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## POPULARITY AND INTERNALIZING SYMPTOMS: THE POSSIBLE MEDIATIONAL ROLE OF FRIENDSHIP QUALITY

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POPULARITY AND INTERNALIZING SYMPTOMS: THE POSSIBLE MEDIATIONAL  
ROLE OF FRIENDSHIP QUALITY

By

Jocelyn Camargo

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2022

POPULARITY AND INTERNALIZING SYMPTOMS: THE POSSIBLE MEDIATIONAL  
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POPULARITY AND INTERNALIZING SYMPTOMS: THE POSSIBLE MEDIATIONAL  
ROLE OF FRIENDSHIP QUALITY

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By

Jocelyn Camargo

## DEDICATION

This dissertation is dedicated to my sister Leslie, for being the light of my life. Leslie, you have always inspired me and motivated me to break new barriers and go beyond what I know. I couldn't imagine doing this without you, you are my reason.

## ACKNOWLEDGMENTS

I am eternally grateful for my parents, for their continuous support and instilling in me the value of persistence and hard work and to Vianey for believing in me, always celebrating the successes with me and being by my side since day one.

POPULARITY AND INTERNALIZING SYMPTOMS: THE POSSIBLE MEDIATIONAL  
ROLE OF FRIENDSHIP QUALITY

Abstract

By Jocelyn Camargo

University of the Pacific  
2022

Adolescence is an important developmental period where friendships become important for social emotional adjustment. Given the importance of friendships in adolescence, the current study explored the relation between popularity and internalizing problems and whether friendship qualities mediated this relation. The present study aimed to answer the following research question: What is the mediating role of friendship qualities in the relationship between perceived popularity and internalizing symptoms? Data from the National Institute of Child Health and Development – Study of Early Child Care and Youth Development were analyzed. Data were analyzed using structural equation modeling. Results indicate that adolescents who rated themselves as being high in popularity also reported higher levels of positive friendship qualities.

A significant relationship was also found among perceived popularity and internalizing problems such that adolescents who rated themselves as being high in popularity were also reported by their mothers as having lower levels of internalizing problems. Contrary to what was expected, validation and caring significantly mediated the relationship between popularity and anxiety/depression and social problems such that as popularity goes up, so does anxiety/depression, and social problems. Results found conflict and betrayal mediates the relation between popularity and thought problems suggesting adolescents that believe they are popular experience less conflict and betrayal and fewer thought problems. Additionally, conflict

resolution, companionship, and recreation each mediated the relationship between popularity and social problems. This suggests that having a friend you can rely on for companionship, recreation and conflict resolution serves as a buffer from the negative consequences of social problems. Help and guidance as a mediator resulted in a positive relation between popularity and social problems which was unexpected. Results support claims that popularity relates to having high quality friendships that protect against internalizing problems. These findings emphasize the importance of understanding outcomes for adolescent adjustment in relation to forming and maintaining positive relationships with peers.

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## CHAPTER 1: INTRODUCTION

The incidence of anxiety, depression, and related internalizing disorders have significantly been on the rise over the last few years, particularly among adolescents and young adults (Mojtabai, Olfson, and Han, 2016). In fact, depression alone is one of the greatest health issues in the United States and is associated with several negative outcomes including, but not limited to, increased suicide attempts, other psychiatric disorders, low school performance, and substance abuse (Lu, 2019). Not only is adolescence marked as a period where youth are at greater risks of developing internalizing problems, but it is also a period where friendships become significantly important. Research has found that strong friendship qualities including intimacy, security, trust, and social competence have been related to positive adaptation and mental health (Rubin et al., 2004) and are essential for social and emotional development (Lonardo, Giordano, Longmore, & Manning, 2009).

Within the framework of adolescent peer relationships, both popularity and successful friendships are important for development. Research suggests that popularity and friendship are related but not synonymous constructs and that each may influence adolescent adjustment (Oldenberg and Kerns, 1997). Few studies, however, have examined the nature of the relation between popularity and friendship and whether together they predict internalizing behavior problems among adolescents. The goal of this study is to examine a possible link between perceived popularity and friendship quality during adolescence and how they relate to internalizing problems.

## **Background and Key Terms**

**Popularity.** Popularity is a measure of social preference or liking among peers (Parkhurst and Hopmeyer 1998). During adolescence popularity and peer relationships become increasingly significant (Reynolds and Juvonen, 2011), yet it is also a period of vulnerability among youth in the development of diagnosable internalizing disorders. Negative peer experiences among youth may be associated with lower popularity as these adolescents are prone to be victims of bullying, thus increasing the risk of undergoing interpersonal difficulties, withdrawal, and depressive symptoms (Long, Zhou, & Li, 2020). When adolescents are insecure about their popularity status among peers, it is possible they are at greater risk of internalizing problems as they fear peer rejection and seek acceptance. Research on popularity and social status also suggests peer relationships are essential for socio-emotional development (Brendgen, Vitaro, Doyle, Markiewicz, & Bukowski, 2002) because popular adolescents have been found to have more friendships that are characterized as having higher levels of intimacy and less conflict compared to less popular adolescents (Oldenberg and Kerns, 1997).

**Friendship quality.** Friendship is referred as the experience of a mutual relationship that is said to be voluntary and plays an integral part in everyday life. It has been perceived as a strong presence in the lives of developing children and adolescents. Further, it is viewed not only as a mutual relationship but has been found to facilitate social emotional goals, and provide companionship, intimacy, and affection for both individuals involved in the friendship. High friendship qualities have been found to serve as a protective factor against being victimized and bullied by peers (Hodges, Boivin, Vitaro, & Bukowski, 1999). Moreover, friendship qualities in adolescents have been linked to later adulthood mental health issues including depression (Chen

et al., 2020). Thus, friendship quality appears to have a significant effect on adolescents' emotional well-being.

