achieve them as an integral part of actualizing one's potential"). According to the t-test analysis, male and female participants differed significantly on the Intrapersonal sub-scale. Despite female participants scoring higher overall, higher scores on the Intrapersonal sub-scale were positively related to group affiliation only for males, and fairly significantly so. While only correlational in nature, this may suggest that the capacity for positive intrapersonal abilities is much more important for males' group-joining behavior than for females. Or alternatively, the results may suggest a reciprocal relationship in which the development of male adolescents' intrapersonal abilities are facilitated by stronger group affiliation. The fact that the relationship is not evident for female participants may suggest that intrapersonal abilities hold less importance for female group-joining behavior, or may simply reflect the finding that female participants in general exhibited stronger intrapersonal abilities than did male participants, regardless of group affiliation. These ideas are purely speculative in nature, and bear further examination.

The fact that physical aggression did not relate significantly with group affiliation for males, but did for females, can be understood in context of differences in socialization and acceptance of physical aggression amongst males, wherein males are more likely to

engage in physical aggression than females (Archer, 2004), and in a wider number of contexts (such as sports, aggressive horse-play with friends, etc). Despite males scoring higher on measures of aggression, this is not as likely to exclude them from friendship groups and structured activities as it may for females, for whom direct physical aggression is less accepted (Archer, 2004).

5.1.7 Finding 7. Significant differences exist between outlier groups (group/gang affiliation) on measures of social/emotional competency and on measures of aggression.

According to the results of this study, participants who endorsed high degrees of Group Affiliation differed significantly from participants who endorsed high degrees of Gang Affiliation when compared on the Interpersonal composite scale of the EQ:i: YV and on the Total EQ scale. These findings converge with the correlational relationships found within this study and discussed earlier. The nature of the analysis gives further credence to the proposed link between group / gang affiliation and social/emotional competency in youth. That is, according to this study's results, youth who report high degrees of group affiliation (with low to average degrees of gang affiliation) also report stronger interpersonal competency skills than do those youth who report high degrees of gang affiliation (with low to average degrees of non-gang group affiliation). This finding, while still not definitive, would strengthen the case for utilizing the EQ-i: YV measure as a screening tool to identify youth who may be at greater risk for gang affiliation, and as a template for planning early intervention programs.

It is interesting that these differences emerge when comparing youth who fall within the outer bounds of the respondents for this study, and not when compared against

those whose reported degree of group and/or gang affiliation is within the average range for the study sample. No significant differences were found between the High Gang Affiliation group and the Mean group. This is most likely indicative of the low overall levels of degree of gang affiliation reported in the study sample. This, in conjunction with the fact that the numbers in the outlier groups are relatively low, would support the benefits for further larger-scale research studies specifically focused on exploring differences in social/emotional competency between non-gang affiliated youth and youth who are more strongly affiliated with youth gangs (e.g., youth who identify themselves as actual gang members).

While significant differences were noted on the Intrapersonal and Total EQ scales between the High High and Low Low groups, the High High group (made up of subjects who reported high degrees of group and gang affiliation), likely was too small of a sample group (n = 3) to be considered a valid reference for inferring differences from other groups. The risk of inferring significance where there is not truly any is high in this case. However, this group would be an interesting group to explore further on a larger scale, given the mediating factors that may become evident regarding risk for gang affiliation.

Significant differences were noted between the High Group Affiliation group and the Low Low group on the EQ Intrapersonal, Interpersonal, Adaptability, General Mood, and Total EQ scales. As well, differences were noted between the Mean group and Low Low group on the EQ Interpersonal scale. These findings were consistent with the correlational findings discussed previously, in which participants who endorsed higher degrees of group affiliation, also tended to endorse higher self-assessment of

social/emotional competencies as measured by these scales, as compared to participants who reported lower degrees of group affiliation.

In regards to the Aggression measures, significant differences emerged only between the High Group Affiliation group and the Low Low group. Differences were found on the AQ Physical Aggression, AQ Anger, and Total Aggression scales. No significant differences were found between the High Group and High Gang affiliation groups on any of the aggression measures. While the correlational findings indicated a significant relationship between Gang Affiliation and Physical Aggression, this relationship was fairly modest. While physical aggression has been found in the literature to be a primary risk factor in gang affiliation, the modest nature of this relationship in the current study, together with the lack of significant difference found between the High Gang and High Group affiliation groups on the aggression measures suggests that this factor may bear further investigation for significance in early or transitional phases of gang affiliation. Alternatively, the sensitivity of the Aggression Questionnaire in picking up on this factor with the target population may also bear further scrutiny.

Similar considerations as discussed in relation to previous findings, regarding the measures utilized in the study should also be considered in examining differences amongst groups. The importance of group belonging, and clearer definition of type of group / gang would serve to further clarify the nature of the between-group differences. Size of groups, and consideration of inter-connections between factors would also be important considerations for future research in the area.

