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The Relationship between Childhood Onset Illness and Social Development

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Abstract

The purpose of this study is to look at the relationship between childhood onset illness and social development success. Social development was operationalized as occupational, educational, economic, social and romantic relationship success. Participants were recruited via online support groups, randomly chosen interest groups, and the general Facebook population. It was predicted that individuals who suffered from a childhood onset illness would have more difficulties (or less success) in social, occupational, educational, economic, and romantic relationship areas during their adult years compared to the healthy comparison group. It was found that individuals with childhood onset illnesses had lower friendship quality in both childhood and adulthood than the healthy comparison group. There were no differences found between those with a childhood onset illness and the healthy comparison group in occupational, educational, economic, and romantic relationship success. By understanding how childhood onset illness effects social development success, it can help guardians and practitioners to properly assist ill children in having meaningful social interactions.

Keywords: Illness, Social Development, Childhood, Social Success, Friendship

The Relationship between Childhood Onset Illness and Social Development

With advances in medical research, children with chronic illnesses are living longer than in past years (Gledhill, Rangel, & Garralda, 2000; Manning, Hemingway, & Redsell, 2013; Maslow, Haydon, McRee, Ford, & Halpern, 2011; Verhoof, Maurice-Stam, Heymans, Evers, & Grootenhuis, 2014). By understanding how childhood onset illness affects individuals' social development and adjustment, it can lead to helping children's parental figures provide them with proper support in regard to a healthy social life despite their illness (Manning et al., 2013). This research could be crucial for those who suffer with a chronic illness. If they are provided with the skills to succeed socially as a child, this could be a significant advantage for them in multitudinous areas as an adult (Almquist, 2011). For example, by having meaningful social support in childhood and early adolescence, it can help to build social skills such as confidence, independence, and trust in others (Marion, Laursen, Zettergren, & Bergman, 2013). These social skills may be crucial for individuals in adulthood when they begin searching for job opportunities, potential mates, and even future social connections. In previous empirical research, social development has been measured in terms of occupational, educational, social, and economic success, as well as quality of romantic relationships (Maslow et al., 2011). These five factors are believed to be the main areas of social development success in adult life (Maslow et al., 2011). It has been found that those who suffered from a chronic condition as a child are at a higher risk of experiencing poor social, vocational, educational, and relationship experiences as an adult (Maslow et al., 2011; Verhoof et al., 2014). There have also been findings regarding sex differences in prevalence and effects of illness on social development success (Huure & Aro, 2002; Shumaker & Hill, 1991). Women have a higher frequency of illness and chronic disorders compared to men overall, which may lead to more social issues for women and therefore less

social support (Shumaker & Hill, 1991). Men and women also have differences in response to illness, which can lead to deficiencies in social success (Shumaker & Hill, 1991). In other studies it was found that illness onset age was a big predictor in how an individual will develop socially; those who suffered with a chronic illness as a child were delayed in reaching developmental milestones compared to those who developed the illness later in life (Stam, Hartman, Deurloo, Groothoff, & Grootenhuis, 2006; Suris, Michaud, & Viner, 2004).

Several previous studies have found that those who were diagnosed with a chronic illness as a child were delayed in their social development and suffered with social difficulties (Adams, Streisand, Zawacki, & Joseph, 2002; Chen et al., 2006; Claar, Walker, & Smith, 1999; Maslow et al., 2011; McCarroll, Lindsey, MacKinnon-Lewis, Chambers, & Frabutt, 2008; Stam et al., 2006). Some of these difficulties include social isolation, humiliation, lack of support, lack of confidence, and a lower number of friends (Adams et al., 2002; Huurre & Aro, 2002; Suris, Michaud, & Viner, 2004). In one study, it was found that individuals with a childhood onset illness suffered more in occupational, educational, and economic areas, than in social success when compared to the healthy comparison group (Maslow et al., 2011). However, in other previous research findings, it has been indicated that children who suffered with a persisting illness had equal difficulties with social success and romantic relationship success as a child and adult relative to occupational, educational, and economic areas (Huurre & Aro, 2002; McCarroll et al., 2008). In regard to social success and friendships, it has been found that those who had more friendships in childhood were physically and mentally healthier in their adult life, which helps support the importance of assisting sick children in establishing strong social relationships (Almquist, 2011).