**Internalizing problems.** The term *internalizing problems* refers to problems that are developed and maintained within the individual; thus, they have been referred to as secret illnesses as they are not easily detected through external observation (Merrell, 2008). They become most prevalent during adolescence (Kessler et al., 2003) and have been linked with later difficulties including self-harm, low mental wellbeing, disrupted social relationships, substance abuse, and reduced educational performance (Gutman & McMaster, 2020).

Some types of disorders that have been clustered within the internalizing problems category include depression, anxiety, social problems, withdrawal, and thought problems. As one of the most common and impairing mental disorders, adolescent depression increases substantially throughout adolescence and into adulthood (Thapar, Collishaw, Pine, & Thapar, 2012). Other problems related to symptoms of internalizing include social problems. Social problems may affect adolescents' ability to establish close peer relationships due to struggles with emotional and behavioral regulation skills. Additional problems in peer relationships can be the result of avoidance or withdrawal that can result in increased risk of developing other mental disorders. Mental disorders and thought problems may include disturbances in reality like hallucinations, delusions, or significant disturbances in cognition, and are likely to negatively affect the interpersonal development of children and adolescents. Hence, a variety of internalizing symptoms may have severe negative effects on adolescent relationships (Durbeej et al., 2019).

## **Purpose and Significance of the Study**

Understanding the processes underlying the connection between popularity and friendship difficulties is essential for identifying prevention and intervention methods for adolescents who may be at greater risk of internalizing problems. Building on this understanding is especially important because research has found that unpopularity in adolescence may be attributed to greater feelings of loneliness and depression, and peer experiences are related to adjustment (Kornienko and Santos, 2014). This study aims to synthesize a relation between what we already know and to bridge the gap in the literature regarding adolescent internalizing problems, friendship quality, and popularity. This study further aims to examine the prospective effects of perceived popularity on internalizing symptoms, and the mediating effect of friendship quality on these relations.

The interplay of peer relationships and internalizing problems is a significant topic to explore as it might illuminate the processes by which perceived popularity and friendship quality place adolescents at risk for emotional maladjustment. Given that the onset and escalation of internalizing symptoms tends to occur during adolescence, it is important to understand these relationships. In this study, dimensions of friendship quality were selected because previous literature has associated these dimensions with internalizing symptoms; however, this study will expand on previous studies because it will include various dimensions of internalizing symptoms.

It is expected that greater friendship quality and higher levels of popularity will be associated with decreased internalizing problems. It is expected that poor friendship quality and lower levels of popularity will be associated with increased internalizing symptoms. Friendship quality is expected to mediate the relation between popularity and internalizing problems such that greater popularity will lead to better friendships and fewer internalizing symptoms.

**Research Question**

What is the mediating role of friendship qualities in the relationship between perceived popularity and internalizing symptoms?

## CHAPTER 2: REVIEW OF THE LITERATURE

The purpose of this literature review is to present the prevalent literature on the interrelatedness of friendship quality, popularity, and internalizing symptoms, and to make evident the gaps in this area of study. Relevant key terms and concepts will be discussed.

### **Popularity**

Experts in popularity and peer relations in childhood and adolescence have used the word popularity to refer to status derived from social prestige, social power, dominance, and visibility (Cillessen & Marks, 2011). The terms “perceived popularity” and “social network centrality” have also been used by researchers to refer to popularity. The term popularity has been used over decades to represent how well one is liked or disliked; however, more recently children and adolescents have consistently been shown to define the term popularity as more than likeability (LaFontana & Cillessen, 2002).

During early adolescence, the importance of popularity and social status becomes prioritized as youth strive to successfully establish social interactions with broader peer groups (La Fontana & Cillessen, 2010). Adolescence is a time in which peer relationships become increasingly significant, therefore, experiencing unpopularity may be particularly distressing. Additionally, it can be said that social relationships take on a more important role during adolescence in shaping self-esteem, well-being, and identity. Few studies, however, have examined the association between perceived popularity and various internalizing problems.

Developmental researchers who have examined peer group dynamics, suggest psychological adjustment is affected by status and popularity, and that these effects are not entirely positive (Parker et al., 2006). Specifically, peer group popularity may have negative as

well as positive effects on internalizing symptoms. This research on the effects of popularity on social-emotional development of adolescents has found links not only between popularity and academic success but also between popularity and criminality and psychological adjustment (Juvonen, Nishina, & Graham, 2000; La Greca & Harrison, 2005; Lonardo, Giordano, Longmore, & Manning, 2009). Being viewed as unpopular may indicate the person has a negative reputation and may be regarded as being low in the peer hierarchy and having low prestige or social power (Mali et al., 2019) which reputation may have a negative effect on self-esteem and internalizing problems.

Research on peer relationships that has examined implications of social relationships on adolescent adjustment has found those with negative peer experiences reported having more problematic patterns of emotional, behavioral, and academic adjustment (Lopez & DuBois, 2005). Moreover, Lopez and DuBois (2005) found that victimization and rejection led to reports of lower self-esteem that in turn, detract from adjustment during early adolescence. Children rated as unpopular by same age peers have been described as physically unattractive, deviant, socially incompetent and isolated (LaFontana & Cillessen, 2002). In addition, unpopularity and disliking among peers has been associated with loneliness, withdrawal, internalized distress, and low numbers of reciprocated friends (Gorman, Schwartz, Nakamoto, & Mayeux, 2011).

Additional research has shown that children rejected by a peer group and deemed as less popular, experience higher levels of loneliness and social dissatisfaction than more popular accepted peers (Nangle, Erdley, Newman, Mason, & Carpenter, 2003). Research also suggests that popularity may serve as a factor that could worsen relational victimization and maladaptive outcomes including anxiety and depression (Long, Zhou, & Li, 2020). Adolescents rated as unpopular present higher risks of experiencing peer victimization adjustment issues which have

been linked to depression, anxiety, low self-esteem, low prosociality, and peer rejection (Casper and Card 2017; Scholte et al. 2013; Cohen and Kendall 2015; Reijntjes et al. 2010; Gorman et al. 2011). In contrast, experiencing popularity in peer relationships may guard against negative cognitions that are characteristic of depressive symptoms. Given the research that has found depression and self-esteem in adolescence are known to put adolescents at risk for later maladjustment, decreasing depressive symptoms and increasing self-esteem are essential for positive development during adolescence.