5.2 General Implications

Overall, while not causative in nature, the findings of this study support the existence of a relationship between social/emotional competencies and gang affiliation. This relationship points to alterable individual-level characteristics that may be valuable to target in intervention efforts aimed at the prevention of gang affiliation or in dissuading youth who may be at early (transient) stages of gang affiliation.   The use of self-report measures in identifying such relationships also proves promising as a relatively simple and reliable means of identifying youth who may be at risk, and therefore providing opportunity for targeted intervention. Early, broad intervention efforts aimed at the development of social/emotional competencies amongst school-aged children has the potential to act as a protective measure in the prevention of gang affiliation amongst youth populations. The lack of finding of a significant relationship between group and gang affiliation in this study would suggest that while the provision of opportunities for structured recreational activities is likely important for healthy youth development, it is insufficient as a preventive measure in regards to gang affiliation. The inclusion of specific interventions aimed at the development and strengthening of youth's social competencies is likely to have a greater impact on the prevention of gang affiliation. This is strengthened by the finding of significant differences in social/emotional competency measures, between youth who endorse high group affiliation, and youth who endorse high gang affiliation

The fact that different findings were found for male and female participants in this study would suggest that intervention efforts should be different for male and female youth. While physical aggression did not emerge as a strong correlate of gang affiliation in this study, it is a noteworthy factor identified in the literature, and may well be more

90

evident with further examination. In this vein, interventions aimed at the development of alternatives to the use of interpersonal aggression amongst male youth are recommended. In addition, interventions that aim towards the continued inclusion versus exclusion of youth who engage in aggressive acts is recommended as essential in order to continue to engage such youth in pro-social alternatives versus fostering a sense of rejection from the normative peer group. This has implications for school policy and recreation programs that would need to develop strategies that simultaneously protect those youth who are most vulnerable to aggression, while also providing constructive consequences and experiences to those youth who do engage in interpersonal aggression. The development of interventions aimed specifically at promoting interpersonal problem-solving and adaptability amongst female youth is also recommended.

While the relationships amongst social/emotional competencies, aggression, and gang affiliation in this study were found to be significant, it is likely that other factors are also relevant for consideration and intervention planning. Specifically, working in partnership with communities to develop opportunities for mentoring youth and providing access to viable employment opportunities is recommended. Working to engage parents and other family members of youth at risk for gang affiliation in prevention and intervention efforts could also serve as protective measures.

The use of self-report measures in this study is encouraging on a number of levels, given the ease of administration. There is the added benefit that self-identification of for areas of need, in addition to personal strengths, may serve to increase youths' engagement in interventions. That is, youth may be more apt to participate in

interventions aimed at skills-development and change if they themselves perceive the factors in question to be problematic for them within their own social context.

<div align="center">5.3 General Limitations</div>

Some limitations to the current study have been noted in discussion of particular findings, and need to be considered in terms of their impact on the study as a whole.

5.3.1 Limitations in study sample

The return rate of consent and assent forms for this study was estimated to be 56%. Given the relatively high percentage of targeted youth who did not participate in the study, those who did participate potentially represent a limited sample, with potentially limited generalizability of results.   There are a variety of factors that could have served to impact the response rate in the current study. For one, the reliability of students of this age taking forms home, sharing them with their parents, and remembering to return them to the school may be questionable in some cases. There was some variance evident in the process by which participating schools chose to disseminate the information to their students and parents, with some schools sending out packages directly to parents, while others sent the forms home with interested students. This variability means that some parents were potentially more likely to receive the study information and therefore more likely to consider consenting to their child's participation than were others.

Differences in the degree of parental involvement and quality of parent-child relationship may also have factored into whether youth returned the forms to their parents, discussed the study with them, and and/or whether parents would be likely to

<div align="center">92</div>

respond to the call for participants. This potential variation in parental involvement may also have served to impact the degree of gang affiliation evident in study participants. The level of parental supervision and parenting practices have been found to be protective factors in regards to gang affiliation, particularly in early adolescence (Esbensen et al., 2001; Lahey et al., 1999; Ryan et al., 2007). Therefore, parents who were more involved with their children in terms of greater supervision and greater mutual communication, may have been more likely to support their child's involvement in the study. In this case, participation in the study may have been biased towards those already at lower risk for gang affiliation given their higher degree of parental involvement. As this factor was not measured in the current study, this is purely speculative, however does point to potential factors limiting or biasing the sample group.

The study participants overwhelmingly identified themselves as Caucasian (94.5%), representing a strong sampling bias and limitation of generalizability of results to a non-Caucasian population. As participating schools did not report their ethnic breakdown, an accurate estimation of the degree to which the study sample is representative of the overall school ethnic population is not possible. However, given the relatively large aboriginal population within the city of focus, it is fair to assume that this study represents a skewed sample. Reasons why this may be the case are difficult to identify. It is possible that non-Caucasian youth and/or their parents did not wish to participate in a study of gang affiliation, given the already higher percentage of minority youth hypothesized by the general culture to be gang-involved, in an effort to not contribute to this stereo-type. The language of the recruitment material may potentially have been inaccessible to some. What is important to note however, is that while

previous studies targeting law enforcement agencies report the majority of gang-affiliated

youth in the province of Saskatchewan to be of aboriginal background, the current study

provides some contradiction to these reports. That is, the current study reflects that study

participants, who primarily self-identified as Caucasian, did have varying degrees of gang

affiliation (albeit the majority of which was at a low level). This raises the question, at

the very least, as to how representative prior estimates truly are of youth in the general

population who may be earlier or less entrenched in the gang culture.

Socio-economic status was not measured in the current study. This poses a further

limitation in the generalizability of results, as it is unclear if there is any relationship

between the degree of gang or group affiliation and socio-economic status. It is also

unclear whether there was any relationship between socio-economic status and

participation in the study itself. Socio-economic status has been identified in previous

studies as a risk factor in adolescent gang affiliation (Flannery et al., 1998; Spergel &

Curry, 1992), with some studies (Stone, 1999) citing financial concerns as the major

reason given by youth for gang-joining behavior, and the relatively higher prevalence of

gangs within stressed neighborhoods has been noted in other studies (Mellor et al., 2005).

