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The Impact of Imaginary Companions on Social Development

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A Senior Thesis submitted in partial fulfillment
of the requirements for graduation
in the Honors Program
Liberty University
Spring 2008

Acceptance of Senior Honors Thesis

This Senior Honors Thesis is accepted in partial fulfillment of the requirements for graduation from the Honors Program of Liberty University.

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Abstract

The imagination and creativity of children is often puzzling to the adult mind. Pretend play and make-believe friends are often prevalent in the life of a child. Past research shows a relationship between the use of the imagination in children's play and their social, cognitive, and emotional development. Furthermore, there are a number of gender differences in the type of imaginary play and pretend friends children create. Children of all ages reported engaging in make-believe play. Therefore, this study investigated whether children create imaginary companions as a result of their social adaptability or socially adapt in the way that they do as a result of the presence of an imaginary companion.

The Impact of Imaginary Companions on Social Development

Children of all ages engage in play as they develop into adulthood. Often children, either by themselves or with their friends, re-enact real-life scenarios as they learn about their environment. A child's imagination is often limitless as he or she may creatively make-believe taking a trip to the grocery store, teaching a classroom of children, or saving the world as a superhero. Children may use their imagination to create "friends" who often participate in everyday activities with them. Although this imaginary play may be a concern for many parents, some researchers support the notion that imaginary companions are common in children and assist in the process of their development. The imagination and creativity children display in their early years express how they process the many new objects, people, and experiences they encounter. Therefore, it is possible that the prevalence of fantasy-play in the life of children impacts many different aspects of their development, including social, emotional, and cognitive (Gleason, 2002; Gleason & Hohmann, 2006; Gmitrová & Gmitrov, 2003; Gmitrová & Gmitrov, 2004; Lewis, Boucher, Lupton, & Watson, 2000; Lindsey & Colwell, 2003; Niec & Russ, 2002).

Literature Review

Creativity in imaginary play

Play in general is beneficial to children in that it facilitates a number of skills beneficial to the child later in life. Children acquire problem-solving skills as a result of engaging in certain types of play. When children are given the opportunity to re-enact an activity or practice a particular type of life skill, they become more creative in their problem solving and do not have as many difficulties as other children who did not

receive this type of life training. A child's imagination is also an aspect of his or her creativity. Creativity produces mature thought, encouraging development in the child and explaining the need the child has to explore objects in his or her surrounding environment in order to help him or her understand the surrounding world. When given the opportunity to explore, children learn to accommodate to the unfamiliar, ultimately encouraging the development of creativity (Russ, 2003; Saracho, 2002).

Gleason, Sebanc, and Hartup (2000) define the difference between children with imaginary companions and those attached to a personified object. An imaginary friend is created by the imagination of the child and is not represented by any type of material object. However, a personified object is an object that the child treats as an actual living being, giving it human characteristics. Dolls and stuffed animals are often considered personified objects for many children as they treat and interact with them as they would a close friend. The results of the study conducted by Gleason et al. reveal that a child's relationship with imaginary companions and personified objects differ. Specifically, children with imaginary companions were more likely to create their friend as a means of creating a playmate or adjusting to change in the family.

Researchers have attempted to discover why children create imaginary companions and what may possibly cause the formation of a pretend friend. It was found that birth order, imagination, and fantasy life significantly affected whether or not children created imaginary companions. Firstborn children are significantly more likely to create an imaginary friend than their younger siblings. It is suggested the firstborn child may not have a play companion and therefore may compensate for his or her loneliness through the use of their imagination. Furthermore, children with imaginary

companions were significantly more imaginative and had a higher predisposition to engage in fantasy (Bouldin & Pratt, 1999). Gleason, Jarudi, and Cheek (2003) also found that imagination was significantly different between adult women who reported having an imaginary friend and those who did not. However, the results from Gleason et al. also reveal that there are no significant differences between personality characteristics in those with and without imaginary companions. Personality characteristics used in this particular study were based upon Karen Horney's study of moving toward, away from, and against other people.

Creation of imaginary companions as a social provision

It is possible some children create pretend friends in response to the loss of a family member or someone close to them. Research demonstrates that children's pretend play often imitates that of the real-life experiences they encounter or are exposed to regularly. Imaginary companions are often elaborations of relationships children share with the people around them (Gleason, 2002). It is also possible that children develop many social skills in the early elementary school years. As a result, the imaginary companion is a transitional phase when the child learns to develop skills in interaction with other children. Although Hoff (2005) found that many children with imaginary friends reported having fewer friends and a lower psychological well-being, he explored the importance of realizing that these children may not have socially coped as well without their pretend companions. Since make-believe friends allow children to practice different types of social situations, it is possible that socially incompetent children use their imaginations to cope. Although they may not be as developed as their peers, they

may learn more through the use of their make-believe friends than if they did not have them at all.

Some research has been done in regards to how children use their imaginary companions as a social provision, or a way to provide for themselves important relationships they are lacking. Gleason (2002) found children with imaginary friends and attachments to personified objects often favored their imaginary companions over their parents and best friends in real life in regards to relationships they nurtured. Additionally, it was found that children with imaginary friends distinguished between parents and best friends in regards to how they are socially provided in these relationships significantly more than children attached to personified objects or children with no imaginary attachment. Children with imaginary companions are more likely to understand the distinction between different types of relationships. This is possible because children may use their imaginary companions to practice different types of relationships, providing for them the opportunity to understand what the relationships around them socially provide. Gleason and Hohmann (2006) discovered that children's relationships with imaginary friends did not differ from their real-life companions. Therefore, it was suggested that imaginary companions are replications of real relationships and are created as a result of the child's need or desire for a relationship.

Characteristics of children with imaginary friends

Boys and girls differ in the way they engage in imaginary play. Preschool girls are more likely to have and interact with pretend companions. Most of their companions were humans with a specific gender rather than animals or make-believe creatures. Rather than creating imaginary friends separate from themselves, boys are more likely to

impersonate imaginary characters, such as superheroes they see in cartoons on television. However, when they have an imaginary friend, they often generate imaginary animals, rather than humans. The boys mostly create imaginary animals the same sex as themselves (Hoff, 2005; Taylor, Carlson, Maring, Gerow, & Charley, 2004).

