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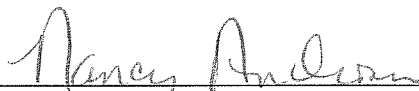
The Effect of Summer Enrollment in The Boys and Girls  
Club on Adolescent Peer Attachment

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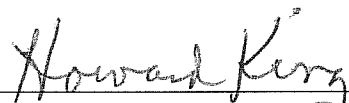
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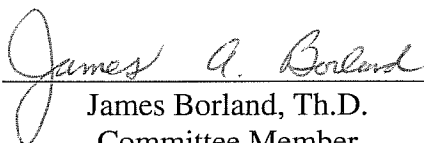
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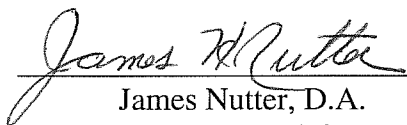
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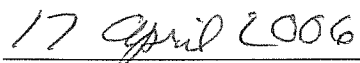
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## Abstract

The formation of friendships is an important developmental step for adolescents. Peer attachment is an attachment relationship that adolescents develop with their closest friends. Research studying peer attachment has divided it into three major categories: trust, communication, and alienation, the later of which is an inverse measure of peer attachment. Youth organizations like the Boys and Girls Club of America (BGCA) offers places outside of school where adolescents can socialize with their peers. This study measured whether the BGCA had a significant impact on increasing peer attachment, trust, and communication while reducing alienation. Adolescents were tested at a local BGCA using the peer portion of the Inventory of Parent and Peer Attachment.

Adolescents were tested again after attending the BGCA for a summer period. One-way  $t$  tests were used to calculate the change in IPPA scores. There was no significant change in scores on total peer attachment;  $t(7) = .129$ , ns or on any of the three subscales, communication;  $t(7) = .842$ , ns, alienation;  $t(7) = 1.383$ , ns, and trust;  $t(7) = .437$ , ns. A Pearson correlation revealed a two-month test-retest reliability of .844. This is very consistent with the original test-retest reliability provided in the norming sample. Several factors may have influenced the lack of significant results: the small sample size, untrustworthy responses, the young age of the sample, and the possibility that peer attachment is a relatively stable trait.

## The Effect of Summer Enrollment in

### The Boys and Girls Club on Adolescent Peer Attachment

The development of friendships is an important and influential part of adolescence (Berger, 2001). Many early theorists held that the development of these friendships were key to healthy development in early childhood but downplayed their importance in adolescence, but in 1953, Harry Stack Sullivan pushed the focus of the psychological and the developmental importance of friendships from early childhood to adolescence (Santrock, 2003). In early childhood friends are defined as playmates, but adolescent friendships involves mutual intimacy and support. Sullivan argued that all people have basic social needs, which include the need for playful companionship, social acceptance, intimacy, and some form of secure attachment to others. Research supports the theoretical groundwork established by Sullivan. Adolescents more often disclose personal information to their friends than do younger children. Adolescents report that they depend more on friends than their family to meet needs for companionship, and reassurance of worth.

In general, adolescent friendships serve six basic functions (Santrock, 2003). First, friendships provide companionship where adolescents can simply spend time together. Second, friendships provide stimulation through the sharing of information, excitement, and amusement. Third, friendships provide physical support through time, resources, and assistance. Fourth, friendships provide ego support through assistance and encouragement for adolescents to maintain a positive impression of themselves. Fifth, friendships provide a source of social comparison where adolescents can learn how they measure up with other adolescents and where they need improvement. Finally,

friendships provide a source of intimacy and affection through trusting relationship with others.

Those close friendships that involve intimacy and emotional significance are a special kind of attachment relationship, known as peer attachment (Armsden & Greenberg, 1987). Attachment theory was developed by Mary Ainsworth to describe infants' relationships with their primary caregivers (Berger, 2001). However, Ainsworth did not limit attachment to infants; she defined attachment as “an affectional tie that one person or animal forms between himself and another specific one—a tie that binds them together in space and endures over time” (Berger, 2001 p. 206). Peer attachment is the perceptions that an adolescent has about his close friends; especially how these friends serve as a source of psychological security (O’Koon, 1997). Peer attachment does not replace parental attachment but it does move in that direction (Armsden & Greenberg, 1987). In adolescence, attachment behaviors tend to be focused on non-parental figures. This is especially prevalent when peer influence involves immediate decisions that have little impact on the future (Meeus, Oosterwegel & Vollebergh, 2002).