The current study focused on the relationship between childhood onset illness and social development success in adult years (measured as social success, occupational success, economic success, educational success, and romantic relationship quality and quantity.) Based on previous research the predictions are as follows: individuals who suffered from a childhood onset illness will have less success in social, occupational, educational, economic, and romantic relationship areas during their adult years compared to the healthy comparison group.

Method

Participants

Eighty-two individuals were recruited voluntarily using online support groups, randomly chosen Reddit groups, and the general Facebook population. There was no financial incentive given to participants. There were 7 male participants, 70 female participants, and 3 participants who stated “other”. Forty-six participants suffered from a childhood onset illness (persisting longer than two weeks and significantly affecting their daily life) and 34 participants were a part of the healthy control group. The age of onset for participants with a childhood illness range from 0 to 18 ($M=6.09$, $SD=5.89$). Out of the participants, 77.50% were Caucasian/White, 5.00% were Multiracial, 3.75% were Black/African American, 2.50% were Native American/ American Indian, 1.25% were Asian/Pacific Islander, 1.25% were Asian American, 1.25% were Latino/a, and 1.25% reported as “other.”

Materials

Demographics. Participants were asked to self-report their sex, age of childhood illness onset (if applicable), and ethnicity.

Occupational Success & Prestige Codes. This scale was modified to ask questions about where individuals are employed, how long they have been employed, or how long they

have been unemployed. If an individual stated that they are employed, the job position was rated on a prestige scale where different levels of occupation are ranked. There are 889 different occupations listed in the prestige codes. The rankings range from 14 to 80. The higher the number that is given to an occupation, the higher the job is on the scale of prestige (Stevens & Hoisington, 1987). Those with higher occupational prestige were rated higher in occupational success.

The Experiences in Close Relationship Scale (ECR). This scale measures typical romantic relationship quality (Brennen, Clark, & Shaver, 1998). The ECR is a 36 question survey, each question with 7-point Likert scale response options ranging from “agree strongly” to “disagree strongly”. The questions are added up to create a total ECR score, which range from 36 to 252. The higher the number, the higher the relationship quality.

The Friendship Scale. This scale measures participants’ quality of friendship over the past four weeks (Hawthorne, 2000). For the current study, this scale was modified to be answered regarding friendships from the past and present. The Friendship Scale is a six question survey with 5-point Likert scale response options, where 0 indicates “Not at all” and 4 indicates “Almost always”. The responses are added up to determine the quality of friendships the participant has. The friendship scores range from 0-24, with higher scores indicating higher quality of friendships.

Economic Success. In the current study economic success was operationalized by having participants self-report their annual incomes. There were six options listed: under \$14,999, between \$15,000-39,999, between \$40,000-74,999, between \$75,000-94,999, between \$95,000-150,000, and above \$150,000. Higher incomes indicate greater economic success.

Educational Success. In the current study, educational success was operationalized by having participants self-report the number of years of education they have completed. The levels of education ranged from less than high school diploma, high school graduate, some college, associate's degree, bachelor's degree, master's degree, and doctorate or professional programs completion. The more years of education completed indicates greater educational success.

Procedure

Participants were recruited using online resources where a link to the current study was posted. After they completed the demographics section they were able to continue on with the various surveys. First they were asked questions about past health history (whether or not they were diagnosed with a childhood illness), and if the illness is still with them today. They were also asked when the illness first started and the official diagnosis of their illness. If they responded that they were not diagnosed with a childhood illness, then they were sent straight to the education questions. Following the education questions, they were asked about their annual income, unemployment status, and job position and title. They were also asked questions about current and past friendship quality and quantity, as well as romantic relationship quality and quantity. Once they completed the surveys they were thanked for their time.

Results

It was predicted that individuals who suffered with a childhood onset illness would have lower levels of social success, educational success, occupational success, and romantic relationship success and quality compared to the healthy comparison group.

Using an independent samples t-test, it was found that individuals with a childhood onset illness had lower levels of friendship quality in childhood ($M=17.08$, $SD=7.23$), than individuals without a childhood onset illness ($M=21.41$, $SD=6.65$), $t(50)= 2.25$, $p=.03$. Refer to *Figure 1*.