### **Friendship Quality**

Formulating close friendships becomes important during late childhood and early adolescence because friendships may influence psychosocial adjustment during late adolescence. Quality friendships are best defined on a continuum of positive and negative features and are pivotal to adolescent development. High-quality friendships are those considered to have high positive features that include intimacy, companionship, help, validation, and conflict resolution, and low negative features including conflict and betrayal (Parker & Asher, 1993). Moreover, high quality friendships have been related to better outcomes as they provide a climate where adolescents can feel more supported and discuss important events. Parker and Asher (1993) report that high quality friendships have been linked with children showing fewer internalizing symptoms including feelings of loneliness and anxiety. Examining the quality of friendships provides more insight of how friendship affects later development especially as friendships play a critical role during early adolescence.

Having high quality friendships, including those that provide intimacy, validation, companionship, and help, may aid adolescents in coping successfully with the demands of life. Intimacy in friendships can be described as engaging in self-disclosure, feeling trust, and

establishing interdependence with each other. In friendships where intimacy is reported to be high, individuals experience greater relationship satisfaction and longer relationship longevity (Sanderson, Rahm, & Beigbeder, 2005). The importance of friendship intimacy becomes apparent when it comes to socioemotional functioning. Not having intimate friends can be stressful as being left unsatisfied through friendships may lead to feelings of loneliness and depression. Children's desire for intimacy may be due to a lack of validation of personal worth. When youth lack validation in friendships, they may be left feeling less secure, more anxious, and less worthy (Buhrmester, 1990). Additionally, these youth may be missing out on important sources of social support and coping assistance that could lead to later internalizing problems.

Help is another friendship quality that plays an important role in peer interactions during adolescence. Help can both be offered or denied depending on the nature of the friendship among adolescents. Children with higher friendship qualities may be given or offered help more frequently in a sensitive and respectful way. Meanwhile, children with lower quality friendships may experience refusal of help that may be accompanied by unfriendly or humiliating remarks, adverse actions, or hostile ignoring (Zornemann, Krappmann, Grabow, & Oswald, 1999). For some, refusal of requested help may be dissuasive from asking for future help which may lead to continued internalizing problems like withdrawal.

Companionship is another characteristic indicative of high friendship quality. Friendship companionship can be defined as the amount and quality of time children spend together which may vary based on individual and friendship characteristics. For example, research has found children who engaged in prosocial behaviors and who were lower in social anxiety were rated as being more companionable and helpful friends (Cillessin, Jiang, West, & Laszkowski, 2005).

Additionally, friendships low in relational aggression were rated as having higher levels of companionship (Cillessin et al., 2005).

In order to establish and maintain friendships, children need to learn a variety of skills, one of which involves the ability to manage interpersonal conflict. Conflict resolution skills are expected to improve as children age. Research has found empathy to be positively linked to problem solving and negatively linked to conflict engagement in adolescents. This research suggests that adolescents who are more empathic are also more skillful in managing conflicts among friendships, thus leading to higher friendship quality (De Wied, Branje, & Meeus, 2007). Two low negative features of friendship include conflict and betrayal. Conflict and betrayal can be regarded as the extent to which a relationship is characterized by having arguments, disagreements, mistrust, disloyalty or insensitivity. When conflict or betrayal occurs in a relationship, individuals will tend to avoid each other which can result in a falling out of the relationship. Whereas, when two individuals partake in conflict resolution and work towards a mutual outcome, this promotes the maintenance of the relationship. High quality friendships should be characterized by low conflict and betrayal and, thus, fewer unfair outcomes in their social interactions. Given past findings that suggest positive friendship qualities (i.e., validation and caring, companionship and recreation, help and guidance, and intimate exchange) are associated with higher relationship satisfaction, and negative friendship qualities (i.e. conflict and betrayal) are associated with lower satisfaction (Parker & Asher, 1993); research is warranted to determine whether these friendship qualities are in any way linked to adolescents' experiences of internalizing behaviors.

Continued evidence suggests that youth benefit the most when they perceive their friendships as high quality. Strong quality friendships serve to promote positive adaptation

including intimacy, security, trust, and social competence that have been linked with children and adolescents' socioemotional well-being (Rubin et al., 2004). As children learn to form close peer relationships, the relationships they form contribute to their identity development (Rageliene, 2016). As children develop, their understanding of relationships increases, allowing them to regulate emotions, consider multiple perspectives, and compromise, all of which should allow children to develop high quality friendships as they mature (Bengtsson & Arvidsson, 2011). Thus, positive aspects of friendships emerge from early childhood to adolescence and impact psychosocial adjustment.

Forming and maintaining quality friendships facilitates healthy social and emotional development. Thus, as children enter adolescence, they spend more time with friends, and become increasingly reliant on friendships for support. Brendgen et al. (2002) found the number of reciprocated friendships and the quality of friendships was negatively related to emotional and behavioral adjustment for adolescents who were unpopular among same-sex peers. Moreover, poor friendship quality was found to predict the onset of maladaptive behaviors such as keeping secrets in adolescent friendships (Corsano et al., 2017). Conversely, Stocker (1994) found that children who reported greater levels of warmth in their friendships demonstrated lower levels of depression and behavioral problems and greater levels of self-worth. It appears, having strong quality friendships is important for fostering positive relationships and maintaining a positive well-being.