Peer attachment relationships provide many of the same traditional roles of other attachment relationships. Peers serve as sources of emotional support and comfort (Laible, Carlo & Roesch, 2004). Peers also serve as safe havens from adolescents' problems. At the extreme, peer separation results in distress. Peer attachment helps adolescents to alter their model or mental representation of the world, other people, and themselves (Nickerson & Nagle, 2004). However, peer attachment does differ from traditional attachment. Peer attachment involves a mutual attachment between

adolescents, serving as a two-way street, instead of having one person dependent upon the other.

Healthy psychological adjustment is dependent upon strong peer attachment. A study by Laible and Thompson (2000) found that adolescents who scored high on both peer and parental attachment were the best adjusted, and those who scored low on both were the least adjusted. The study also found that adolescents who scored high on peer and low on parental were better adjusted than those who scored low on peer and high on parental. However, other studies have found those results to be reversed with parental attachment more important than peer (Field, Diego & Sanders, 2002). Regardless of which one is more significant, peer attachment is a necessity for adolescents. These positive peer relationships are not just important for immediate psychological health; strong peer relationships in adolescence have been correlated with positive mental health all the way into midlife (Santrock, 2003).

Low levels of peer attachment have been tied to depression and anxiety. Adolescents who are dissatisfied with their peer relationships exhibit more depressive symptoms and anxiety than adolescents who are satisfied (Gaspar de Matos, Barrett, Dadds, & Shortt, 2003). Depressed adolescents report perceived deficiencies in their peer relationships. Depression is often associated with low social self-worth, while anxiety is associated with low social competence. Both factors reflect low peer attachment. In contrast, those adolescents who feel a supportive nature in their peer relationships have emotional well-being and competent feelings about themselves and others.

Peer attachment has also been correlated with self-esteem and empathy (Laible et al., 2004). Supportive relationships with peers allow adolescents to develop good

communication skills and high levels of empathy. Because peer attachments are reciprocal, they provide a perfect context for adolescents to show kindness, compliment, and have compassion for one another. Reciprocal empathy also provides adolescents with some feelings of responsibility toward each other and an obligation to help lower each other's distress. This positive environment builds respect for others and oneself, resulting in increased levels of self-esteem.

Peer-attachment is also linked to self-image, especially in females (O'Koon, 1997). Similar to self-esteem, self-image is the conception that one has about oneself. One study exploring the relationship between adolescents' peer attachment and the five factors of self-image, emotional tone, body image, social relationships, mastery of external world, and psychopathology, found that high levels of peer attachment significantly correlated with positive self-image for females. Males already scored significantly higher on self-image regardless of peer attachment.

Peer attachment has also been correlated with various measures of adolescent's current satisfaction with life (Nickerson & Nagle, 2004). Peer attachment correlated with the satisfaction an adolescent has about his living environment. This living environment included the child's home, neighborhood, and general community including the people in it. Peer attachment also correlated with school satisfaction for females but not males. However, males also reported overall lower school satisfaction regardless of peer attachment. Like self-esteem and self-image, peer attachment was correlated with overall satisfaction with self.

While peer attachment correlates with many positive factors in the development of adolescents, there are several external factors that influence an adolescent's likelihood

to develop strong peer attachment. Gender is one of these factors. Studies have found that females have stronger peer relationships and attachment than males (Field et al., 2002). The fact that females have stronger peer attachment may reflect a difference in how males and females view friendships. Females place a higher importance in the level of intimacy in friendships than males (O’Koon, 1997). Males have more surface-oriented interactions with their peers, while females value a greater amount of sensitivity toward their peers. Other studies have found that adolescent females experience more interpersonal stress and conflict with peers than adolescent males (Gaspar de Matos et al., 2003). Such findings may support the research that peer relationships play a more important role for females than males because in general females value relationships more than males (O’Koon, 1997).