Participants with a childhood onset illness had significantly lower levels of friendship quality in adulthood ($M=18.16$, $SD=6.42$) than participants without a childhood onset illness ($M=22.18$, $SD=5.88$), $t(51)=2.38$, $p=.02$. Refer to *Figure 2*.

Annual income for individuals diagnosed with a childhood onset illness was not significantly lower ($M=2.04$, $SD=1.55$) than those in the healthy comparison group ($M=2.15$, $SD=1.56$), $t(59)=.289$, $p=.77$. Similarly, those with a childhood onset illness did not have significantly lower occupational status or prestige ($M=45.45$, $SD=11.70$) than those without the childhood illness diagnosis ($M=44.71$, $SD=10.80$), $t(33)=.847$, $p=.85$. There were no significant differences in number of years of education in the childhood illness group ($M=4.29$, $SD=1.80$) compared to the healthy comparison group ($M=3.82$, $SD=1.36$), $t(59)=-1.154$, $p=.26$.

Participants diagnosed with an illness in childhood did not have lower numbers of long-term relationships ($M=2.57$, $SD=2.17$) than participants who were healthy in childhood ($M=2.17$, $SD=.986$), $t(49)=-.702$, $p=.55$. Participants in the illness group also did not have significantly different romantic relationship quality ($M=130.84$, $SD=34.93$) compared to the healthy group ($M=120.70$, $SD=36.70$), $t(44)=-.948$, $p=.35$.

Discussion

The purpose of the current study was to investigate the relationship between childhood onset illness and various aspects of social development. It was hypothesized that individuals diagnosed with a childhood illness would be more likely to have less success in social relationships, occupation, education, economic, and romantic relationship areas throughout their adult life. Consistent with past research, it was found that participants who were diagnosed with a childhood onset illness (that persisted for longer than two weeks and had significant effects on the person's life) experienced lower levels of friendship quality in both childhood and adulthood

in comparison to the healthy control group (Chen et al., 2006). Lower friendship quality in participants with a diagnosis of childhood onset illness suggests that those with an illness as a child struggled with social success amongst peers. Although the individuals with an illness had some friends in childhood, they rated their friendship quality as significantly lower than those who were not diagnosed with a childhood illness. Interestingly, it was also found that childhood illness affects friendships in adulthood. Whether this finding is due to illness in childhood or continued illness into adulthood is an interesting question that should be examined in future research. Past research has found that individuals who had fewer friendships as a child often have poorer health as an adult (Almquist, 2011). This finding may be an explanation for why participants in the current study reported lower levels of friendship as an adult as well as child. This could be due to either continued illness into adulthood or lack of sufficient social skills in childhood. Future research should examine this relationship.

By understanding how being diagnosed with an illness at a young age affects crucial areas of social life (such as making meaningful connections with peers), parents and physicians may be able to assist sick children in having important interactions with other children. These findings may also be able to assist parents in understanding the implications of having a child with an illness, and what to expect as their child grows and progresses. In future studies, researchers should look at the number of siblings individuals with childhood onset illnesses have in order to determine whether these relationships counteract the lack of social success with peers. Parents and guardians need to be aware of the difficulties their children may experience, and help their child find meaningful social interactions because childhood friendships are important to future health (Almquist, 2011; Sias & Bartoo, 2007).

Contradictory to past research, the current study found that participants with a childhood illness had no difference in regard to romantic relationship success, educational success, economic success, and occupational success when compared to the healthy comparison group (Chen et al., 2006; Martinez, Carter, & Legato, 2011; Maslow et al., 2011). These discrepancies in findings may be due to lack of complete participant responses as well as a small sample size (especially males). These variables should be tested again in future research with a larger sample size and more complete responses. Different measures may also be useful in determining the different areas of social development, as the measures used in the current study may have had an effect on the participant's answers. For example, only occupational prestige was measured in the current study, not the individuals' job satisfaction rating. Satisfaction and job fulfillment should be measured in future studies as it may be a more sensitive measure of occupational success.