Whether a friendship may serve as a protective factor against internalizing problems may not be dependent on the friendship itself but rather the quality of that friendship. As mentioned above, friendship quality is multifaceted, and some characteristics are best associated with positive adjustment while others are associated with negative adjustment. According to Asher

and Parker (1993), the qualities of children's friendships include Validation and Caring, Conflict Resolution, Conflict and Betrayal, Help and Guidance, Companionship and Recreation, and Intimate Exchange. Previous research has found a link between higher friendship quality and lower internalizing symptoms, externalizing symptoms, and social withdrawal (Biggs, Vernberg, & Wu, 2012; Collibee, LeTard, & Wargo Aikins, 2016). Past research has also found that certain aspects of friendship qualities are associated with specific outcomes (e.g., Hodges et al., 1999 found conflict was associated with higher externalizing problems and help was associated with higher internalizing problems). Hence, research is warranted to examine how and whether friendship quality may mediate the association between popularity and internalizing symptoms.

### **Internalizing Problems in Adolescence**

#### **Anxiety and Depression**

Internalizing disorders encompass mood disruptions such as depression, anxiety, withdrawal, social problems, and thought problems. Depression and anxiety are common internalizing disorders experienced by large populations and are usually associated with substantial symptom severity and functional impairment (Kessler et al., 2003). In 2015, it was estimated that the number of people across the world with depression, exceeded 300 million (WHO, 2017). Depression is considered one of the major contributors to suicide deaths, ranging in about 800,000 deaths by suicide per year. Current data from the World Health Organization (WHO) suggests depression is the leading cause of years of healthy life lost due to disability among 10-19-year-olds. Additionally, WHO estimates the total number of individuals with depression increased by 18.4% between the years 2005 and 2015. Additionally, the risk of developing symptoms considerably increases as children enter adolescence (Merikangas et al., 2010). Recent data indicate the prevalence of internalizing problems, including depression and

anxiety disorders, in adolescence have been substantially increasing in successive birth cohorts (Mojtabai, Olfson, and Han, 2016).

Depression and anxiety are commonly diagnosed in adolescence and are often comorbid (Kessler et al. 2012). This comorbidity causes further debilitation than depression or anxiety alone; when left untreated, it may lead to severe negative life outcomes including, lower life satisfaction, death by suicide, risky sexual behavior, substance abuse, higher rates of divorce, crime, and unemployment, and more physical health problems (Cummings, Caporino, & Kendal, 2014; Lu, 2019). Reports by the National Comorbidity Survey – Adolescent Supplement indicate adolescents with severe depression had greater comorbidity for anxiety, attention-deficit-hyperactivity-disorder (ADHD), and behavioral disorders (Avenevoli et al., 2015; Merikangas et al., 2010).

In a study of friendship and depressive symptoms, one researcher found that the relationship between having more friends and fewer depressive symptoms was largely mediated by a sense of belonging (Ueno, 2005). This research provided support for the idea that social integration promotes mental health by inducing positive feelings about one's relationships with others in society. As such, it can be said that having low popularity and friendships may lead to depression and anxiety as individuals lack a sense of belonging and social supports. Low levels of friendship network popularity are likely associated with increased levels of depressive symptoms. One reason for this may be that the positive attention, admiration, and reinforcement that come from social status may be missing among those with less prominent network position (Kornienko & Santos, 2014).

## **Social Problems**

As children age, they begin to experience more social encounters with peers. Having social supports during the transition to adolescence is necessary as experiencing disrupted social relationships in adolescence may exacerbate internalizing symptoms (Mathyssek, Olino, Verhulst, & Van Oort, 2012). The transition to adolescence may also have detrimental effects for internal and external conflicts, thus making the developmental transition a sensitive period for the development of social problems. Social problems may be in part influenced by friendship quality as research has found better responses to social problems are linked to higher quality friendships. Lack of resources and social support often afforded by high quality friendships may also influence the development of social problems in adolescence. For individuals who struggle in the transition from childhood to adolescence, the risk of developing emotional and behavioral problems becomes exacerbated (Bornstein et al., 2010).

During adolescence, peers become increasingly influential as adolescents spend nearly twice as much time with peers instead of with their parents. Adolescents also place greater attention to fitting in to the peer network and primarily turn to a peer for social comparison, emotional support, and problem-solving (LaFontana & Cillessen, 2010). As relationships develop through adolescence, becoming more intimate, the need for adolescents to develop a more refined set of social skills, becomes more important. Developing these skills provide a basis for which adolescents learn to initiate conversations, provide emotional support, and disclose personal information to peers. When adolescents experience difficulties implementing these skills, they may also experience difficulty establishing close peer relationships that could prevent later internalizing problems. Children naturally seek to be liked by others but showing low social competence may predict social problems and other internalizing problems over time.

## **Withdrawal**

Withdrawn children have also been known to experience difficulties in later adulthood related to indices of maladjustment regarding internalizing problems and relationship difficulties (Nelson et al., 2008). Emerging adolescents may often find themselves in new social settings where they may interact with different types of peers. Being socially withdrawn means to remove oneself from a social setting or interaction for whatever reason (Coplan & Rubin, 2010). Different motivations for social withdrawal have been theorized. One reason individuals may withdraw from social interactions may be due to shyness or fear. Shy individuals may want to interact but at the same time experience wariness, fear, and anxiety and so they choose to withdraw from the interaction. Another motivation for being socially withdrawn may be that the individuals are not afraid of interacting with others, but rather are simply less interested in initiating interactions with peers. Lastly, some individuals exhibit high avoidance and are regarded as less approachable because they are actively avoiding social interactions. Each motivation for withdrawal seems to be associated with different indicators of maladjustment.

Shyness has been linked with internalizing problems including sadness, loneliness, depressive symptoms, anxiety, low self-esteem, and problems with peer relationships among children and young adolescents (Bowker & Raja, 2011). Individuals who are uninterested in social interactions may experience fewer internalizing problems than shy peers, but still experience some issues among peers. Adolescents who actively avoid social interactions are thought to experience more significant issues in adaptive development. Avoidance has been found to be related to loneliness and peer exclusion which poses significant risk for internalizing problems and problems in peer relationships (Bowker & Raja, 2011). Having low quality friendships may lead adolescents to become depressed as they may experience low social supports

which in turn may cause them to withdraw socially. Additionally, children's withdrawal behaviors present issues in initiating and maintaining friendships and consequently these friendship difficulties may lead to becoming more withdrawn (Rubin, Coplan, & Bowker, 2009).