Imaginary companions, as well as make-believe play, are often associated with children between the ages of three and five. However, research has shown that children continue to maintain these friendships as well as engage in pretend play as they go through elementary school. Research reports that 65% of six- and seven-year-olds claimed to have had an imaginary friend at some point in their lives. Around 31% of those children stated they currently continued to play with their make-believe companions even though they were beyond preschool and into their elementary years (Taylor et al., 2004). Hoff (2005) found that half of fourth graders reported having imaginary companions earlier in their childhood. Approximately 57% of these children had their make-believe friends after the age of seven. Despite popular belief that children only engage with imaginary friends in early childhood, many children continued their pretend friendships into middle childhood.

Cognitive factors and the ability to distinguish fantasy from reality

Children with imaginary companions may possibly engage in more creative activities and participate in pretend play more often than their peers who do not have an imaginary companion (Bouldin, 2006; Bouldin & Pratt, 1999). Bouldin found that the presence of an imaginary companion in a child's life significantly correlated with the child's tendency to participate in fantasy-based activities. Particularly, there were differences between children with imaginary companions and children without imaginary

companions in regards to their dream content, daydreams, and game content. Therefore, these findings support the notion that children with imaginary companions create more vivid mental images. Furthermore, Bouldin and Pratt suggest imaginary companions may function as a way for children to accommodate new information into their schemata when parents and teachers positively reinforce the child's exploration.

The way a child thinks is often affected by the presence of imaginary companions. Children with make-believe friends reported daydreaming more often than other children. Most of their daydreams occurred while they were alone, and many times they described a more vivid experience than other children where they could almost see and hear the events they imagined around them. Furthermore, it was found that children with imaginary friends had more mythical dreams at night and were more imaginative. Overall, research supports the notion that children with make-believe companions often have more imagination and engage further in imaginary play (Bouldin, 2006).

Cognitive development is also affected as a result of using the imagination while engaging in play. In 2003, Gmitrová and Gmitrov found that preschool curriculum based on play was more effective in a child's cognitive development than other methods of teaching young children. Furthermore, Gmitrová and Gmitrov (2004) found when children do not engage specifically in child-directed pretend play a number of skills are diminished later in life, including meta-cognition, problem-solving, social cognition, and overall academics. Lewis et al. (2000) suggest that a relationship exists between imaginary play and language development in children. Since children symbolize activities during pretend play, their conceptual knowledge grows, increasing their verbal competency. Russ (2003) claims "play fosters the development of cognitive and affective

processes that are important in the creative act" (p. 291). He found that divergent thinking emerged as a result of fantasy and imagination during early childhood.

A common consideration of researchers is whether or not children realize they are engaging in pretend play. Are children capable of understanding the difference between fantasy and reality? It is suggested that children who engage in fantasy-based play on a regular basis have a different theory of mind than other children. Bouldin and Pratt (2001) found that children with imaginary companions and children without imaginary companions reacted differently to a pretend "monster" shadow on a wall, indicating that children with imaginary companions may possibly believe in the reality of the figure more often than their peers. Carrick and Quas (2006) sought to determine whether or not children could discern the difference between real and fake images depicting a number of events provoking common emotions. The results revealed children were more likely to recognize pretend positive events as realistic more often than those that were frightening or sad. Therefore, it is indicated that children are more likely to mistake happy and exciting false events as realistic. However, it is possible they fail to recognize the possibility of a negative event happening to them. Also, children often emotionally attached themselves to fictional stories. These children often asked questions about specific characteristics of the characters and re-enacted the stories in pretend play (Alexander, Miller, & Hengst, 2001).

Emotional understanding

A correlation between imaginary friends and a greater understanding of emotions in preschool children has been found. Children who interacted in pretend play alongside their peers showed a greater understanding of feelings than children who did not engage

in imaginary play. As a result of their social interactions with the other children as they pretended real-life activities, children expanded their ability to understand the emotions of other people. In addition, children who participated in play that was structured, complex, and creative showed a higher understanding of relationships through their thoughts, feelings, and actions (Lindsey & Colwell, 2003; Niec & Russ, 2002).

It was suggested that children with imaginary friends had more patience because they entertained themselves longer through fantasy and imagination. The results of Manosevitz, Fling, and Prentice (1977) reveal that there were no significant differences on any of the fantasy and imagination measures. Contradictory to their research, Singer (1961) found different results in his study on children's imagination and the ability to wait. Children who were more predisposed to engage in fantasy were able to remain standing or wait quietly in their seats for a significantly longer period of time than children who were not as imaginative. However, Manosevitz et al. relied heavily on the parents' reports of whether or not their children had an imaginary friend. Therefore, some parents may not be aware of their child's imaginary friend. There is also contradictory evidence regarding the connection between children's intelligence and imaginary companions. I.Q. differences between children with pretend friends and those without were not found in one study by Manosevitz et al. (1977). However, Taylor and Carlson (1997) found that many children with imaginary friends could be classified as engaging in a high level of fantasy. Furthermore, this group of children resulted in having higher scores on verbal intelligence than children in the low fantasy group.

Purpose of the Study

The purpose of this study is to research whether or not a relationship exists between the prevalence of imaginary companions and the ability to socially adapt. The following research question is being considered in this study: Is there a possible correlation between the prevalence of an imaginary companion in the lives of children and their ability to socially adapt later in life? It is hypothesized that, due to loneliness and a need for camaraderie, children with imaginary companions or tendencies to engage in pretend play learn to socially adapt in their surrounding environment differently than their peers.

Method

Participants

To gain a better understanding of how imaginary companions impact the psychosocial development of children later in their lives, college students were studied. One hundred twenty-six participants were used from a large private university in the southeastern region of the United States. Some participants were selected from a pool of freshman students who agreed during their freshman seminar class to be part of research at the university. Other participants were students enrolled in the university's psychology courses. These students had the opportunity to receive psychology activity credits, a requirement of all psychology courses at the university.

Both males and females were used in this study to determine if there were any gender differences; however, only 17 males responded to the survey compared to 109 females. Furthermore, only students over the age of 18 were used to eliminate the need of parental permission in the study. One hundred five of the participants were between the

ages of 18 and 21. Twenty-one of the participants reported they were 22 or older. Students reported graduating from high school from different educational settings, including private, public, and home school. A majority of the participants received public school education while 26.2% went to private school and 14.3% were homeschooled. Only one student preferred not to respond to this item.