Race also influences peer attachment. One study found that white and Hispanic Americans reported closer intimacy with their friends than black Americans (Field, Lang, Yando & Bendell, 1995). Another study found that African-American youth rated having a group of friends to hang out with as less important than their white counterparts (Giordano, Cernkovich & Demaris, 1993). The study also found that African-Americans report lower levels of intimacy with their friends. Another study found African-Americans to value spending more time with their family than their peers (Giordano, 2003).

Another factor that influences peer attachment is family structure. Research has shown that adolescent males who grow up in a home without a paternal figure have several psychological and interpersonal developmental problems, especially if the paternal absence occurred before the age of five (Beatty, 1995). These interpersonal



problems included diminished peer attachment. This diminished level of peer attachment supports some theories that suggest peer adjustment is related to appropriate identification with same sex peers. Male adolescents without a paternal figure may have trouble forming strong peer attachment because they lack a masculine figure to model appropriate social interactions. Females also experience the psychological effects caused by paternal loss (Hetherington, 1972). However, the effects female adolescents experience differ from male adolescents because females still have their same sex parent to model appropriate social behaviors and interactions after (Beatty, 1995).

Socioeconomic status also impacts peer attachment. High socioeconomic adolescents include more peers in their social network, while low socioeconomic status adolescents report closer relationships with their friends and neighbors (Samuelsson, 1997). However, adolescents in low socioeconomic families often have their peer relationships interrupted (Giordano, 2003). Their families tend to make frequent residential moves for short periods of time. These moves negatively impact the adolescents' peer relationships, sending them to new schools and forcing the search and development of new friends. Sometimes low socioeconomic adolescents have difficulties developing peer relationships in the first place. They are more often absent from school, which hampers their ability to build and maintain friendships. They may also live in unsafe neighborhoods, where they develop an attitude of defensiveness and a lack of trust, which negatively impact the development of intimate friendships.

Research designed to measure peer attachment, has divided the issue into three major categories, trust, communication, and alienation (Armsden & Greenberg, 1987). Developmental theorists have argued that a sense of trust is essential for interpersonal

relationships (Terrell, Terrell & Von Drashek, 2000). Children who fail to gain a basic sense of trust see the world as hostile and the people in it as undependable, but those that develop a sense of trust have confidence and hope in others. Although, initial trust is developed through nurturing in infancy, this sense of trust must be maintained throughout life.

Trust is an essential aspect of peer relationships (Whitmire, 2000). Peer relationships allow adolescents the ability to share personal problems with each other because they have placed trust in the stability of the relationship. Research indicates that peer trust is the best predictor of satisfaction in peer relationships (Nickerson & Nagle, 2004). Research demonstrates that adolescents who do not trust others are more insecure, lonely, and feel unloved (Terrell et al., 2000). Research suggests that the extent to which adolescents trust others indicates their willingness to establish intimate relationships with peers.

Trust is also better understood and strengthened in peer relationships (Flanagan, 2003). Because peer relationships are mutual, adolescents learn that trust is meaningless without freedom. Adolescents involved in a peer attachment relationship are taking the risk of being disappointed by each other. Adolescents learn about the relationship between trusting one another and being trustworthy themselves. Adolescents learn that trust is about reliability, and support this by holding each other responsible to keep their word. Keeping promises adds order, stability, and predictability to peer relationships. However, while peer relationships help to strengthen trust, they may not be the ideal environment to form overall social trust (Flanagan, 2003). Adolescents build close friendships with other adolescents who are predominantly similar to themselves, in terms

of gender, age, and ethnicity (Santrock, 2003). Research indicates that when trust is built with friends, characteristic of themselves, adolescents may stereotype non-characteristic individuals as untrustworthy (Flanagan, 2003).

Similar to the initial development of trust, communication skills are often learned early in life from parental figures, especially from a child's mother (Black, 2002). This communication pattern continues into adolescence. Positive communication skills play an important role in developing peer relationships (Nickerson & Nagle, 2004). Verbal communication and intimacy also play an important role in healthy adolescent development. Communication in strong peer relationships is supportive (Giordano, 1995). The tone and content of communication is also important. Intimate communication within peer attachment relationships is critical as the adolescent copes with various identity issues faced during this stage of physical, social, and mental development.