### **Thought Problems**

Growing evidence suggests that moderate to severe forms of psychopathology, including thought problems, among children and adolescents is reported at a higher rate than in years past. Thought problems are characterized by atypical behaviors and disturbances in reality and may include obsessive thoughts, hearing noises, being compulsive, seeing things, and exhibiting strange behavior or strange ideas. Significant thought problems are believed to be linked to symptoms of psychosis including hallucinations, delusions, and strange thoughts and behaviors. Psychotic symptoms may be present in a number of psychological disorders including bipolar, depressive, personality, dissociative, and neurocognitive disorders (American Psychiatric Association [APA], 2013). Children and adolescents commonly experience psychotic-like symptoms. In a meta-analysis, researchers found the prevalence of psychotic symptoms in children ages 9–12 years to be 17% and 7.5% among adolescents ages 13–18 years (Kelleher et al., 2012); but far fewer developed full-fledged disorders with psychosis. Although youth psychotic symptoms are commonly reported, not all youths who report unusual thoughts or concerning behavior will have a psychiatric disorder.

Loss of peer relationships may contribute to the development of thought problems or psychosis. As psychosis most often emerges during early adolescence and young adulthood, disruptions to social development at this stage can affect the long-term impacts of an individual's functioning. Existing literature suggests that reduced social networks and support predate the onset of psychosis (Gayner, & Morgan 2013). Having low quality friendships and a lower social

rank can lead to psychosis as having fewer friends results in fewer people to turn to in a crisis and a higher likelihood of developing mental health problems.

### **The Present Study**

The current study advances the literature on popularity and internalizing problems by exploring the potential mediating role of friendship quality. Popularity has been reported as having both beneficial and negative consequences to children's and adolescents' overall well-being. Findings have also shown that individuals perceived as less popular by peers report experiencing higher levels of depression and loneliness. The relation between popularity and internalizing problems has been well established by existing research, therefore, the study was primarily focused on whether perceived friendship quality would play a mediating role.

The present study will analyze whether six dimensions of friendship quality mediate the relationship between popularity and internalizing problems. In the current study, internalizing problems will be comprised of composite measures taken from the Child Behavior Checklist (CBCL) which will include anxious/depressed, social problems, withdrawal, and thought problems. Including four distinct outcomes will allow further examination of the differences between the qualities of friendships.

The research question used to guide this study will be, what is the mediating role of friendship qualities in the relationship between perceived popularity and internalizing symptoms? It is expected that low levels of popularity will be associated with increased internalizing symptoms. Low levels of popularity are expected to be associated with lower ratings of positive friendship qualities including validation and caring, conflict resolution, help and guidance, companionship and recreation, and intimate exchange and with higher ratings of negative friendship qualities including conflict and betrayal. High levels of friendship quality are expected

to be associated with lower levels of anxiety/depression, social problems, withdrawal, and thought problems.

## CHAPTER 3: METHODOLOGY

**Participant selection.** Data was utilized from the National Institute of Child Health and Development (NICHD) Study of Early Child Care and Youth Development (SECCYD). The SECCYD is a longitudinal study which began in 1991 and spanned over four phases. Initially in Phase I, 1,364 children and their families were recruited from pre-selected hospitals at 10 separate sites. Phase I consisted of information gathered from 1 month to 3-years-old and occurred during 1991-1994. Phase II consisted of information from age 4 to 1<sup>st</sup> grade and occurred during 1995-1999. Phase III consisted of information from 2<sup>nd</sup> grade to 6<sup>th</sup> grade and occurred from 2000-2004. The last phase, phase IV consisted of information from 7<sup>th</sup> grade to high school and occurred during 2005-2008. The current study utilized data collected during Phase IV of the NICHD database which consisted of 1,073 children and families. Of those families, 189 were excluded from this study due to missing information on independent or dependent measures. Demographic statistics for participant families are reported in Table 1.

Table 1  
*Demographics Statistics*

|                                      | Number (N) | Percentage % |
|--------------------------------------|------------|--------------|
| <i>Gender</i>                        |            |              |
| Male                                 | 443        | 50.1%        |
| Female                               | 441        | 49.9%        |
| Total                                | 884        | 100%         |
| <i>Ethnicity</i>                     |            |              |
| American Indian, Eskimo,<br>Aleutian | 2          | .2%          |
| Asian or Pacific Islander            | 11         | 1.2%         |

(Table 1 Continued)

|                              |     |       |
|------------------------------|-----|-------|
| Black or African American    | 104 | 11.8% |
| White                        | 724 | 81.9% |
| Other                        | 43  | 4.9%  |
| Total                        | 884 | 100%  |
| <i>Hispanic/Non-Hispanic</i> |     |       |
| Non-Hispanic                 | 835 | 94.5% |
| Hispanic                     | 49  | 5.5%  |
| Total                        | 884 | 100%  |

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## Instruments

**Background variables.** Sex variable was reported by parents, and Socio-economic Status (SES) was measured by income-to-needs ratio, which was calculated by dividing family's reported income by the poverty threshold.

**Friendship quality questionnaire.** Adolescents were asked to complete the Friendship Quality Questionnaire designed to assess the perceptions of their friendship with their very best friend, regardless of how often the child sees that friend. The 29-item questionnaire utilized a 5-point response scale ranging from 1 = "not at all true" to 5 = "really true" to measure six qualitative aspects of the friendship: Validation and Caring, Conflict Resolution, Conflict and Betrayal, Help and Guidance, Companionship and Recreation, and Intimate Exchange.