Measures

The freshmen college students were measured using a psychological test developed by the author under the supervision of faculty in the psychology department at the university. The test is shown in Appendix A. The first three items of the survey provided demographic information regarding the gender, age, and type of high school education of the participant. Following the demographic information, 29 items, selected from an online Social Skills Test (n.d.), were used to assess the participants' psychosocial levels.

The second portion of the test was originally developed in a psychological measurement undergraduate psychology course. The development of the test was supervised by the course instructor and measured whether or not college students had an imaginary companion when they were younger. A total number of 12 items were written regarding this topic and used for the class assignment. A field test was taken from students enrolled in the course. Out of the nineteen students, three were male and sixteen were female. The item-total statistics revealed that the 12 items yielded an alpha coefficient of 0.815, indicating that the test reliability was relatively high.

In an attempt to increase the reliability of this test, more items were created for this study. There are a total of 25 items to which the participants were asked to respond

using a 4-point Likert-scale ranging from one to four. If the respondent strongly disagreed, he or she answered with a “1”, disagreed with a “2”, agreed with a “3”, and strongly agreed with a “4”. Furthermore, five additional items at the end of the test were included to determine the type of imaginary companion each participant admitted to having as a child. Each item allowed the participant to respond if the statement was relevant to them or to leave it blank if they found it irrelevant.

Procedure

The research project was advertised by professors in their courses as well as on the university’s psychology website, allowing students the opportunity to participate. An online database was created where the students could access the survey over a two-week time period. The participants’ responses were then stored in the online database and programmed into a Statistical Package for the Social Sciences (SPSS) file for analyzing. Scores were computed for both items regarding social skills and prevalence of an imaginary companion. These scores were then compared to determine whether or not a correlation existed between the two.

Results

Analysis of Measurements

Social skills scale. A principle component factor analysis was conducted in order to determine the number of different traits measured by the social skills scale. The factor analysis with the social skills scale suggested that two underlying traits were measured as seen in Figure 1. A varimax rotation was used to simplify the interpretation of these two factors. The rotated component determined the correlations between each question and the underlying traits. Eight of the items did not correlate with either of the two factors

measured on the social skills scale. Therefore, these items were eliminated from the final analyses. Twelve items correlated with factor one and 9 items correlated with factor two. One of these 9 items negatively correlated with factor two, and after a review of the item, it was determined there was no explanation for this occurrence so the item was eliminated from the rest of the final analyses. The final items used in the analyses are shown in Appendix B.

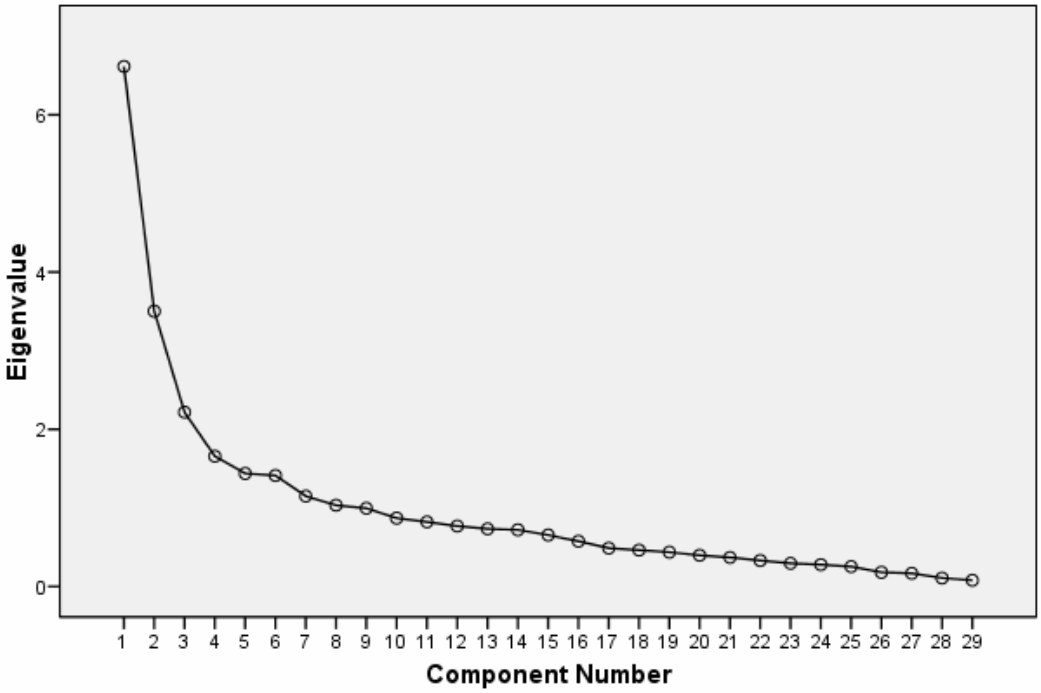

Figure 1. Scree plot of factor analysis of the items on the social skills scale, indicating that there were primarily two traits measured.

An item analysis of the 12 items under factor one produced an alpha coefficient of 0.907, indicating a high reliability. Furthermore, an item-total correlation of the 8 items under factor two produced an alpha coefficient of 0.732. After the reliability of these items under the two different factors was confirmed, a Pearson correlation was conducted

in order to verify that the two sets of items measured two different traits. A very small and non-significant correlation of $r(124)=-0.046$, $p=0.605$ resulted. Since there was not a significant correlation between the two factors, it was confirmed that the factor analysis provided correct results indicating that two separate traits were measured in the social skills scale.

After a review of the 12 items under the first factor, it is suggested that these items measure the ability of understanding or seeking to understand situations from the perspective of other people. Examples of these items include the following statements: "When I talk to someone, I try to put myself in his/her shoes" and "When I don't understand a question or statement, I ask for further explanation." Therefore, the factor one items are considered the "social knowledge" scale. Items measuring the second factor consist of the following: "I feel uneasy in situations where I am expected to share my emotions" and "I get tense at formal get-togethers." Therefore, it is suggested that the second factor measures how comfortable one person is in different types of social situations so these items are labeled the "social comfort" scale.

Imaginary companions scale. Another principle component factor analysis was conducted in order to determine the number of different traits measured by the imaginary companions scale. It was determined that only one factor was measured on this scale as seen in Figure 2. The trait intended by the author to be measured by this scale is the level of imaginary play in childhood. The success of the formation of the measurement of one particular trait was confirmed by the factor analysis. The reliability of the first 25 items was tested, providing an alpha coefficient of 0.829, ensuring a high reliability of this measurement.