While positive communication increases peer relationships, poor communication skills interfere with them (Whitmire, 2000). Studies have shown that adolescents with poor communication skills experience more loneliness and rejection from peers than other adolescents (Stiles & Raney, 2004). Poor communication skills include not paying attention to a peer's needs or emotions, providing little praise or support to peers, discussing inappropriate topics, the inability to negotiate with peers, the inability to interpret social signals, and the inability to deliver and understand jokes, sarcasm and slang (Whitmire, 2000). Slang plays an important part in adolescent communication. Slang distinguishes adolescent culture from both adults and children. The effective use of

slang helps to establish a peer-group identity. The inappropriate use of slang can completely ostracize an adolescent from that peer-group.

Emotional communication also plays an important role in the development of peer relationships (Von Salisch, 2001). Children and adolescents develop rules and guidelines for the appropriate display of emotions, and those who break those rules are rejected. In adolescence, males are more afraid than females of showing sadness to their peers because adolescent males believe they will be ridiculed and belittled for displaying such emotions. Peers reject adolescents who frequently explode into fits of rage and anger. Adolescents known to experience joy in the failure, or envy in the success of their peers are also rejected. Research has shown that adolescents who have stronger peer relationships are more cognitively advanced in understanding the significance of emotions. Other forms of non-verbal communication, such as gestures and facial expressions are also important in peer relationships. Studies have shown that adolescents who have higher peer relationships are better at imitating and displaying facial expressions that appropriately fit a given situation (Von Salisch, 2001).

Alienation also contributes to peer attachment but in an inverse way. Where high levels of communication and trust correlated with strong peer attachment, high levels of alienation correlated with low peer attachment (Armsden & Greenberg, 1987). Alienation in the context of adolescence has been defined by five factors: self-estrangement, powerlessness, meaninglessness, normlessness, and social isolation (Lacourse, Villeneuve & Claes, 2003). Self-estrangement is rooted in classical philosophy, addressing a discrepancy between an adolescent's idealized and actual self. Powerlessness reflects an adolescent's perception of not having control over his own life.

Meaninglessness reflects an adolescent's belief that his behaviors have little or no impact on his life. Normlessness is the idea that socially unacceptable or inappropriate behaviors may be used to achieve an adolescent's goals. Social isolation describes an adolescent's perception of a lack of intimate friendships in his life. Normlessness and social isolation are the two primary factors of alienation associated with peer relationships.

The normlessness aspect of alienation often leads to adolescent delinquency. Alienation has been correlated with several delinquent behaviors in adolescence (Williamson & Cullingford, 1998). Studies have found alienation to correlate with marijuana usage, alcohol abuse and other forms of drug usage. Studies have also found alienation to correlate with suicide and suicide attempts (Calabrese & Raymond, 1998). Other studies have found alienation to correlate with dropping out of school, sexual activity, and breaking laws.

Alienation may be influenced by personal space boundaries some adolescents form. Personal space boundaries are "the metaphorical separation between the person and his/her environment—where the person ends and the external environment begins" (Stiles & Raney, 2004 p. 30). Adolescents with closed boundaries put up walls around themselves, separating them from other individuals. Adolescents with closed boundaries often appear rude, and emotionally hardened. As a result, these adolescents have few friends, and feel rejected and isolated from others. However, having no boundaries at all may also lead to isolation, because the adolescent appears needy and clingy.

Youth organizations serve as environments for adolescents to develop and grow their peer relationships and attachments (Santrock, 2003). Youth organizations and groups help adolescents practice and develop important interpersonal skills. Studies have

shown that participation in extracurricular activities lead to better peer relationships (Anderson-Butcher, Newsome & Ferrari, 2003). Adolescents enjoy a mixture of both informal and structured youth organizations (Santrock, 2003). Adolescents enjoy free time to simply socialize with their peers. However, they also enjoy participation in structured activities including playing games, sports and instructional lessons that help prepare them for life. Overall participation in youth organizations increases adolescents' achievements while simultaneously decreasing their delinquency.

The Boys and Girls Clubs of America (BGCA) are one of these youth organizations: "The BGCA is a community based nonprofit organization that seeks to improve the psychosocial development of youths while also inspiring them to become productive and responsive citizens" (Anderson-Butcher et al., 2003 p. 40). The BGCA provides adolescents with a safe environment to learn, develop friendships, and participate in activities. The overall goal of the BGCA is to promote the healthy development of adolescents. The BGCA uses five core programs to achieve this goal: character and leadership development; education and career development; health and life skills; the arts; and sports, fitness, and other forms of recreation. All of these programs focus on developing social competence. Overall adolescents who have participated in the organization have described it as a significant prosocial environment (Anderson-Butcher et al., 2003).