For this sample: The raw items used to create the Companionship and Recreation Score had moderate internal reliability (8 items, Cronbach's alpha = .76); the raw items used to create the Validation and Caring Score had high internal reliability (6 items, Cronbach's alpha = .87); the raw items used to create the Help and Guidance Score had moderate internal reliability (5

items, Cronbach's alpha = .83); the raw items used to create the Intimate Disclosure Score had high internal reliability (3 items, Cronbach's alpha = .86); the raw items used to create the Conflict and Betrayal Score had moderate internal reliability (4 items, Cronbach's alpha = .78); the raw items used to create the Conflict Resolution Score had moderate internal reliability (2 items, Cronbach's alpha = .75); and the raw items used to create the Friendship Quality Total Score had high internal reliability (28 items, Cronbach's alpha = .92).

The Companionship and Recreation subscale measures the extent to which the participant and their best friend enjoy spending time engaged in shared activities. A sample item from this subscale includes, "This friend and I enjoy playing computer games or other kinds of games together." This subscale score is computed as the weighted average of the responses to items 2, 7, 22-24, 26, and 28-29. The possible scores range from 1 to 5, with higher values indicating more time spent in companionship and recreation with the best friend.

The Validation and Caring subscale measures whether the best friend expresses care, concern, and whether they validate the participant. A sample item from this subscale includes, "If other kids were talking behind my back, this friend would always stick up for me." This subscale score is computed as the weighted average of the responses to items 4, 5, 6, 8, 10 and 27. The possible scores range from 1 to 5, with higher values indicating more validating and caring behaviors are given by the best friend.

The Help and Guidance subscale measures if the participant and their best friend help, and/or guide each other often. A sample item from this subscale includes, "This friend and I always count on each other for ideas on how to get things done." This subscale score is computed as the weighted average of the responses to items 13, 16, 17, 19 and 25. The possible scores

range from 1 to 5, with higher values indicating more help and guidance behaviors engaged in by and for the best friend.

The Intimate Disclosure subscale measures whether the participant perceives their best friend as someone they can talk to about problems and/or other private things. A sample item on this subscale includes, “When I’m mad about something that happened to me, I can always talk to this friend about it.” This subscale score is computed as the average of the responses to items 9, 11, and 21. The possible scores range from 1 to 5, with higher values indicating more disclosure behaviors with the best friend.

The Conflict and Betrayal subscale measures the extent to which the participant and their best friend engage in conflict with each other. A sample item from this subscale includes, “This friend and I get mad at each other a lot.” The subscale score is computed as the average of the responses to items 3, 12, 15 and 20. The possible scores range from 1 to 5, with higher values indicating more conflict behaviors with the best friend.

The Conflict Resolution subscale measures whether the participant and their best friend are able to resolve conflict. A sample item from this subscale includes, “This friend and I always make up easily when we have a fight.” Score is computed as the average of the responses to items 14 and 18. The possible scores range from 1 to 5, with higher values indicating an easier time getting over conflicts with the best friend.

**Popularity.** Participants completed the What My Peers Think About Me Questionnaire at age 15, which was used to assess popularity (Phase IV). The questionnaire includes 8 items that required the student to think carefully about how others in their grade like them, measuring the extent to which he or she perceives him/herself as being popular among peers. Participants were asked to circle a number from 1 (Almost no one) to 7 (Almost everyone). A sample item from the

questionnaire includes, “How many people in your grade like you?” There is also a home-schooling version of the What My Peers Think About Me Questionnaire. The version for the home-school participants ask’s about “kids” rather than “people in my grade.” Perceived Popularity with Peers (Study Child) was computed as the mean of items 1 to 8 after reflecting items 2 to 5 and 7. Scores computed ranged from 1.75 to 7, with higher scores indicating greater perceived popularity with peers. Possible scores ranged from 1 to 7. The raw items used to create this score have moderate internal reliability (8 items, Cronbach’s alpha = 0.76).

**Internalizing behaviors.** Mothers and Fathers/other adults were asked to complete the Child Behavior Checklist (CBCL: Achenbach, 1991) when the study participants were 15 years old. Data set contained data from mothers and alternative primary caregivers which included fathers, grandparents, other relatives, and other adults. The CBCL is a widely used measure to assess the social competence and problem behavior of children 4-18 years. A list of 129 items that includes a broad range of children’s behavioral/emotional problems was presented. For each item, the respondent was asked to determine how well that item describes the target child currently or within the last six months: 0 = Not True (as far as you know), 1 = Somewhat or Sometimes True, and 2 = Very True or Often True. Broad band scales of Internalizing and Externalizing problems, and narrow band scales of social problems, aggression, attention problems, and depression (among others) are derived from a computerized scoring program. The anxiety/depression, social problems, withdrawn, and thought problems subscales of the CBCL were chosen to measure the degree to which the adolescent internalized.

Anxious/Depressed T-Score is composed of items 12, 14, 31, 32, 33, 34, 35, 45, 50, 52, 71, 89, 103, and 112. The possible range of scores is from 50 to 100. The actual range of scores is from 50 to 89 for the mother/alternate primary caregiver, and from 50 to 94 for the

father/partner/or other adult. Higher scores indicate a stronger affinity to demonstrate anxious or depressed behaviors. These behaviors include lonely, cries, fear of thinking or doing something bad, feels he/she has to be perfect, feels or complains that no one loves him/her, feels others are out to get him/her, worthless, nervous, fearful, guilty, self-conscious, suspicious, sad, worries. The raw items used to create this score have moderate internal reliability (14 items, Cronbach's  $\alpha = 0.80$ ) and ( $\alpha = 0.86$ ) for mother/alternate primary caregiver, and for father/partner/or other adult, respectively.

Social Problems T-Score is composed of items 1, 11, 25, 38, 48, 55, 62, and 64. The possible range of scores is from 50 to 100. The actual range of scores is from 50 to 77 for the mother/alternate primary caregiver, and from 50 to 97 for the father/partner/or other adult. Higher scores indicate a stronger affinity to demonstrate social problems. These problems include acts young, clings, does not get along with other kids, gets teased a lot, not liked by other kids, overweight, clumsy, prefers being with younger kids. The raw items used to create this score have modest internal reliability (8 items, Cronbach's  $\alpha = 0.66$ ) for the mother/alternate primary caregiver, and moderate internal reliability (8 items, Cronbach's  $\alpha = 0.71$ ) for the father/partner/or other adult.