5.3.2 Limitations of measures

As has been noted in the discussion of individual findings, the measures utilized

in this study are all of the self-report variety. While self-report has been found to be a

valid measure of gang affiliation, social/emotional competency, and aggression, this must

still be noted as a potential limitation of results in the current study. That is, discussion of

results should be limited at this stage to self-reported gang and group affiliation, and self-

perceived social/emotional competencies and use of interpersonal aggression. As noted

previously, the use of self-report measures does present some benefits as well as potential

limitations, as youth earlier in the gang affiliation process are not likely to be identified

by law enforcement or school personnel statistics, and youth self-identification of areas of

personal vulnerability may potentially increase opportunity for engagement in

intervention efforts.

The Gang Affiliation measure utilized in this study did not ask participants

directly if they identify themselves as a gang member, nor did the questions pertaining to

gang affiliation ask participants to describe type of gang (e.g., loosely formed versus

highly organized criminally focused group) they may be affiliated to. While this was

purposeful as a means of capturing those youth who would be considered earlier in the

continuum of gang affiliation, it does pose some potential limitations as different reasons

have been cited for affiliation with different types of gang groups (Mellor et al., 2005),

and differences may present themselves between those youth who are highly gang

affiliated but do not consider themselves to be a 'member' and those who do self-identify

as a gang member.

The Group Affiliation measure utilized in this study consisted of questions

reflecting varying degrees of involvement in friend groups and organized recreational

activity groups. Differentiation amongst these various groups was not accounted for in

the total Group Affiliation score. It is possible that this poses some limitations in terms

of more than one factor being identified by the Group Affiliation measure. The

individual value placed on group belonging has also been identified as an important

factor for consideration (Newman et al., 2007). This factor was not included in this

study, and may have implications for the relationship between group affiliation and gang

affiliation. That is, those youth who report a low group affiliation, but high value for belonging to a group, may be at higher risk for gang affiliation than those youth who do not attach the same value to group belonging. Had this been considered, the findings regarding a lack of relationship between group and gang affiliation in this study may potentially have been different.

5.4 Recommendations for Future Research

5.4.1 Measures.

An updated version of the Aggression Questionnaire (Buss & Warren, 2000) is now available. Although containing many of the same items as the 1992 Buss & Perry version, the updated version reportedly includes some simplification of language and elimination of the reverse-score items, as well as a reconfiguration of some of the factor scores (Buss & Warren, 2000). The new measure is reported by the authors to reflect stronger psychometric properties than the previous version, including norms for respondents as young as nine years old. Future research may benefit from utilization of this measure as a stronger tool than that used in this current study.

As noted, the Group affiliation measure utilized in the current study may potentially reflect multiple factors, including a measure of affiliation to friend groups and to structured activity groups. Further testing of this measure is recommended, and differentiation made between the different factors to determine whether there is a relationship between the individual factors and gang affiliation that is not reflected in the current composite. The inclusion of a measure of importance of group belonging is suggested for future research. Newman et al. (2007) included a measure of group

membership salience in their study through asking participants to respond (according to a 5-point Likert scale) to the question "How important is it for you to find a group that provides you with a sense of belonging?". They also included a measure of the quality of peer group belonging and a measure of peer group affiliation, in which participants were asked to list the different types of groups at their school, and to identify whether they belonged to each of the groups or not. The utilization of similar measures of perceived group membership in future studies may provide greater insight into the relationship between group and gang affiliation, thereby providing potentially important information regarding prevention and intervention planning for youth at a community and school level. Reliability testing was done only on a small pilot group. Further evaluation is recommended.

According to the results of this study, the BarOn EQ-i: YV demonstrates promise as an effective, and well-validated tool for the identification of potential target areas for intervention and prevention efforts regarding gang affiliation. Further exploration of the use of this measure with youth at varying degrees of gang affiliation is recommended.

A potential limitation of the current study includes the fact that the measures utilized are purely self-report measures. Further investigation of the relationship between social/emotional competency and gang affiliation may benefit from inclusion of measures completed by collateral sources such as parents and teachers. This may provide further information relevant to intervention planning.

The inclusion of a measure of perceived community competency, that is the degree to which youth perceive their community as competent in meeting their needs for social and economic success is also recommended. Cureton (1999) suggested that youth

who join a gang do so in part out of a rejection and defiance of the limitations and deprivation imposed upon them by their community. Passive adaptation to the limitations of their social world is not accepted as an option. Together with ratings of social/emotional competencies and a rating of the importance of social and economic success, a rating of perceived community competence may serve to further differentiate between those youth who choose to affiliate with gangs and those who do not. This would potentially further inform intervention efforts at the community level.

5.4.2 Study Design

Future studies examining the relationship between degree of gang affiliation and social/emotional competency would benefit from inclusion of a clearer definition of the sample group, including a measure of socio-economic status, and degree of parental involvement. A broader ethnic representation is also recommended in order to facilitate generalization of results to a non-Caucasian population. This may require the inclusion of targeted recruitment in the study design and ethics approval process.