The goal of this study was to support the research that suggests the Boys and Girls Club of America is a positive environment to develop and cultivate meaningful friendships. It was hypothesized that a couple months of participation in the BGCA will significantly increase adolescents' overall peer attachment. It was also hypothesized that

two factors of peer attachment, communication and alienation, would also significantly differ after participation. Peer communication would significantly increase after participation in the BGCA. Alienation would significantly decrease after participation in the BGCA. However, it was hypothesized that the third factor of peer attachment, trust, would not significantly differ after participation in the BGCA. An initial sense of trust is developed very early in life, and while it is possible to develop trust even when an adolescent did not have that trust as a child, it is extremely unlikely. Adolescent participation in an organization for a couple months would not ordinarily be enough to overcome an ingrained sense of mistrust.

## Methodology

### *Subjects*

This study was open to adolescents ranging in grade from those who had successfully completed the fifth grade and were entering the sixth grade to those who successfully completed the eleventh grade and were entering the twelfth grade, who enrolled in a summer session of the Boys and Girls Club of America in a small city in Virginia. A summer session represented the period of time between the end of school in the spring and the start of school in the fall. In this study that period lasted eight weeks. However, some adolescents were immediately excluded from the study because parental consent could not be obtained. All adolescents' who did participate had a parent or legal guardian sign an informed consent form (see Appendix A) before participating in the study.

After the parents and guardians gave informed consent, this study consisted of fifteen adolescents. However, seven of these adolescents were excluded from the study

due to their failure to complete their summer enrollment in the program. One of the subjects moved several states away, while the other six subjects chose to stop participating at the Boys and Girls Club. Demographic information was gathered on the remaining eight adolescents who actually completed their summer session. The eight adolescents ranged in age from eleven to thirteen. Exactly half of the sample was female and half was male. The subjects ranged in grade from sixth to ninth. The majority of the sample came from broken homes. Two of the adolescents were Caucasian, two were African-American, two were Native-American, and the remaining two described themselves as being of mixed ethnicity. The researcher also attempted to obtain demographical information concerning the socioeconomic status of the adolescents in the study. However, the majority of them refused to answer the question. Some claimed that they were unaware of their families' financial situation, while others simply avoided answering the question at all.

### *Instruments*

There were two instruments used in this study. The first was a self-report inventory addressing the basic demographic information of the sample (see Appendix B). The other instrument was the peer section of the Inventory of Parent and Peer Attachment (IPPA) (Armsden & Greenberg, 1987). The IPPA is a self-report questionnaire designed to measure emotional and cognitive factors in adolescents' relationship with their parents and peers, which impact psychological security (O'Koon, 1997). The inventory uses five point likert style questions with response categories of almost never or never, seldom, sometimes, often, and almost always or always. The inventory contains two distinct sections, one measuring parental attachment and another measuring peer attachment



(Armsden & Greenberg, 1987). However, this study focused only on peer attachment, so only that section of the inventory was administered to the adolescents.

The peer section of the inventory contains twenty-five self-report questions that are either direct or reverse scored (Armsden & Greenberg, 1987). The peer section also contains three subscales: trust, communication, and alienation. The trust subscale consists of ten items, the communication subscale consists of eight items, and the alienation subscale consists of seven items. While trust and communication are direct measures of peer attachment, alienation is an inverse measure of peer attachment. However, the alienation subscale is still scored like the other two subscales with high scores on the subscale indicating greater possession of that trait, but the alienation questions are reverse scored when calculating overall peer attachment.

The IPPA is a reliable test (Armsden & Greenberg, 1987). The internal consistencies of the subscales for the inventory were established by two separate samples from the University of Washington in 1981. The first sample was composed of ninety-three students and the second sample was composed of eighty-six students. Sixty-three percent of the samples were female, seventy-five percent were Caucasian, and ages ranged from sixteen to twenty years old. The internal consistencies were measured using Cronbach's alpha. The peer trust subscale's alpha was .92, the peer communication subscale's alpha was .97, and the peer alienation subscale's alpha was .72. The test-retest reliability was established using a separate sample of twenty-seven individuals ranging from eighteen to twenty-one years old. The three-week test-retest reliability was correlated at .86 for peer attachment.