Withdrawn T-Score is composed of items 42, 65, 69, 75, 80, 88, 102, 103, and 111. The possible range of scores is from 50 to 100. The actual range of scores is from 50 to 79 for the mother/alternate primary caregiver, and from 50 to 88 for the father/partner/or other adult. Higher scores indicate a stronger affinity to demonstrate withdrawn behaviors. These behaviors include would rather be alone, won't talk, secretive, shy, stares, sulks, underactive, sad, and withdrawn. The raw items used to create this score have moderate internal reliability (9 items, Cronbach's

alpha = 0.74) for the mother/alternate primary caregiver, and moderate internal reliability (9 items, Cronbach's alpha = 0.81) for the father/partner/or other adult.

Thought Problems T-Score is composed of items 9, 40, 66, 70, 80, 84, and 85. The possible range of scores is from 50 to 100. The actual range of scores is from 50 to 79 for the mother/alternate primary caregiver, and from 50 to 94 for the father/partner/or another adult. Higher scores indicate a stronger affinity to demonstrate thought problems. These problems include obsessive, hears things, compulsive, see things, stares, strange behavior, strange ideas. The raw items used to create this score have low internal reliability (7 items, Cronbach's alpha = 0.52) for the mother/alternate primary caregiver, and modest internal reliability (7 items, Cronbach's alpha = 0.60) for the father/partner/or other adult.

Norms exist to determine whether children's behavior falls into the normal range, suggests that the child is at risk for problems, or indicates that the child's behavior is more akin to those with clinically diagnosed problems. The prevalence of internalizing behavior problems was of particular interest in this study. Total raw scores for each CBCL broadband factor (internalizing) were used in all analyses.

**Data analysis.** The research question was analyzed using structural equation models. The independent variable was perceived popularity. The dependent variable was internalizing problems derived from the CBCL subscales that included anxiety/depression, social problems, withdrawal, and thought problems. The anxiety/depression, social problems, withdrawal, and thought problems scales were allowed to covary. Background variables included sex and SES that were also allowed to covary. Friendship quality served as the mediator variable between popularity and internalizing problems. Friendship quality was composed of the six main characteristics of friendship qualities that included, validation and caring, conflict resolution,

conflict and betrayal, help and guidance, companionship and recreation, and intimate exchange and were allowed to covary.

Paths were estimated from the background variables to the independent variable (perceived popularity) to the mediating variables (each of the six friendship quality characteristics), and then to the dependent variables (each of the four internalizing problems scales). A path was estimated from each of the six friendship quality characteristics to the dependent variables (each of the four internalizing problems scales). IBM SPSS Amos Structural Equation Modeling program was used to analyze data.

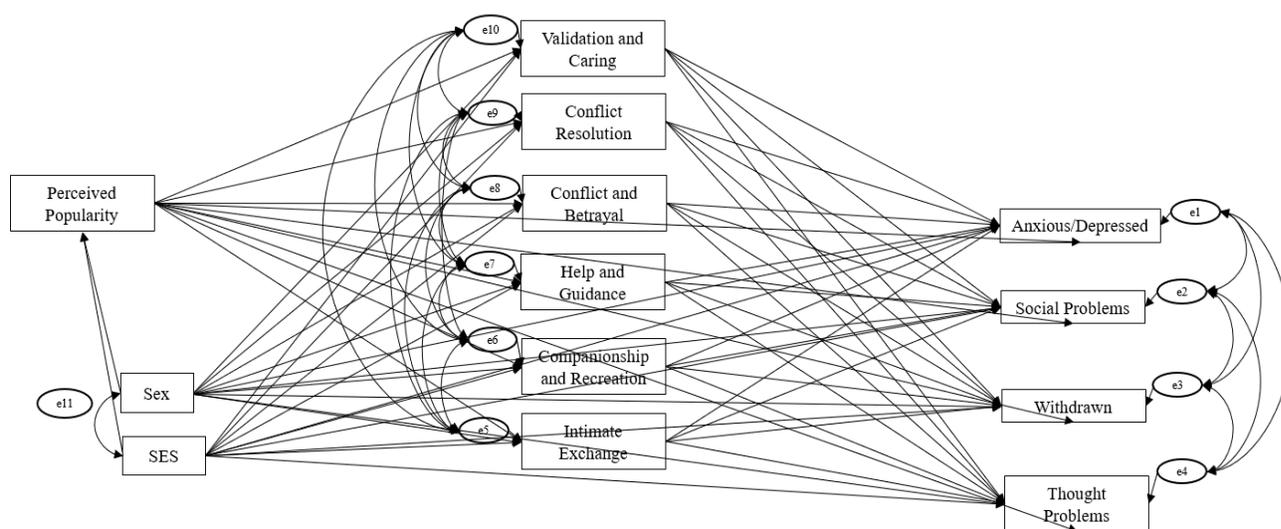


Figure 1. Path model

## CHAPTER 4: RESULTS

Data were analyzed with path modeling to determine whether friendship quality mediates the relationship between perceived popularity and internalizing problems. To control for the influence of background characteristics, child sex and family income-to-needs ratio were included in the model. Using AMOS, paths were estimated from the background variables to perceived popularity, mediating variables, and dependent variables. Paths were also estimated from perceived popularity to the mediating and dependent variables and from the mediating to the dependent variables. Background variables were allowed to covary amongst themselves as were the mediating and dependent variables. Missing data were estimated using maximum likelihood procedures.