Testing the relationship between gang affiliation and social/emotional competency is recommended with youth who are further along the continuum of gang affiliation, such as those who self-identify as a gang-member and/or with those who are identified through contact with law enforcement agencies as gang-affiliated. A between-group study design that compares the social/emotional competency of gang members to that of non-gang youth may provide further information valuable to this area of research. In order to accomplish this, either a much larger sample group would be recommended, and/or the study design would need to be adapted to allow for targeted recruitment of identified gang members.

A prospective, longitudinal study design would present an interesting alternative, as a means of testing the degree to which gang affiliation is sustained or intensified over time, and the relationship to social/emotional competency. That is, it would be interesting to assess whether youth assessed as having lesser social/emotional competency are more likely to transition to stable gang membership than are those with greater social/emotional competency. Alternatively, the responsiveness of youth to interventions designed to aid in the development of social/emotional competency would be an important area of study, to determine whether degree of gang affiliation can be impacted through targeted intervention in this area. A comparison of pre and post measures of gang affiliation and social/emotional competency amongst groups exposed to interventions and those not participating in interventions would provide further information in this regard.

5.5 Conclusion

This exploratory study was initiated to contribute to the literature regarding adolescent gang affiliation, with particular interest in identifying social/emotional measures that could be utilized to guide the development of intervention and prevention efforts. The BarOn EQ-i: YV (Bar-On & Parker, 2000) was chosen as the central measure of examination in this context. Findings in the study suggest that the BarOn EQ-i: YV holds promise as a measure for this purpose, with EQ Interpersonal, Adaptability, and Total EQ composites demonstrating significant relationship to degrees of gang affiliation. These findings represent relatively new contributions to the literature regarding early gang affiliation in adolescents.

The Aggression Questionnaire (Buss & Perry, 1992) was also examined as a potential measure for this study's purpose. The Aggression Questionnaire sub-scales did not appear to correlate as strongly with degrees of gang affiliation as did the BarOn EQ-i: YV. This represented a significant divergence from the existing literature that has identified interpersonal aggression as a primary risk factor for adolescent gang affiliation. correlations.

Differences in patterns of correlations were noted for male and female study participants, supporting the literature that suggests that male and female adolescents may affiliate with gangs for different reasons, which also bears consideration when planning intervention and prevention efforts.

The design and findings of this study are preliminary and exploratory in nature. The findings were limited to a narrowly defined sample population, and several limitations related to the population and study design have been identified that will limit generalizability of results. In addition, questions regarding the measures utilized in this study also pose limitations on generalization of results. However, the cautions aside, the findings of the current study point to potentially important areas for future research in support of efforts to respond to a rapidly growing youth gang problem in Canadian society.

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Appendix A: Ethics Approval

University of Saskatchewan
Behavioural Research Ethics Board (Beh-REB)

06-Apr-2006

Certificate of Approval

PRINCIPAL INVESTIGATOR	DEPARTMENT	BEH#
Brian Noonan	Educational Psychology and Special Education	06-58

STUDENT RESEARCHER(S)

Heather Middleton

INSTITUTION (S) WHERE RESEARCH WILL BE CARRIED OUT

University of Saskatchewan

Saskatoon SK

SUB-INVESTIGATOR(S)

Don H. Saklofske

Stephen Wong

SPONSORING AGENCIES

UNFUNDED

TITLE
Youth at Risk for Gang Affiliation, and Measures of Social Competency

CURRENT APPROVAL DATE
06-Apr-2006

CURRENT RENEWAL DATE
01-Apr-2007

CERTIFICATION

The University of Saskatchewan Behavioural Research Ethics Board has reviewed the above-named research project. The proposal was found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol or consent process or documents.

Any significant changes to your proposed method, or your consent and recruitment procedures should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS

The term of this approval is five years. However, the approval must be renewed on an annual basis. In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for further instructions:

http://www.usask.ca/research/ethical.shtml .

APPROVED.

Valerie Thompson, Chair
Behavioural Research Ethics Board
University of Saskatchewan

YOUTH ASSENT FORM

You are invited to participate in a study entitled *"Youth at risk for gang affiliation, and measures of social competency"*. Please read this form carefully, and make sure to ask any questions you might have.

Who is doing the research study? Heather Middleton (student researcher), Department of Educational Psychology & Special Education, University of Saskatchewan (966-5255)

What is this study about?

The purpose of the study is to find how kids your age (between 12 and 15 years old) see their friendships and social world. I want to look at whether this is different for kids who are connected to groups of different kinds.

You will be asked to complete three short questionnaires that look at how you get along with other people (for example: if you are able to stay calm when upset or angry, how you deal with different feelings, what you do when you feel mad at someone, etc) and what kinds of groups you spend time with (such as sports teams, groups of friends, gangs, other groups). You will not be asked to put your name on any of the forms.

The forms will be filled out in your school, during school time, and will take no more than about 30 minutes.

Why should I bother?

It is your choice to take part in the study or not. Deciding to participate in the study or not will not have any impact on your school participation or grades. Good things that can come out of being part of the study include being a part of important research, and providing some clues to others about what kind of programs could be helpful to kids in your community.

Who will see the info I fill out?

The forms will be completed anonymously (that means that no names will be asked for or included anywhere in the forms, except for this assent form and the form to be filled out by your parents). Your identity will remain secret. Questions will be asked about groups that you hang out with (including sports teams, youth groups, gangs, etc), but you will NOT be asked to say whether you are a gang member or not. Kids from schools across the whole city are included in the study, so particular areas or groups of kids are not targeted by the study.

The forms that you fill out will only be looked at by the researchers. Information learned from the study will only be written up as a summary of all people completing the forms.