The validity of the IPPA is seen in both convergent and divergent measures of validity (Armsden & Greenberg, 1987). These forms of validity were established using the second sample of eighty-six students from the internal consistency study. Sixty-two percent of the sample was female, and eighty percent was Caucasian. Peer attachment scores significantly correlated with the Tennessee Self-Concept Scale's social self-concept subscale ( $r = .57, p < .001$ ). Peer attachment also significantly correlated with the peer utilization factors on the Inventory of Adolescent Attachment ( $r = .32, p < .001$ ). Peer attachment was not significantly correlated with the Tennessee Self-Concept Scale's self-criticism scale, an indicator of social desirability.

### *Procedure*

The first step in this study was to obtain permission to conduct the research. First, permission was obtained from the director of the local branch of Boys and Girls Club, where the data was collected. Initial permission was granted in a phone conversation between the director of the Boys and Girls Club and the researcher. This permission was later reconfirmed in a face-to-face meeting between the director and the researcher. At this meeting, the director was given the opportunity to ask the researcher questions about the nature of the study and the intrusiveness of the IPPA inventory. At the end of the meeting, the director felt comfortable with the study and reconfirmed his initial consent for the data collection.

The next step involved obtaining consent from a parent or legal guardian of the adolescents who would participate in the study. The parental or guardian consent was obtained through an informed consent form (see Appendix A) that was sent home with each adolescent. Those parents or legal guardians who pick up their adolescent from the

Boys and Girls Club were directly handed the informed consent form. Each adolescent was given one week to return a signed copy of the informed consent form. Those adolescents who did not return the form did not participate in the study.

The next step involved scheduling a time for the researcher to administer the peer section of the IPPA and demographic survey to the adolescents at the Boys and Girls Club. A time period shortly after school was dismissed for the summer was chosen because the objective of the study was to look at the effect of summer enrollment in the Boys and Girls Club on peer attachment. All adolescents who participated in the study completed both the peer section of the IPPA and the demographic survey in a large group setting. However, no talking or communication between adolescents was allowed. In order to help maintain strict confidentiality, the names of the participants were not written on either the peer attachment inventory or the demographic survey. Instead each adolescent was assigned a number to correspond with his name. A master list with the names and corresponding numbers were kept, so that the researcher could pair the adolescent's initial IPPA score with his second score.

The next step required the adolescents to regularly attend and remain enrolled during a summer session of the Boys and Girls Club of America. The study intended this session to last for ten to twelve weeks but as a result of the local public school system and the summer operating schedule of the Boys and Girls Club, which closed a week early for fund raising, the time period was reduced to eight weeks. Approximately half of the adolescents who began the study failed to meet the criteria for regular attendance or they dropped completely out of the Boys and Girls Club. Those who remained in the program

were retested with the exact same peer attachment portion of the IPPA test. The scores on these tests were then compared to their original scores.

### Results

The results of this study were calculated by reverse coding the necessary questions, and summing the adolescents' answers on the peer section of the IPPA inventory to derive at composite scores for the three subscales: trust, communication, and alienation. The entire alienation subscale was then reverse coded and summed with the other two subscales to derive at an overall score for total peer attachment. This process was used for both the before the summer enrollment in the Boys and Girls Club testing of the IPPA inventory and the after summer enrollment testing of the IPPA inventory. The difference between the two scores was then calculated to find any change in scores between the two administrations of the test. The significance of these differences was then calculated using four one-way t tests.

It was hypothesized that total peer attachment, peer communication, and peer alienation would significantly increase for the adolescents after spending the summer in the Boys and Girls Club of America. These hypotheses were not supported by this study as seen in Table 1. Total peer attachment yielded a result of  $t(7) = .129$ , ns. Peer communication yielded a result of  $t(7) = .842$ , ns. Peer alienation yielded a result of  $t(7) = 1.383$ , ns. The fourth and final hypothesis, which predicted the null for peer trust, was supported by the findings as seen in Table 1. Peer trust yielded a finding of  $t(7) = .437$ , ns. In summary the Boys and Girls Club led to no significant changes in peer attachment for any of the scales provided by the IPPA inventory.