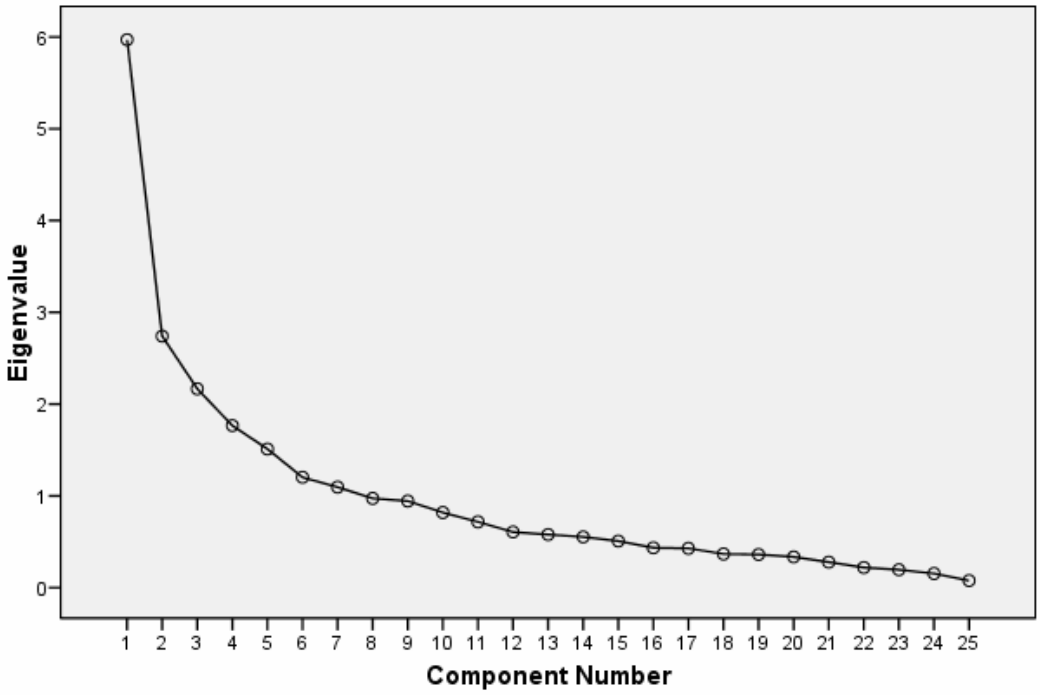

Figure 2. Scree plot of factor analysis of the items on the imaginary companions scale, indicating that only one trait was measured.

Score calculations. Two social skills scores and one imaginary companions score were calculated for each of the participants. On the social skills scales, items were recoded and given a higher score for more socially appropriate responses. Imaginary companion scores were higher if the participant expressed having more pretend play and imaginary companions in childhood. Two separate scores were determined for the two factors, social knowledge and social comfort, on the social skills scale. On social knowledge, the scores ranged from 18 to 52 with a mean of 37.78 while the social comfort scores ranged from 24 to 46 with a mean of 35.48. The imaginary companions score ranged from 40 to 90 with a mean of 70.07.

Demographic Differences

Gender differences. It may be argued that gender differences cause a difference in the social skills score. Therefore, an analysis was conducted in order to determine whether or not a difference in gender would affect the results of the study. Since the distribution of the social skills scores on the social knowledge scale was asymmetrical, as shown in Figure 3, a Mann-Whitney test was used to determine whether or not there were significant differences between men and women. The result, $U(17,109)=701$, $p=0.107$, confirmed that there were no significant differences. An independent sample t-test was used to test the difference between the social skills scores on the social comfort scale between genders since the distribution appeared to be normal, as shown in Figure 4. A result of $t(124)=0.711$, $p=0.478$ also confirmed that there were no significant differences between genders in social comfort.

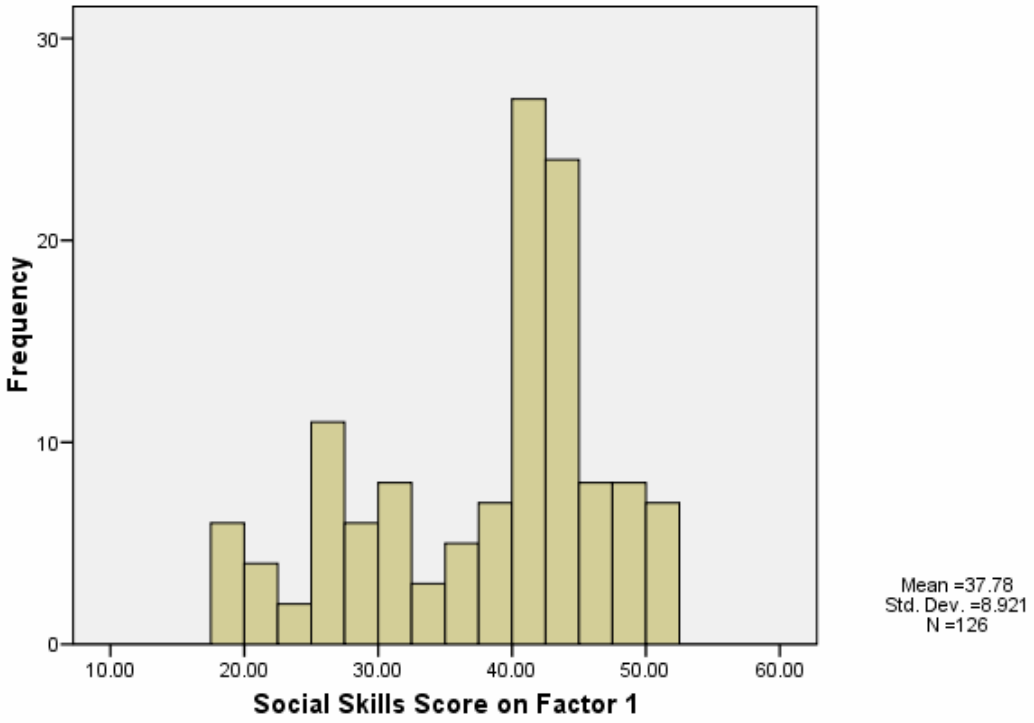

Figure 3. Histogram of the social skills scores on the social knowledge scale.