There were some mentionable limitations in the study. For example, the sample used in this study is not completely generalizable, as the majority of participants were female and Caucasian. Interactions between sex and the various social development variables were not able to be completed due to the lack of male respondents and missing data. In order to find a larger more generalizable sample, researchers in the future should post more frequently on various websites (both illness related and randomly chosen) in order to meet all of the quotients for different demographics needed in the study. The current age of the participant was also never asked for in the demographic section of the survey; only illness onset age was a response option for participants. Past research has found that older and younger adults cope differently to living with chronic illnesses, which may affect the amount and quality of social success and friends the individual has (Felton & Revenson, 1987). Future studies should not only ask for the illness onset age, but for the current age of the participant as well. This way researchers may be able to

determine whether current age will have an effect on number of friends and overall social success participants may have as an adult. Participants who chose to participate in the study may also have been individuals already suffering from friendship issues and chronic illnesses, so their responses may be different compared to if a sample outside of support and illness related groups was used. Although randomly chosen Reddit groups were used (such as football, gardening, skiing, etc.) there were less responses from individuals in the random groups than in the illness and support related groups. This may be due to the fact that participants in the illness related groups believed that the project may lead to personal gain for them (related to their illness), whereas those in the randomly chosen groups did not have as much incentive to complete the survey. In the future it would be beneficial to post more frequently and expansively across randomly chosen sites to ensure a larger number of participants and responses for the comparison group.

Past research studies have also found that the type of childhood illness may determine how an individual will function socially (Stam et al., 2006). For example, more severe illnesses can have a greater impact on individuals' social skills and therefore their social development success (Stam et al., 2006). Future research should take illness type and severity into consideration when analyzing data in order to determine whether illness type will have a significant effect on social development areas. It would also be interesting to investigate whether the type of illness was life threatening versus non-life threatening to see whether there would be a drastic change in responses between the illness participants. In regard to occupational success, future researchers should analyze illness severity and length of unemployment on top of the occupational prestige and annual income. This information needs to be addressed because it may be affecting the main variables of the study. Future research should address all five of the main

factors of social development success as well as interactions with unemployment. Information about unemployment may say a lot about the medical difficulties and therefore social difficulties the individual is living with (Herbig, Dragano, & Angerer, 2013). Although it was not a purpose of the current study, in examination of the proportion of people who reported not having a romantic relationship, it does not seem like it is being driven by childhood illness. Few individuals listed having no romantic relationships. It would also be interesting to compare those with childhood onset illnesses to those that had no romantic relationships at all to determine whether this could be something disturbed by illness. The current study also only asked about friendship quality, it did not ask for the individual's perceived number of friends. The quantity of friendships should be measured by future researchers in order for it to be used in overall social success for participants.

In conclusion, it was found that childhood onset illness can have a significant effect on individuals' social success in terms of their friendship quality in childhood and adulthood but not on other markers of social success (e.g., educational, occupational, economic, and romantic relationships). Future research needs to be continued in order to identify the individual differences that make some people who live with a childhood illness more or less susceptible to problems with social development than others. Social development plays a huge role in our lives, as it sets the stage for many types of life course outcomes (Almquist, 2011; Claar, Walker, & Smith, 1999; Maslow et al., 2011). Determining whether childhood illness can impair a variety of social development milestones can help us to learn what kind of resources children with illnesses will need in order to be successful throughout life.

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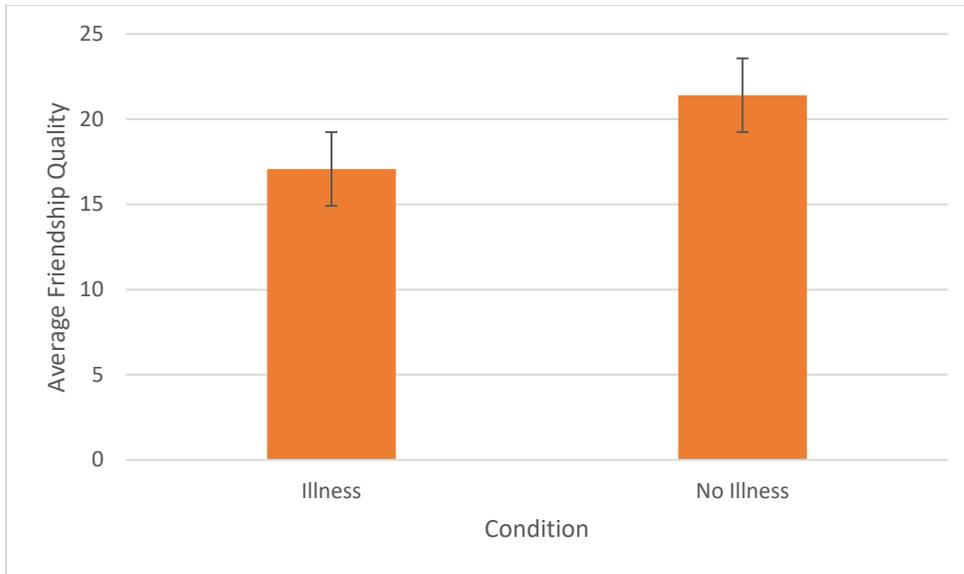