Table 1

*One-way t Test for Changes in Peer Attachment*

One-Sample Test						
Test Value = 0						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Change in Peer Trust	.437	7	.676	.875	-3.86	5.61
Change in Peer Communication	.842	7	.428	2.375	-4.30	9.05
Change in Peer Alienation	1.383	7	.209	2.625	-1.86	7.11
Change in Overall Peer Attachment	.129	7	.901	.625	-10.86	12.11

## Discussion

This study yielded no significant changes in peer attachment. However, this may have been the result of the small sample size that was used in this study. Based on the information provided by the local Boys and Girls Club prior to the data collection, the researcher was expecting to have a much larger sample ranging from twenty-five to thirty-five adolescents. However, factors including lack of parental consent and a small turn out rate at the Boys and Girls Club quickly dropped that number down to only fifteen participants at the start of the study. Once the study was completed those initial fifteen adolescents was further reduced to only eight. With such a small sample size it would be very difficult to overcome any extremely deviant scores that differed from the norm. Having such a limited sample can often be a problem of using a sample based on preexisting factors. The researcher should have considered this in the initial design of the experiment. Instead of conducting the research at only one local branch of the Boys and Girls Club of America, the researcher should have expanded his data collection to other branches of the Boys and Girls Club within the area.

The small amount of subjects also ruined the possibility of using the demographic information collected to create grouping variables to examine different factors in the analysis of the data. Gender, race, family structure, and socioeconomic status are all factors that influence peer attachment. If the number of subjects had been greater, the researcher could have looked for changes in peer attachment among the various groups. However, since the sample size was already so small further subdividing the sample would have been pointless. If any future research is conducted using a much larger sample size, it may prove beneficial to analyze for change among the various groups

previously mentioned. However, in order to use socioeconomic status as a grouping factor, the subjects would need to provide an approximate level of their socioeconomic status, which they refused or were unable to do in this study.

Another factor that may have influenced the outcome of the study was the possibility of some of the adolescents being untruthful in their responses to the questions provided on the peer section of the IPPA inventory. While the researcher has no proof that any student was dishonest, he does have suspicions that one or two of the adolescents were not entirely truthful in their responses. The major reason the researcher believes that one or two adolescents were not completely truthful on their inventory is the pattern that resulted on their completed inventory. One adolescent's inventory went from almost always or always, to almost never or never, in a descending order throughout the entire inventory. However, it is possible, though highly unlikely, for the adolescents' answers to naturally fall into such a unique pattern meaning the adolescent was completely truthful throughout the entire inventory.

The other adolescent in question basically responded with the lowest scores possible on every item on the inventory. One thing that made this especially unique was that the adolescent did not simply circle the low answer for every question, he also circled the low score answer on the reversed coded questions. One of the workers at the Boys and Girls Club described this particular adolescent as mean. So it is logical to draw the conclusion the adolescent actually has virtually no peer attachment at all. However, it is also conceivable that the adolescent was deliberately untruthful on the inventory in an attempt to skew the results.

However, eliminating these two participants from the study without any valid proof would have been unjustified and may have altered the results of the study to favor a significant change in one or more of the subscales or the total peer attachment scale when that result was not truly merited. If the sample size had been greater any deceit on the part of an adolescent would basically fall into the category of a deviant score. The large number of adolescents who told the truth would have a great deal more weight than the relatively low number of adolescents who might have lied. However, with such a small sample size if an adolescent did lie his deviant score would carry a great amount of weight and could greatly affect the accuracy of the results.

Another design flaw of the study was the expectation of a greater range of ages within the sample. The researcher intended to collect data from adolescents ranging from grade six to grade twelve; however, no adolescent was entering a grade higher than ninth. This could have greatly affected the results of the peer section of the IPPA inventory. While the test is considered to be reliable and valid for all adolescents, it was created and normed for older adolescents. The researcher should have anticipated that few high school students would enroll themselves into a summer session of the Boys and Girls Club. High school students tend to have more responsibilities than middle school students. Many high school students have summer jobs or have their own vehicle. Those high school students that do not have a vehicle usually know someone who does. This gives them many opportunities to socialize and spend their time somewhere other than the Boys and Girls Club. If the researcher had considered this, he may have been able to find a more appropriate test to measure adolescent peer attachment that was intended for younger aged adolescents.