That means that individual people cannot be identified by the information. Information from individual people will not be included in the write-up.

What if I start and then decide I want to quit? Taking part in the study or not is up to you. If you get started and then decide that you do not want to be part of it anymore, that's okay. If you withdraw from the study at any time, any information that you have filled out will be destroyed at your request.

Questions: If you have any questions concerning the study, please feel free to contact the researchers at the number provided above. This study has been approved on ethical grounds by the University of Saskatchewan Behavioral Research Ethics Board on March 15, 2006. Any questions regarding your rights as a participant may be addressed to that committee through the Ethics Office (966-2084).

Consent to Participate:

"I have read and understood the study described above; I have been given a chance to ask questions and any questions I asked have been answered satisfactorily. I consent to participate in the study described above, understanding that I may withdraw this consent at any time. A copy of this assent form has been given to me for my records. I understand that the signed consent of my parent/guardian is also required for me to participate in this study".

_____
(Print your name)

_____   _____
(Sign here)   (Date)

_____   _____
(Signature of Researcher)   (Date)

Appendix C: Parental Consent Form

PARENT/GUARDIAN CONSENT FORM

Your child is invited to participate in a study entitled *"Youth at risk for gang affiliation, and measures of social competency"*. Please read this form carefully, and feel free to ask any questions you might have.

Researcher(s): - Heather Middleton (student researcher), Department of Educational Psychology & Special Education, University of Saskatchewan
- Dr. D. Saklofske (faculty supervisor), Division of Applied Psychology, University of Calgary
- Dr. B. Noonan (on-site faculty supervisor), Department of Educational Pyschology & Special Education, University of Saskatchewan
- Dr. S. Wong (research committee member), Department of Clinical Psychology, University of Saskatchewan
- Contact Number for all: (306) 966-5255

What is this study about?

Purpose and Procedure: The purpose of the study is to identify ways in which youth experience and interact with their social world (social competence) and to investigate whether this is different for youth who have more or less connections with groups. The study is particularly interested in exploring the amount and kinds of social relationships (friends and acquaintances) teenagers may be involved in. These kinds of relationships may include friendships, belonging to recreational groups, and in some cases, acquaintances with gang members.

For this study, youth will be asked to complete three self-report forms (check-list format): A Group Affiliation form (asks youth about their involvement in school and community activities, and connections to different kinds of groups) the BarOn EQ-i: Youth Version (asks youth how they handle different emotions that they feel and emotions that others show, etc), and the Aggression Questionnaire (asks youth what they do when they are angry, whether they ever argue or fight with others, etc).

Time to complete the measures is expected to be approximately 30 – 45 minutes, and will be completed within the participants' school, within school hours.

Potential Benefits: Benefits for youth participating in the study include being able to contribute to an important area of research. Potential benefits for the wider community include that the results from this study may assist in the future development of programs and services to for youth in the community.

Potential Risks: No known risks are identified in participation in this study. All materials will be completed anonymously and results will be presented in summary form only (no individual information). Participants' identities will remain confidential.

Participants will NOT be asked to declare whether they are gang members or not. Youth from schools across the city are included in the study, so particular areas or groups of youth are not targeted by the study. The questionnaires are not expected to result in the participants experiencing distress. However, should any participants experience distress as result of participating in the study, the researcher will be available for de-briefing, and referrals for counseling can be provided. Participation or lack of participation in the study is not linked to access to any services within or outside the school.

Confidentiality: Individual rating forms will be examined only by the researchers. All materials will be completed anonymously and numerical codes will be assigned by the researcher for purposes of data entry and analysis. Data will be reported in summary format only, meaning that individual people cannot be identified by the information.

Storage of Data: Survey forms will be kept in locked file cabinets in a locked office in the University of Saskatchewan. Files are accessible only to research staff. Consent forms and survey forms will be stored separately to ensure confidentiality. The data (survey forms) will be stored in the locked office at the University of Saskatchewan for five years following completion of the study.

Right to Withdraw: Your child's participation is voluntary, and he or she may withdraw from the study for any reason, at any time, without penalty of any sort. If your child withdraws from the study at any time, any data that he or she has contributed will be destroyed at your request.

Questions: If you have any questions concerning the study or its results, please feel free to contact the researchers at the numbers provided above. This study has been approved on ethical grounds by the University of Saskatchewan Behavioural Research Ethics Board on (insert date). Any questions regarding your rights as a participant may be addressed to that committee through the Ethics Office (966-2084). Out of town participants may call collect.

Consent to Participate:

"I have read and understood the description provided above; I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I consent for my child _____ to participate in the study described above, understanding that I may withdraw this consent at any time. A copy of this consent form has been given to me for my records."

_____
(Print name of Parent/Guardian)

_____   _____
(Signature of Parent/Guardian)   (Date)

Appendix D : Bar-On Model of EI

A Brief Description of the Bar-On model of Emotional Intelligence (Bar-On, 2004)

1. **Intrapersonal Composite**: measures self-awareness and self-expression

   - **Self-regard**: measures ability to accurately perceive, understand, and accept oneself.

   - **Emotional Self-Awareness**: to be aware of and understand one's emotions

   - **Assertiveness**: To effectively and constructively express one's emotions and oneself.

   - **Independence**: To be self-reliant and free of emotional dependency on others.

   - **Self-Actualization**: To strive to achieve personal goals and actualize one's potential.