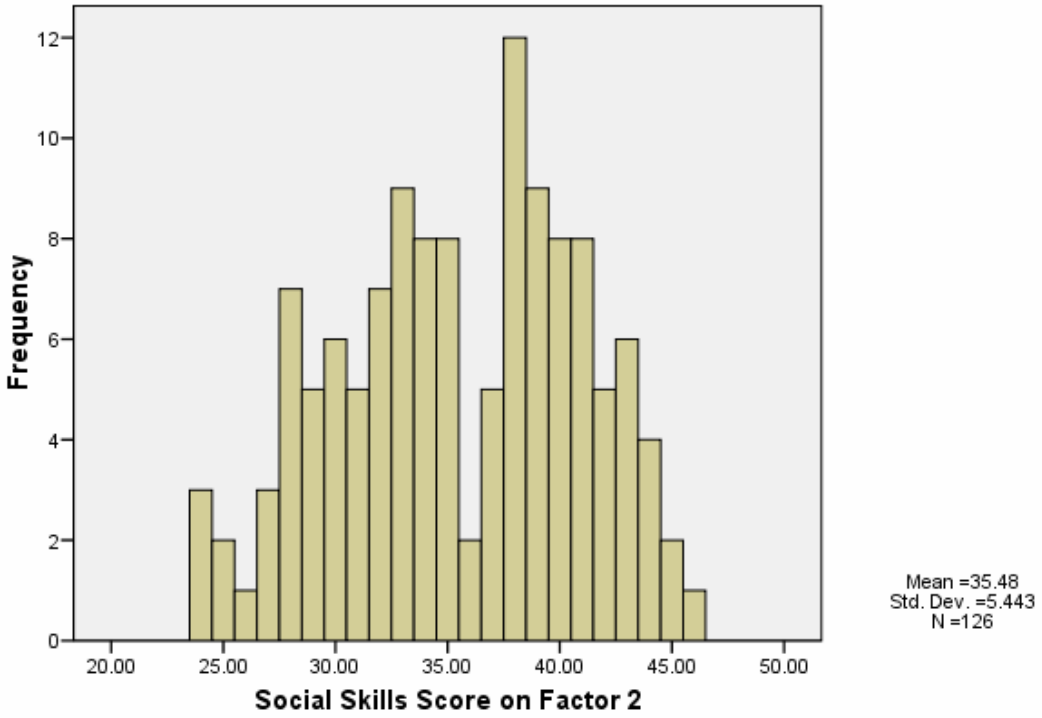

Figure 4. Histogram of the social skills scores on the social comfort scale.

Past research indicated that girls were more likely to engage in imaginary play and to form imaginary companions. However, the results of this study suggest otherwise. Since the distribution of the scores on the imaginary play scale was normal, as seen in Figure 5, an independent sample t-test was conducted on the imaginary companion scores between the male and female respondents. The results, $t(124)=1.2$, $p=0.233$, indicated that there was not a significant difference between men and women on the imaginary companion scores.

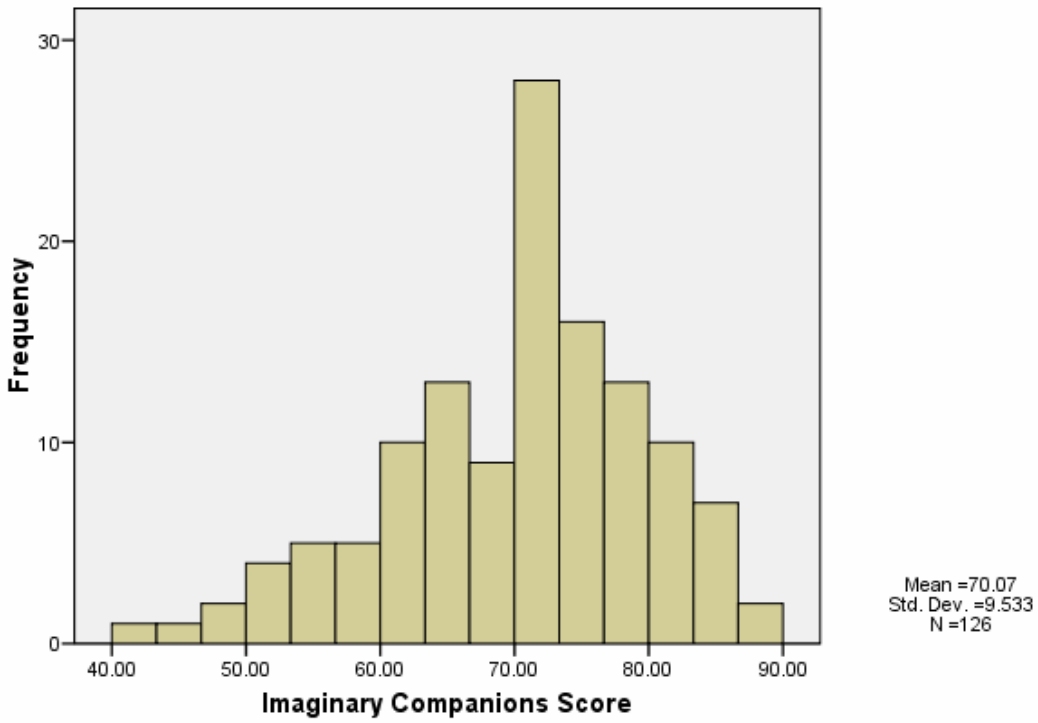

Figure 5. Histogram of the imaginary companions score.

Educational differences. It may be argued that social skills are also affected by a child or teenager's educational setting as a result of the social opportunities they receive at their school. One of the demographic items on the survey allowed the participant to respond with the type of high school education he or she received. The respondent could reply whether they attended a public or private high school or were homeschooled. They also had the option of stating that they did not wish to respond.

A Kruskal-Wallis test was used to determine possible differences between respondents with different types of educational backgrounds and their social knowledge score. A nearly significant result of $H(2)=5.693$, $p=0.058$ occurred. Respondents from a public school setting had a median score of 42 whereas private school respondents and home school respondents had median scores of 38 and 38.5 respectively. Additionally, a

one-way analysis of variance (ANOVA) was used to test the differences between educational backgrounds and social skills scores on the social comfort scale. The result of $F(2,122)=1.135$, $p=0.325$ indicated that there was not a significant effect of educational setting on social comfort.