Figure 1. Mean childhood friendship quality for those with and without illnesses.

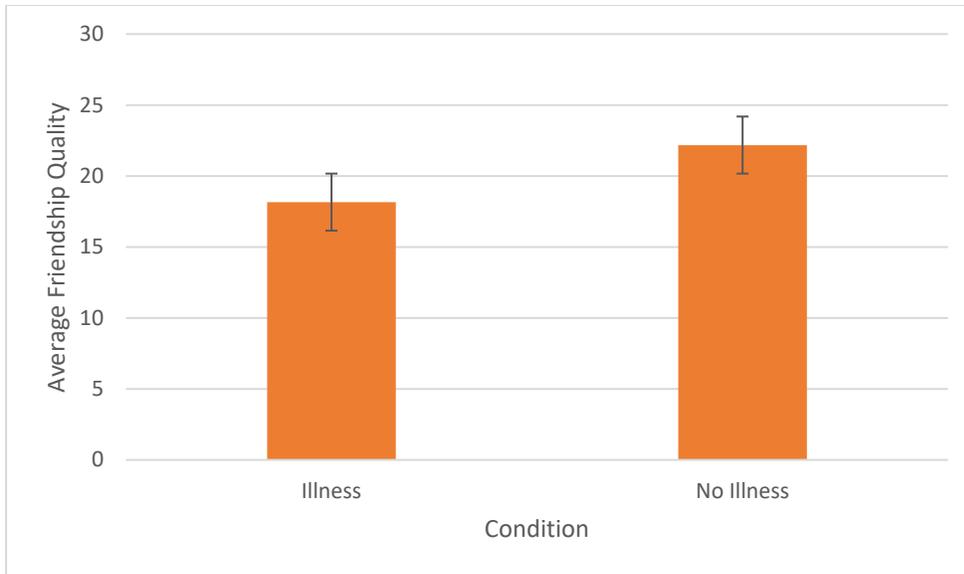


Figure 2. Mean adult friendship quality for those with and without childhood illnesses.

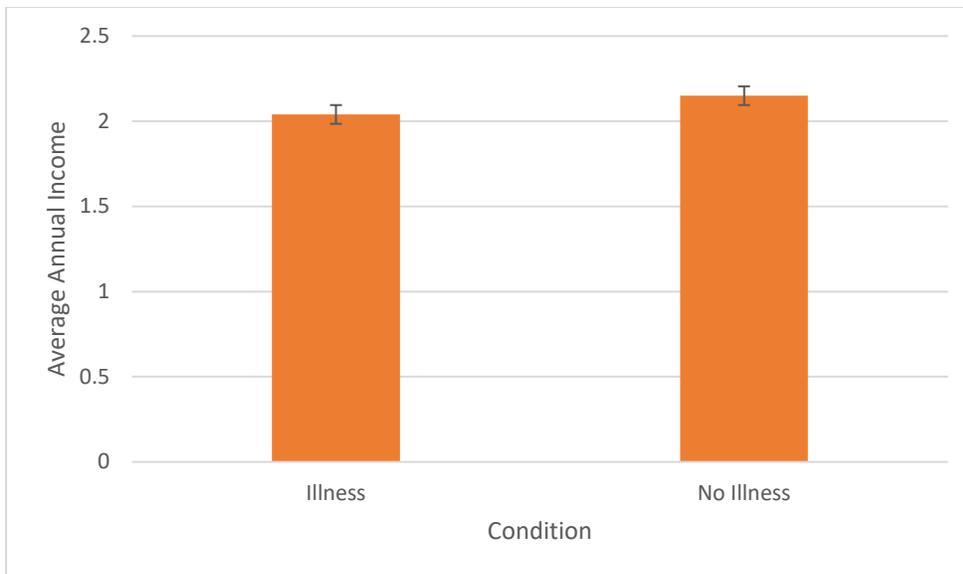


Figure 3. Mean annual income of participants with and without childhood onset illnesses. One is under \$14,999, two is between \$15,000-39,999, three is between \$40,000-74,999, four is between \$75,000-94,999, five is between \$95,000-150,000, and six is above \$150,000.