2. **Interpersonal Composite**: measures social awareness and interpersonal relationship

   - **Empathy**: to be aware of and understand how others feel.

   - **Social Responsibility**: To identify with one's social group and cooperate with others.

   - **Interpersonal Relationship**: To establish mutually satisfying relationships and relate well with others.

3. **Stress Management Composite**: Emotional management and regulation

   - **Stress Tolerance**: To effectively and constructively manage emotions.

   - **Impulse Control**: To effectively and constructively control emotions.

4. **Adaptability Composite**: Change management

   - **Reality-testing**: To objectively validate one's feelings and thinking with external reality.

- **Flexibility**: To adapt and adjust one's feelings and thinking to new situations.

- **Problem-solving**: To effectively solve problems of a personal and interpersonal nature.

5. **General Mood Composite**: self-motivation

- **Optimism**: To be positive and look at the brighter side of life.

- **Happiness**: To feel content with oneself, others, and life in general.

Group Affiliation

Please respond to the following statements as best you can by circling the best answer.

1. I participate in a school club or team (for example: basketball team, drama club, etc).

0	**1**	**2**	**3**	**4**
Never	**Rarely**	**Sometimes**	**Frequently**	
Often				

2. I participate in a club or team outside of school (for example: soccer team, choir, etc).

0	**1**	**2**	**3**	**4**
Never	**Rarely**	**Sometimes**	**Frequently**	
Often				

3. The people about my age in my neighborhood do social things together.

0	**1**	**2**	**3**	**4**
Never	**Rarely**	**Sometimes**	**Frequently**	
Often				

4. There are people about my age in my neighborhood who belong to gangs.

0	**1**	**2**	**3**	**4**
None	**Maybe**	**A few**	**Quite a few**	
Most				

5. The people I hang out with belong to school clubs or teams.

0	**1**	**2**	**3**	**4**
None	**Maybe**	**A few**	**Quite a few**	
Most				

6. The people I hang out with belong to clubs or teams outside of school.

0	**1**	**2**	**3**	**4**

None	**Maybe**	**A few**	**Quite a few**
Most			

7. People I know (for example in my school, neighborhood, etc) belong to gangs.

0	**1**	**2**	**3**	**4**

None	**Maybe**	**A few**	**Quite a few**
Most			

8. I hang around with the same group of friends most of the time.

0	**1**	**2**	**3**	**4**

Never	**Rarely**	**Sometimes**	**Frequently**
Often			

9. I hang out with people who are gang members.

0	**1**	**2**	**3**	**4**

Never	**Rarely**	**Sometimes**	**Frequently**
Often			

10. My friends and I like to do the same things.

0	**1**	**2**	**3**	**4**

Never	**Rarely**	**Sometimes**	**Frequently**
Often			

11. I usually hang out with a group of people (3 or more of us at a time).

0	**1**	**2**	**3**	**4**

Never	**Rarely**	**Sometimes**	**Frequently**
Often			

12. I have worn gang colors on purpose.

0	**1**	**2**	**3**	**4**

Never	**Rarely**	**Sometimes**	**Frequently**
Often			

13. My friends and I like to dress the same as each other.

0	1	2	3	4
Never	Rarely		Sometimes	Frequently
Often				

**Questions pertaining to gang affiliation are adapted from measures used by:
Pillen, M., & Hoewing-Roberson, R. (1992) and Esbensen, F., Winfree, L.T., He, N.,
& Taylor, T.J. (2001)

Appendix F: Survey Administration Protocol

Protocol for Research Study

Researcher: Heather Middleton

General Information:

The survey packages contain three instruments:

- Group Membership questionnaire
- BarOn EQ-i: Youth Version questionnaire
- Aggression Questionnaire

The survey packages are organized in individual envelopes that have been assigned a numerical code for individual participants. The completed survey forms are to be sealed and returned in their corresponding envelopes. The forms in the envelopes have been assigned the same numerical code as on the outside of the envelope.

Participants are to be instructed NOT to put their names on the survey forms or envelopes as the study is intended to remain confidential. Consent forms will be stored separately and not linked to the survey numerical codes.

It is anticipated that most kids will complete the surveys in 20 – 30 minutes.

The ethics review board has also requested assurance that participants will be seated far enough apart from each other that they will not be able to see one another's responses on the survey forms.

Only those youth who have returned the signed parental consent and youth assent forms should participate in the completion of the survey packages. The consent and assent forms are stored separately from the completed surveys.

Instructions to participants:

The following instructions should be read to participants prior to administering the surveys:
- "Thanks for participating in this research study. As you know from completing the consent forms, this study is interested in finding out more about how kids who belong to different groups see their social world and get along with one another as compared to kids who do not belong to these groups. Your participation is essential to the researcher in completing my study and will hopefully help officials to make good decisions around programs and options for kids in the future. Your help is very much appreciated!"
- "The forms contained in the envelopes in front of you are meant to apply to a wide range of kids. That means that some of the questions will fit for you, and

some will not fit at all. That's okay. Just answer the best you can for yourself. This is not a test, so there are not any "right" or "wrong" answers. Choose the answer that best fits for you.