Another ANOVA was conducted to determine whether or not educational background differences were associate with differences in the respondents' imaginary companions scores. The outcome of the test, $F(2,122)=0.578$, $p=0.564$ indicated that there were no significant differences between respondents from different educational backgrounds and the prevalence of imaginary play and companions in their childhood.

Differences between Types of Imaginary Companions

At the end of the survey, there were five items that determined the prevalence of three different types of imaginary companions. The first type included dolls, action figures, and stuffed animals as imaginary friends. The second type consisted of using a personal imagination to crate an imaginary friend. The third type involved imagining being friends with characters from movies, television, or books. Respondents also had the opportunity of reporting whether or not they spoke with a real-life friend even when that friend was not physically present. If they found that none of the four statements applied to them, they could respond to the fifth item stating that the four items above did not relate to them.

Fifty-three percent of the respondents reported that they participated in the first type of imaginary companions where they possessed dolls, action figures, and stuffed animals with which they interacted. About 51% engaged in the type of imaginary friends where they pretended to play with characters from movies and television shows they

watched and books they read. Finally, only 20% reported that while they were growing up they created their own imaginary companion. Twenty-three percent of the respondents claimed that they did not possess any type of these imaginary companions as a child.

Mann-Whitney tests or independent sample t-tests, depending on whether the scores were "normally" distributed, were conducted on each of the items to determine whether not there was a difference of social skills scores between those who participated in a certain type of imaginary companionship and those who did not. The second item, which stated "I had a real-life friend I talked to even when they were not physically there," provided a significant difference, $t(124)=1.977$, $p=0.05$, on the social knowledge scale. On the social knowledge scale, those who reported "yes" to this question had a mean score of 35.3, compared to the mean score of 40.86 of those who answered "no".

Additionally, a nearly significant difference, $U(62,64)=1588$, $p=0.053$, on social knowledge was found between those who claimed to have the third type of friend and those who did not. Those who answered "yes" had a median score of 40.5, and those who answered "no" had a median score of 42. Nevertheless, a significant difference, $t(124)=2.179$, $p=0.031$, was found on the social comfort scale with those who answered differently on this item. The average social comfort score of those who responded "yes" to this item was 25.16, and the average score of those who answered "no" was 26.98. The rest of the items produced non-significant differences, all p's>0.073.

Correlation between Social Skills Scores and Imaginary Companion Score

A Spearman or Pearson correlation between the two separate social skills scores and the imaginary companions score were calculated to determine whether or not the prevalence of an imaginary companion in early childhood affected the way they socially

adapted later on in life. A non-significant correlation was found between the social knowledge and imaginary companion scale with a result of $r_s(126)=-0.087$, $p=0.335$. Nevertheless, a significant positive correlation was found between the social comfort scale and the imaginary companions scale with a result of $r(124)=0.284$, $p=0.001$. This indicated that an increase in the prevalence of imaginary companions does not relate to social knowledge; however, it is associated with a slight increase in social comfort.

Discussion

Explanation of Results

Demographic considerations. Some demographic issues may have affected the outcome of the study. First, it was suggested that gender may have played a factor in the social skills score since men and women may behave socially in different ways. Furthermore, girls were reported to participate in imaginary play more often than boys. The outcome of these analyses indicated that there were no significant differences in these scores between the two groups. As a result, it is unlikely that gender affected the outcome of this study.

Another demographic issue that ought to be considered is the type of high school each of the participants attended. The setting of a person's high school education may affect the way he or she socially behaves since it is where he or she spent a significant amount of time during the years of his or her life when others around them are highly influential. A Kruskal-Wallis test between respondents from different educational backgrounds and their social skills scores on social knowledge indicated that there was a nearly significant result. Public high school respondents had the highest average social knowledge scores, indicating that students in this type of educational setting may be

exposed to more social situations where they learn more about socially appropriate behavior. Furthermore, it is important not that home school and private school respondents had almost identical scores. Therefore, it is possible students receive the same type of social training in both educational settings. Although this study did not provide significant results, it is possible that further research would result in a significant difference between students from different educational backgrounds and their ability to understand people from different perspectives.

Types of imaginary companions. The author suggested that there were three different types of imaginary companions. Significance tests were used to determine whether or not there were social skills differences between those who had each of the different levels of imaginary companions and those who did not.

Those who reported talking to friends even when they were not physically present had a significantly lower score than other respondents on the social knowledge scale. In other words, these respondents have more difficulty understanding situations from other points of view. Although the difference was relatively small, it is suggested that these children imagined their friends in their presence at certain times in order to cope with certain types of social skills they were lacking, such as not knowing how to react to certain situations in a socially accepted manner.

Furthermore, respondents who reported creating imaginary friends based on characters from movies, television, or books were found to have a nearly significantly lower score on social knowledge and significantly lower score on social comfort. Since these respondents reported having a lower score on social comfort than those who had the second type of imaginary companion, it is suggested that children modeled behavior

shown on the television in order to practice socializing in more uncomfortable situations. These children may be unsure of how to react in certain situations; however, they have seen imaginary characters in that situation, and they learn to practice that type of behavior as a means of socially coping. Since the results for this type of imaginary companion are different from the other types of imaginary friends, it is possible that television is unique in the way it impacts children.

Correlation between social skills score and imaginary companions score. The overall purpose of the study was to determine whether or not a correlation existed between the prevalence of imaginary companions in childhood and social skills later in life. The results indicated that imaginary companions did not significantly associate with the social knowledge of children as they grew older; however, it did have a significant relationship with social comfort scores.

A non-significant correlation between social knowledge and the imaginary companions score indicated that there is not a relationship between the two variables. Therefore, the results of this study do not support previous research conducted by Lindsey and Colwell (2003), as well as by Niec and Russ (2002), who found that children with imaginary companions were more understanding of the feelings of other people. It is suggested by this study that the occurrence of an imaginary friend does not affect the way children learn to understand others' perspectives as they grow older.

The significant positive correlation between the social comfort and the imaginary companions score suggests that children with imaginary companions are more likely to feel comfortable in different social situations. It is possible that imaginary companions were used as a means of practicing social situations, causing the child to be more

comfortable in similar real life situations in the future (Hoff, 2005). Additionally, the imaginary play accounted for 8% of the variation, indicating that although there was a significant difference, the effect on social comfort was not large. Since the social knowledge scale did not yield a significant correlation and the social comfort scale produced a positive correlation, this study suggests that imaginary companions may only make an impact on only specific types of social skills.