While this study yielded no significant findings, it was able to further provide reliability to the peer section of the IPPA. The original test-retest reliability for the peer section of the IPPA was established using a sample of twenty-seven individuals ranging from eighteen to twenty-one years old (Armsden & Greenberg, 1987). This three-week test-retest reliability was correlated at .86. This study provided the researcher with the opportunity to calculate the test-retest reliability after the eight week summer session in the Boys and Girls Club of America. While the researcher predicted a change in the adolescents' scores due to participation in the Boys and Girls Club, the analysis showed no significant change over this time.

A subsequent analysis of the data by the researcher correlated the initial total peer attachment scores with those obtained at the end of the summer. As seen in Table 2, a Pearson correlation yielded a correlation of .844. This correlation provides the peer section of the IPPA inventory with eight-week test-retest reliability of .844. That is remarkably similar to three-week test-retest reliability of .86 established in the original norming of the test (Armsden & Greenberg, 1987).

Several limitations and potential flaws in the experimental design have been discussed explaining possibilities of why summer enrollment in the Boys and Girls Club of America failed to have a significant effect on peer attachment, trust, communication, and alienation. However, it is plausible that even with a much larger sample size and greater distribution in the ages of the participants that the study would have still yielded the same insignificant findings. It is not a stretch to assume that peer attachment is a much more stable trait than the researcher originally anticipated. The eight-week test-retest reliability of .844 strongly supports this assumption.

Table 2

*Correlation Providing Test-Retest Reliability for the Peer Section of the IPPA Inventory*

<b>Correlations</b>			
		Before Total Peer Attachment	After Total Peer Attachment
Before Total Peer Attachment	Pearson Correlation	1	.844**
	Sig. (2-tailed)		.008
	N	8	8
After Total Peer Attachment	Pearson Correlation	.844**	1
	Sig. (2-tailed)	.008	
	N	8	8

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Building relationships and forming attachments are processes that take time. These things do not just happen overnight but instead require effort and energy. Those adolescents who failed to build strong relational bonds with both their parents and peers are likely to continue to struggle to build those relationships in the future. While those who were able to establish and build strong relational bonds early in life are likely to continue to be able to build those bonds in the future. Those adolescents who scored low on IPPA at the start of the study, scored just as low at the end of the study because eight weeks in an environment conducive to building relationship still was not enough to overcome years of ingrained thought and behavior. Those adolescents who scored high on the IPPA at the start of the study had already experienced a particular level of growth and development in their levels of peer attachment. Since the Boys and Girls Club of America provided an environment conducive to maintaining those high levels of peer attachment, they naturally scored high at the end of the study too. So it was logical that the Boys and Girls Club had no effect in changing those adolescents' levels of peer attachment.

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## Appendix A

## Informed Parental Consent Form

I \_\_\_\_\_ give permission for my child  
\_\_\_\_\_ to participate in this study examining peer  
attachment in adolescents. I understand that my child may refuse to participate in the  
study, or drop out of the study at any time. There will be no adverse consequences for my  
child, if they choose not to participate in this study. I also understand that the results of  
this study are for research purposes, and the specific results of my child will not be  
disclosed to anyone. Confidentiality is extremely important and will be strongly upheld.

Signature \_\_\_\_\_ Date \_\_\_\_\_



## Appendix B

## Demographic Survey:

Please circle the answer that best describes you.

My current age is \_\_\_\_\_.

11    12    13    14    15    16  
17    18    Over 18

I will be attending the \_\_\_\_\_ grade in the  
fall.

6<sup>th</sup>    7<sup>th</sup>    8<sup>th</sup>    9<sup>th</sup>    10<sup>th</sup>    11<sup>th</sup>  
12<sup>th</sup>

My gender is \_\_\_\_\_.

Male    Female

My family income is best described as  
\_\_\_\_\_.

High    Average    Low

I live with \_\_\_\_\_.

Both Parents    One Parent  
One Parent & Step Parent  
Neither Parent

My racial heritage is \_\_\_\_\_.

Caucasian  
African-American  
Hispanic-American  
Asian-American  
Mixed or Other Ethnicity