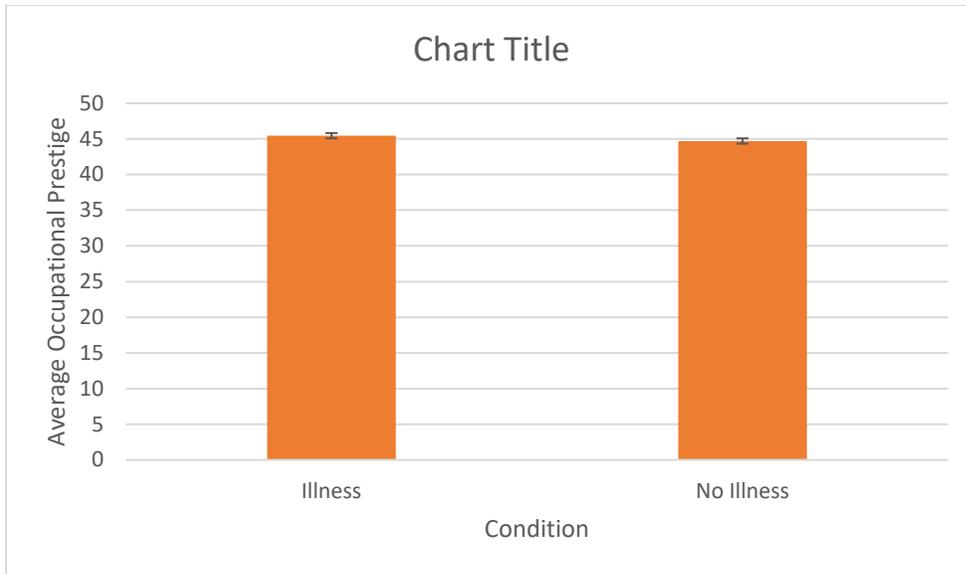


Figure 4. Mean occupational prestige of participants with and without childhood illnesses. The scores range from 14 to 80 (Stevens & Hoisington, 1987).

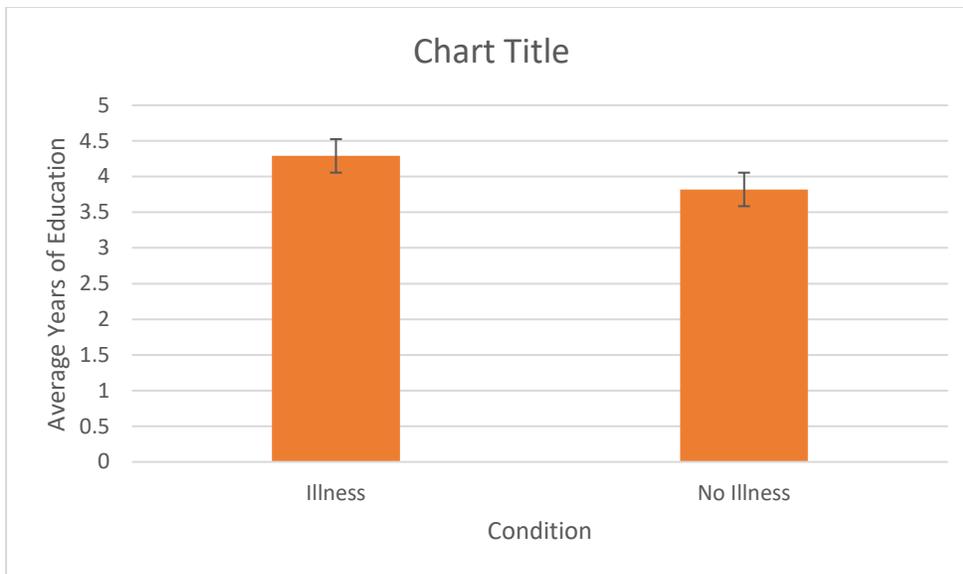


Figure 5. Mean number of years of education for participants with and without childhood illness. One is less than high school diploma, two is high school graduate, three is some college, four is associate's degree, five is bachelor's degree, six is master's degree, and seven is professional and doctorate program completion.