Limitations to the Study

Memory. There are a number of limitations that ought to be addressed. First, since this study relied on retrospective reports of students' imaginary play as children, memory may play a factor in the respondents' reports. It is possible some participants forgot some events from their childhoods, which would affect their reports about whether or not they engaged in imaginary play or had an imaginary companion. Furthermore, respondents to the social skills survey may have answered in a more socially desirable manner rather than in a realistic one. A lack of reporting what is considered a weakness by societal standards may have caused some of the data to be unreliable.

Type of sample. Participants in this study were all collected from a private Christian university. Students from this university chose to attend a conservative Christian institution where Christian principles are emphasized, teaching the students how to Biblically interact and relate with other people. Therefore, it is suggested that this sample may have a slightly different social skills level than the normal population. Since this study did not have a control group from a secular institution, it is difficult to determine whether or not this would affect the results.

Possibilities in Further Research

It would be beneficial for further research in this topic to be conducted with preschool children. Direct observation of a preschool child's play patterns and engagement in imaginary play and imaginary friends would provide more reliable results. Interviews with parents and teachers who interact regularly with these children would bring about more information, indicating possibilities of why children choose to create imaginary friends and whether or not it affects their development in other areas. Additionally, this particular study assessed the correlation of imaginary play in childhood and social skills later in life. However, a study with children would allow the assessment of the short term impact of the way children socially adapt in their immediate environment. It is possible that a considerably larger significant difference may be found between those with and without imaginary companions.

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Appendix A

By responding to this survey, agreement has been made with the following statement:

> "I understand that my participation in this research project is voluntary and that I may stop at any time. There will be no adverse consequences to me if I decide not to participate. I also understand that the results of this project will be for research purpose only and will not be disclosed to anyone; confidentiality will be maintained and my name will be removed from all results. If I have any questions about this survey, I may contact Emily Bloom at edbloom@liberty.edu or 434-582-8910"

PLEASE MARK WITH AN "X" TO YOUR RESPONSE TO THE FOLLOWING QUESTIONS:

Gender: Male_____ Female_____

Age: 18_____ 19_____ 20_____ 21_____ 22+_____

Type of High School: Public_____ Private_____ Home School_____

1. I get so caught up in what I have to say that I don't notice the reactions of my listeners.
   - _____Often true
   - _____Sometimes true
   - _____Rarely true
   - _____Never true

2. People tell me that I am clueless about things that are going on right under my nose.
   - _____Often true
   - _____Sometimes true
   - _____Rarely true
   - _____Never true

3. I make sure that my closest friends know that they are important to me.
   - _____Often true
   - _____Sometimes true
   - _____Rarely true
   - _____Never true

4. When I talk to someone, I try to put myself in his/her shoes.
   - _____Always true
   - _____Often true
   - _____Sometimes true
   - _____Rarely true
   - _____Never true

5. There are times when I really need my friends.

_____True-I always seem to be in need of support
_____True-I rely on my support network from time to time
_____False-I am completely self-sufficient
_____False-I don't have any friends I can rely upon

6. If I were at a party and saw two people I knew standing in the corner and talking quietly, I would approach them.
_____Very likely
_____Somewhat likely
_____Somewhat unlikely
_____Mostly unlikely
_____Very unlikely

7. I would rather bite my tongue than start a conflict.
_____Always true
_____Often true
_____Sometimes true
_____Rarely true
_____Never true

8. I tend to withdraw from people.
_____Always true
_____Often true
_____Sometimes true
_____Rarely true
_____Never true

9. I am at ease with people I don't know.
_____Always true
_____Often true
_____Sometimes true
_____Rarely true
_____Never true

10. I go to great lengths to avoid social gatherings.
_____Always true
_____Often true
_____Sometimes true
_____Rarely true
_____Never true

11. When someone explains how s/he is feeling, I paraphrase to verify that I understand.
_____Always true
_____Often true
_____Sometimes true
_____Rarely true

_____Never true
_____No, that would be ridiculous!

12. When entering a conversation in a formal setting such as a meeting or a class, I make sure that I have something concrete to say before starting to speak.
_____Always true
_____Often true
_____Sometimes true
_____Rarely true
_____Never true

13. I am comfortable dealing with conflict when it arises.
_____Always true
_____Often true
_____Sometimes true
_____Rarely true
_____Never true

14. When someone has difficulty finding the proper words, I suggest what I think s/he is trying to say.
_____Always true
_____Usually true
_____Sometimes true
_____Rarely true
_____Never true

15. When I'm out with my friends, I dominate the conversation.
_____Always true
_____Often true
_____Sometimes true
_____Rarely true
_____Never true

16. I feel uneasy in situations where I am expected to share my emotions.
_____Most of the time
_____Often
_____Sometimes
_____Rarely
_____Never

17. I hate situations in which I am expected to socialize.
_____Always true
_____Often true
_____Sometimes true
_____Rarely true
_____Never true

18. I explain my ideas clearly.
    _____Always
    _____Usually
    _____Sometimes
    _____Rarely
    _____Never

19. I smile when I am talking with others.
    _____Most of the time
    _____Often
    _____Sometimes
    _____Rarely
    _____Never

20. If someone gives me a genuine apology, I am _____ able to accept it.
    _____always
    _____often
    _____sometimes
    _____rarely
    _____never

21. When I don't understand a question or statement, I ask for further explanation.
    _____Always
    _____Often
    _____Sometimes
    _____Rarely
    _____Never

22. Looking back at typical conversations, I _____ realize that I talked mostly about myself.
    _____nearly always
    _____often
    _____sometimes
    _____rarely
    _____never

23. I get distracted when listening to what other people have to say.
    _____All the time
    _____Often
    _____Sometimes
    _____Rarely
    _____Never

24. If a friend asks me for my honest opinion, I'll tell the truth even if it hurts.
    _____Yes, but I am as gentle as possible when the news isn't good
    _____Yes, but I don't bother to sugarcoat the news

_____No, I don't want to be the bringer of bad news
_____No, people don't really want to hear bad news
_____No, I try to stay out of other's affairs

25. If a friend is upset…
_____I will avoid him/her – I don't deal very well with that type of thing
_____I will try to help him/her, but not at the expense of my priorities
_____I will assume that s/he needs his/her space and leave him/her alone for a while
_____I will make time to help him/her if s/he wants help, even if it involves personal sacrifice