- "If you are unsure about the meaning of a word or sentence, please ask me. Likely if you are not sure about something, someone else in the room has the same question.
- Remember NOT to put your name on any of the forms or the envelope – this is to make sure that your answers are anonymous. Your answers should be your own private answers, so make sure to sit far enough apart to be sure that you have privacy to complete the questionnaires.
- Again, this is not a test. So, make sure to take your time and think the question through – you don't have to rush. Just give the answer that fits the best for you. If you make a mistake or want to change your answer, just cross out your first answer and put in your new one.
- Remember, this is your choice to participate in the survey or not. If you change your mind and decide that you do not want to continue, that is no problem. Just let me know. At that point, any information you have completed will be destroyed.
- When you have finished the surveys in the envelope, put them back in the envelope in front of you and seal the envelope before handing it in."

The instructions for each of the individual survey instruments are contained on the first page of each, and are read out to the participants at the beginning of the session, following the above general instructions.

On the front page of the Bar-On EQ:I, participants are asked for their student number – they are asked to ignore this question.

The wording for the "Aggression Questionnaire" sometimes needs clarification for the kids completing it. Read out the following instructions after introducing this tool:

- "Please ignore the letters down the right hand side of the page. Those are for the person doing the scoring of the survey, so you don't have to worry about them. Just put the best number from the rating scale (1 to 5) in the boxes on the right hand side of the page. The rating scale for this questionnaire is worded a little funny. So, when it says 'this is extremely uncharacteristic for me', that means that this sentence does not fit for you at all. When it says 'this is somewhat characteristic', it means it sort of fits for you – you are in the middle. When it says it is 'extremely characteristic', that means that it really fits for you".

Completed packages are collected from the participants following administration. Ensure all of the envelopes are sealed.

Multiple Comparisons between outlier groups on the EQ-i: YV subscales (Bonferroni statistic)

Dependent Variable	(I) Group	(J) Group	N (J) Group	Mean Difference (I-J)	Std. Error	Sig.
Intrapersonal	High Group	High Gang	16	5.59	3.859	1.000
	(N = 19)	High High	3	-6.46	7.065	1.000
		Low Low	11	17.48**	4.309	.002
		Mean	14	2.64	4.006	1.000
	High Gang	High Group	19	-5.59	3.859	1.000
	(N = 16)	High High	3	-12.04	7.155	.978
		Low Low	11	11.90	4.454	.098
		Mean	14	-2.95	4.162	1.000
	High High	High Group	19	6.46	7.065	1.000
	(N = 3)	High Gang	16	12.04	7.155	.978
		Low Low	11	23.94*	7.407	.020
		Mean	14	9.10	7.235	1.000
	Low Low	High Group	19	-17.48**	4.309	.002
	(N = 11)	High Gang	16	-11.90	4.454	.098
		High High	3	-23.94*	7.407	.020
		Mean	14	-14.84*	4.582	.020
	Mean	High Group	19	-2.64	4.006	1.000
	(N = 14)	High Gang	16	2.95	4.162	1.000
		High High	3	-9.10	7.235	1.000
		Low Low	11	14.84*	4.582	.020
Interpersonal	High Group	High Gang	16	15.10**	3.444	.000
	(N = 19)	High High	3	6.79	6.305	1.000

		Low Low	11	17.61**	3.845	.000
		Mean	14	10.93*	3.575	.034
	High Gang	High Group	19	-15.10**	3.444	.000
	(N = 16)	High High	3	-8.31	6.385	1.000
		Low Low	11	2.51	3.975	1.000
		Mean	14	-4.17	3.714	1.000
	High High	High Group	19	-6.79	6.305	1.000
	(N = 3)	High Gang	16	8.31	6.385	1.000
		Low Low	11	10.82	6.610	1.000
		Mean	14	4.14	6.457	1.000
	Low Low	High Group	19	-17.61**	3.845	.000
	(N = 11)	High Gang	16	-2.51	3.975	1.000
		High High	3	-10.82	6.610	1.000
		Mean	14	-6.68	4.089	1.000
	Mean	High Group	19	-10.93*	3.575	.034
	(N = 14)	High Gang	16	4.17	3.714	1.000
		High High	3	-4.14	6.457	1.000
		Low Low	11	6.68	4.089	1.000
Adaptability	High Group	High Gang	16	13.45	5.387	.154
	(N = 19)	High High	3	.93	9.864	1.000
		Low Low	11	17.63*	6.015	.048
		Mean	14	10.55	5.592	.643
	High Gang	High Group	19	-13.45	5.387	.154
	(N = 16)	High High	3	-12.52	9.989	1.000
		Low Low	11	4.18	6.219	1.000
		Mean	14	-2.90	5.810	1.000
	High High	High Group	19	-.93	9.864	1.000
	(N = 3)	High Gang	16	12.52	9.989	1.000

			N			
		Low Low	11	16.70	10.341	1.000
		Mean	14	9.62	10.101	1.000
	Low Low	High Group	19	-17.63*	6.015	.048
	(N = 11)	High Gang	16	-4.18	6.219	1.000
		High High	3	-16.70	10.341	1.000
		Mean	14	-7.08	6.397	1.000
	Mean	High Group	19	-10.55	5.592	.643
	(N = 14)	High Gang	16	2.90	5.810	1.000
		High High	3	-9.62	10.101	1.000
		Low Low	11	7.08	6.397	1.000
Gen. Mood	High Group	High Gang	16	8.97	4.300	.413
	(N = 19)	High High	3	-2.86	7.873	1.000
		Low Low	11	16.75**	4.802	.009
		Mean	14	3.47	4.464	1.000
	High Gang	High Group	19	-8.97	4.300	.413
	(N = 16)	High High	3	-11.83	7.973	1.000
		Low Low	11	7.77	4.964	1.000
		Mean	14	-5.50	4.638	1.000
	High High	High Group	19	2.86	7.873	1.000
	(N = 3)	High Gang	16	11.83	7.973	1.000
		Low Low	11	19.61	8.255	.209
		Mean	14	6.33	8.063	1.000
	Low Low	High Group	19	-16.75**	4.802	.009
	(N = 11)	High Gang	16	-7.77	4.964	1.000
		High High	3	-19.61	8.255	.209
		Mean	14	-13.27	5.106	.118
	Mean	High Group	19	-3.47	4.464	1.000
	(N = 14)	High Gang	16	5.50	4.638	1.000