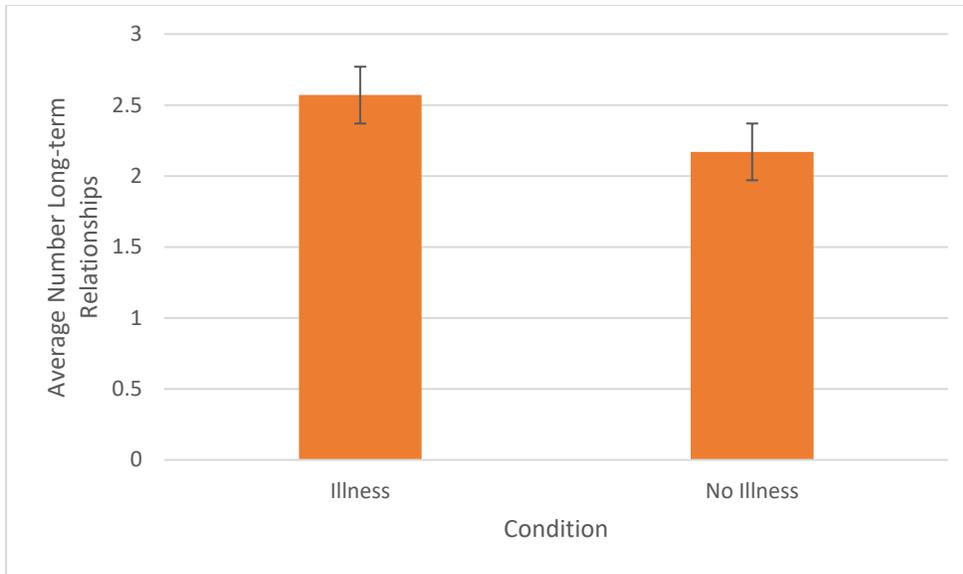


Figure 6. Mean number of long-term relationships of participants with and without childhood illnesses.

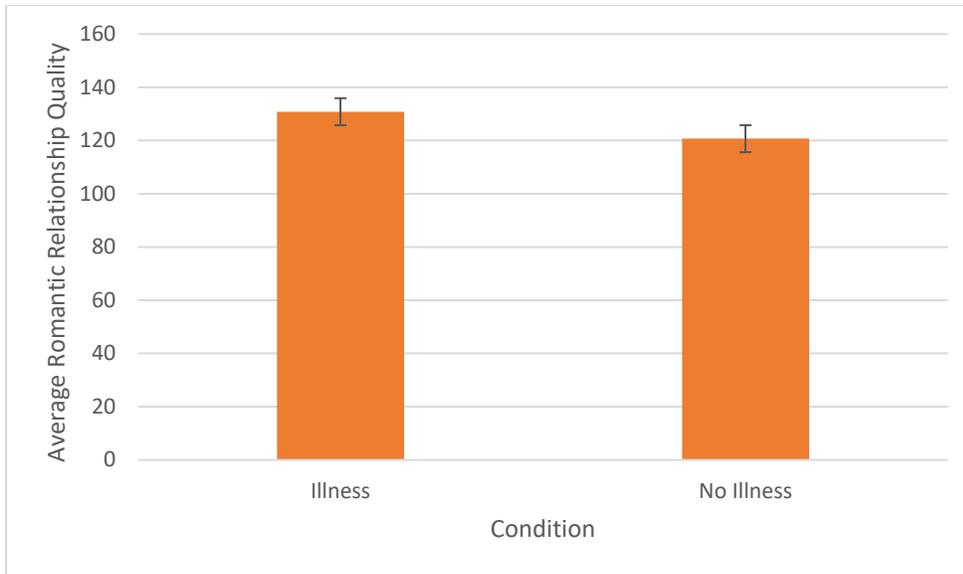


Figure 7. Mean romantic relationship quality of participants with and without a childhood illness. Taken from the Experiences in Close Relationship scale (Brennen, Clark, & Shaver, 1998).