26. Imagine that you are at a conference and you need to do some networking for your company. The situation is a little awkward since you don't know anyone, but you were sent to the conference by your boss partially to make some business contacts. How would you likely conduct yourself at the buffet dinner?
_____I would approach anyone who looks equally uncomfortable and chat casually
_____I would approach the friendliest looking person, chat casually, and hope to be introduced to others through that person
_____I would hang around trying to look approachable and wait until someone comes to me
_____I would hide out in a corner, trying to look inconspicuous
_____I would approach a group of people, ask if I can join them, and enter the conversation when there is a lull
_____I would join a group and immediately launch into a subject that I am well versed in. I want these people to respect my abilities

27. You are working on a team-building exercise at work. Your group must come up with an innovative solution to an old problem. You have a clear idea of the best solution; the trouble is, everyone in your group disagrees with you. How do you react?
_____I would try to present my idea in a more crowd-pleasing way, but if they still didn't go for it I would be open to other suggestions
_____I would forcefully insist we go with my idea, and would be closed to solutions the others might present
_____I would let my idea go. If everyone is against it, there must be a better solution
_____After one last try to convince others of the merits of my idea, I would let my idea go, but would likely be closed to other possible solutions
_____I would try to listen to the other ideas but would have a tendency to bring up the old one

28. Same situation as above: The group decides to go with another idea, which you consider less than perfect. How do you deal with your feelings?
_____I would shut down and stop contributing completely

_____I would find out all I could about the new idea so that I could be able to contribute
_____I would throw myself into contributing to the new solution
_____I would do very little to contribute other than pointing out all the possible problems to their solution
_____I would be sulky, and contribute little, if anything
_____I would grudgingly try to accept the solution and to play a part in implementing it

29. I get tense at formal get-togethers.
_____Completely true - I can hardly even think about them without breaking out into a sweat
_____Mostly true - I feel very uncomfortable when I am there
_____Somewhat true - but once I am there I can usually get through it without too much discomfort
_____Somewhat false - after the initial anticipation and excited nerves, I can relax and have fun
_____Completely false - I love them and feel totally relaxed while I am there

PLEASE RESPOND TO EACH OF THE FOLLOWING STATEMENTS ABOUT YOUR CHILDHOOD. IF YOU STRONGLY DISAGREE, THEN CIRCLE 1. IF YOU DISAGREE, THEN CIRCLE 2. IF YOU AGREE, THEN CIRCLE 3. IF YOU STRONGLY AGREE, THEN CIRCLE 4.

1. I enjoyed creating plays with my friends and acting them out when I was a child

1 2 3 4

2. I did not play with dolls or action figures very often as a child

1 2 3 4

3. When I was younger, I preferred to play sports or games that did not involve creating a storyline or scenario

1 2 3 4

4. I preferred to read a story than create one of my own

1 2 3 4

5. When I played with my friends, I often created the games and activities we played

1 2 3 4

6. I often re-enacted television shows or movies I watched as a child

1 2 3 4

7. As a child, I did not talk to dolls, stuffed animals, or action figures as if they were a living being

1 2 3 4

8. I had an imaginary identity as a child (ex. pretended to be someone else for an extended period of time)

1 2 3 4

9. I played with a doll, stuffed animal, action figure, or imaginary friend more often than with my peers

1 2 3 4

10. I did not enjoy playing dress-up or wearing costumes as a child

1 2 3 4

11. When I was younger, I did not become very upset when I lost a doll, stuffed animal, or action figure

1 2 3 4

12. I interacted with my favorite doll or stuffed animal when I was growing up

1 2 3 4

13. I sometimes find myself talking to people, even when they are not there

1 2 3 4

14. I do not often interact with animals through conversation

1 2 3 4

15. I talked to the Tooth Fairy, Santa Claus, or the Easter Bunny as a child

1 2 3 4

16. I find that I talk to myself even when other people are not around

1 2 3 4

17. I had an imaginary friend, stuffed animal, or doll that came to public places (school, grocery store, church, etc.)

1 2 3 4

18. My imaginary friend, stuffed animal, or doll often engaged in many of the same activities as me

1 2 3 4

19. I often found myself in trouble as a result of an imaginary friend, stuffed animal, or doll

1 2 3 4

20. As a child, I had an imaginary companion that I interacted with on a regular basis

1 2 3 4

21. I had an imaginary friend my immediate family knew about

1 2 3 4

22. I had an imaginary friend my extended family knew about

1 2 3 4

23. I had an imaginary friend my friends knew about

1 2 3 4

24. I had an imaginary friend my teachers and peers at school knew about

1 2 3 4

25. I had an imaginary friend who had a specific name and identity

1 2 3 4

PLEASE MARK WITH AN "X" ALL OF THE FOLLOWING STATEMENTS THAT APPLY:

1. I owned a doll, action figure, or stuffed animal that I considered a friend _____

2. I had a real-life friend I talked to even when they were not physically there _____
3. I imagined being friends with characters off of movies, television, or books _____
4. I had an imaginary friend who was created by my own imagination _____
5. None of the four above statements apply to me _____

Appendix B

Social Knowledge (Factor One)	**Social Comfort (Factor Two)**
I make sure that my closest friends know that they are important to me.	People tell me that I am clueless about things that are going on right under my nose.
When I talk to someone, I try to put myself in his/her shoes.	I would rather bite my tongue than start a conflict.
I am at ease with people I don't know.	I tend to withdraw from people.
When someone explains how s/he is feeling, I paraphrase to verify that I understand.	I go to great lengths to avoid social gatherings.
When entering a conversation in a formal setting such as a meeting or class, I make sure that I have something concrete to say before starting to speak.	I feel uneasy in situations where I am expected to share my emotions.
I am comfortable dealing with conflict when it arises.	I hate situations in which I am expected to socialize.
I explain my ideas clearly.	I get distracted when listening to what other people have to say.
I smile when I am talking with others.	I get tense at formal get-togethers.
If someone gives me a genuine apology, I am _____ able to accept it.	
When I don't understand a question or statement, I ask for further explanation.	
If a friend asks me for my honest opinion, I'll tell the truth even if it hurts.	
You are working on a team-building exercise at work. Your group must come up with an innovative solution to an old problem. You have a clear idea of the best solution; the trouble is, the group decides to go with another idea, which you consider less than perfect. How do you deal with your feelings?	