		High High	3	-6.33	8.063	1.000
		Low Low	11	13.27	5.106	.118
Total EQ	High Group	High Gang	16	11.19*	3.625	.031
	(N = 19)	High High	3	-2.35	6.638	1.000
		Low Low	11	20.04**	4.048	.000
		Mean	14	8.32	3.763	.311
	High Gang	High Group	19	-11.19*	3.625	.031
	(N = 16)	High High	3	-13.54	6.722	.486
		Low Low	11	8.85	4.185	.387
		Mean	14	-2.88	3.910	1.000
	High High	High Group	19	2.35	6.638	1.000
	(N = 3)	High Gang	16	13.54	6.722	.486
		Low Low	11	22.39*	6.959	.021
		Mean	14	10.67	6.797	1.000
	Low Low	High Group	19	-20.04*	4.048	.000
	(N = 11)	High Gang	16	-8.85	4.185	.387
		High High	3	-22.39*	6.959	.021
		Mean	14	-11.73	4.305	.085
	Mean	High Group	19	-8.32	3.763	.311
	(N = 14)	High Gang	16	2.88	3.910	1.000
		High High	3	-10.67	6.797	1.000
		Low Low	11	11.73	4.305	.085

*$p < .05$, **$p < .01$

Appendix H:

Multiple Comparisons between outlier groups on the AQ subscales (Bonferroni statistic)

Dependent Variable	(I) Group	(J) Group	N (J) Group	Mean Difference (I-J)	Std. Error	Sig.
AQ Physical Aggression	High Group (N = 19)	High Gang	16	-6.37	2.397	.101
		High High	3	.32	4.389	1.000
		Low Low	11	-7.68	2.676	.057
		Mean	14	-5.61	2.488	.279
	High Gang (N = 16)	High Group	19	6.37	2.397	.101
		High High	3	6.69	4.445	1.000
		Low Low	11	-1.31	2.767	1.000
		Mean	14	.76	2.585	1.000
	High High (N = 3)	High Group	19	-.32	4.389	1.000
		High Gang	16	-6.69	4.445	1.000
		Low Low	11	-8.00	4.601	.874
		Mean	14	-5.93	4.494	1.000
	Low Low (N = 11)	High Group	19	7.68	2.676	.057
		High Gang	16	1.31	2.767	1.000
		High High	3	8.00	4.601	.874
		Mean	14	2.07	2.846	1.000
	Mean (N = 14)	High Group	19	5.61	2.488	.279
		High Gang	16	-.76	2.585	1.000
		High High	3	5.93	4.494	1.000
		Low Low	11	-2.07	2.846	1.000
AQ Anger	High Group	High Gang	16	-3.10	1.745	.810

	(N = 19)	High High	3	2.86	3.195	1.000
		Low Low	11	-5.75*	1.949	.046
		Mean	14	-1.19	1.812	1.000
	High Gang	High Group	19	3.10	1.745	.810
	(N = 16)	High High	3	5.96	3.236	.707
		Low Low	11	-2.65	2.014	1.000
		Mean	14	1.91	1.882	1.000
	High High	High Group	19	-2.86	3.195	1.000
	(N = 3)	High Gang	16	-5.96	3.236	.707
		Low Low	11	-8.61	3.350	.128
		Mean	14	-4.05	3.272	1.000
	Low Low	High Group	19	5.75*	1.949	.046
	(N = 11)	High Gang	16	2.65	2.014	1.000
		High High	3	8.61	3.350	.128
		Mean	14	4.56	2.072	.318
	Mean	High Group	19	1.19	1.812	1.000
	(N = 14)	High Gang	16	-1.91	1.882	1.000
		High High	3	4.05	3.272	1.000
		Low Low	11	-4.56	2.072	.318
AQ Total Aggression	High Group (N = 19)	High Gang	16	-11.10	5.787	.600
		High High	3	11.21	10.595	1.000
		Low Low	11	-19.97*	6.462	.031
		Mean	14	-11.79	6.007	.545
	High Gang	High Group	19	11.10	5.787	.600
	(N = 16)	High High	3	22.31	10.730	.420
		Low Low	11	-8.87	6.680	1.000
		Mean	14	-.69	6.241	1.000

High High	High Group	19	-11.21	10.595	1.000
(N = 3)	High Gang	16	-22.31	10.730	.420
	Low Low	11	-31.18	11.108	.068
	Mean	14	-23.00	10.850	.3483
Low Low	High Group	19	19.97*	6.462	.031
(N = 11)	High Gang	16	8.87	6.680	1.000
	High High	3	31.18	11.108	.068
	Mean	14	8.18	6.872	1.000
Mean	High Group	19	11.79	6.007	.545
(N = 14)	High Gang	16	.69	6.241	1.000
	High High	3	23.00	10.850	.383
	Low Low	11	-8.18	6.872	1.000

*p < .05