Table 2  
*Standardized and Unstandardized Coefficients, Standard Errors, and p-values for Paths from Friendship Quality to Internalizing Problems*

|   | <i>B</i> | <i>SE</i> | $\beta$ | <i>p</i> |
|---|----------|-----------|---------|----------|
| <b>Paths</b>                            |          |           |         |          |
| Validation & Caring → Anxious/Depressed | .786     | .335      | .131    | .019     |
| Validation & Caring → Social Problems   | .993     | .346      | .155    | .004     |
| Validation & Caring → Withdrawn         | .392     | .378      | .057    | .299     |
| Validation & Caring → Thought Problems  | .755     | .376      | .112    | .045     |
| Conflict Resolution → Anxious/Depressed | -.258    | .220      | -.047   | .240     |
| Conflict Resolution → Social Problems   | -.525    | .227      | -.090   | .021     |
| Conflict Resolution → Withdrawn         | -.349    | .248      | -.056   | .160     |
| Conflict Resolution → Thought Problems  | -.291    | .247      | -.047   | .239     |

(Table 2 Continued)

|   |       |      |       |      |
|---|-------|------|-------|------|
| Conflict & Betrayal → Anxious/Depressed | .493  | .275 | .065  | .073 |
| Conflict & Betrayal → Social Problems   | .525  | .285 | .064  | .065 |
| Conflict & Betrayal → Withdrawn         | .588  | .311 | .067  | .059 |
| Conflict & Betrayal → Thought Problems  | .760  | .310 | .088  | .014 |
| Help & Guidance → Anxious/Depressed     | .024  | .272 | .005  | .930 |
| Help & Guidance → Social Problems       | .691  | .281 | .123  | .014 |
| Help & Guidance → Withdrawn             | .477  | .307 | .079  | .120 |
| Help & Guidance → Thought Problems      | .209  | .306 | .035  | .495 |
| Companionship → Anxious/Depressed       | -.386 | .318 | -.057 | .225 |
| Companionship → Social Problems         | -.940 | .329 | -.130 | .004 |
| Companionship → Withdrawn               | -.135 | .359 | -.017 | .708 |
| Companionship → Thought Problems        | -.284 | .358 | -.037 | .428 |
| Intimate Exchange → Anxious/Depressed   | -.036 | .220 | -.009 | .870 |
| Intimate Exchange → Social Problems     | -.106 | .228 | -.024 | .641 |
| Intimate Exchange → Withdrawn           | -.355 | .249 | -.074 | .153 |
| Intimate Exchange → Thought Problems    | -.169 | .248 | -.036 | .494 |

Children who rated their friendships as being high in validation and caring, were rated by their mothers, as showing higher levels of anxious/depressed ( $\beta = .131, p = .019$ ), social problems ( $\beta = .155, p = .004$ ), and thought problems ( $\beta = .112, p = .045$ ). For every standard deviation increase in validation and caring, anxious/depressed scores increased by .131, social problems scores increased by .155, and thought problem scores increased by .112 standard deviations.

On the other hand, children who rated their friendships as being high in conflict resolution, were rated by their mothers, as showing lower levels of social problems ( $\beta = -.090, p = .021$ ). For every standard deviation increase in conflict resolution, social problems scores decreased by .090 standard deviations.

Children who rated their friendships as being high in conflict and betrayal, were rated by their mothers, as showing higher levels of thought problems ( $\beta = .088, p = .014$ ). For every standard deviation increase in conflict and betrayal, thought problems, scores increased by .088 standard deviations.

Children who rated their friendships as being high in help and guidance, were rated by their mothers, as showing higher levels of social problems ( $\beta = .123, p = .014$ ). For every standard deviation increase in help and guidance, social problems increased by .123 standard deviations.

Children who rated their friendships as being high in companionship were rated by their mothers, as showing lower levels of social problems ( $\beta = -.130, p = .004$ ). For every standard deviation increase in companionship, social problems scores decreased by .130 standard deviations.

Children who rated their friendships as being high in intimate exchange, were rated by their mothers, as showing lower levels of anxious/depressed ( $\beta = -.009, p = .870$ ), social problems ( $\beta = -.024, p = .641$ ), and thought problems ( $\beta = -.036, p = .494$ ). For every standard deviation increase in intimate exchange, anxious/depressed scores decreased by .009, social problems decreased by .024, and thought problems decreased by .036 standard deviations.

Table 3  
*Standardized and Unstandardized Coefficients, Standard Errors, and p-values for Paths from Perceived Popularity to Friendship Qualities*

|       | <i>B</i> | <i>SE</i> | $\beta$ | <i>p</i> |
|-------|----------|-----------|---------|----------|
| Paths |          |           |         |          |

(Table 3 Continued)

|  |       |      |       |        |
|--|-------|------|-------|--------|
| Perceived Popularity → Validation & Caring   | .230  | .025 | .271  | < .001 |
| Perceived Popularity → Conflict Resolution   | .142  | .032 | .152  | < .001 |
| Perceived Popularity → Conflict and Betrayal | -.093 | .023 | -.139 | < .001 |
| Perceived Popularity → Help & Guidance       | .206  | .031 | .214  | < .001 |
| Perceived Popularity → Companionship         | .218  | .025 | .290  | < .001 |
| Perceived Popularity → Intimate Exchange     | .254  | .036 | .209  | < .001 |

Children who rated themselves higher in perceived popularity, reported higher levels of positive friendship qualities of validation and caring ( $\beta = .271, p < .001$ ), conflict resolution ( $\beta = .152, p < .001$ ), help and guidance ( $\beta = .214, p < .001$ ), companionship ( $\beta = .290, p < .001$ ), and intimate exchange ( $\beta = .209, p < .001$ ). Conversely, children who rated themselves higher in perceived popularity, reported lower levels of negative friendship qualities of conflict and betrayal ( $\beta = -.139, p < .001$ ).

Table 4

*Standardized and Unstandardized Coefficients, Standard Errors, and p-values for Paths from Perceived Popularity to Internalizing Problems*

| Paths                                    | <i>B</i> | <i>SE</i> | $\beta$ | <i>p</i> |
|--|----------|-----------|---------|----------|
| Perceived Popularity → Anxious/Depressed | -.834    | .184      | -.164   | < .001   |
| Perceived Popularity → Social Problems   | -.1.378  | .191      | -.253   | < .001   |
| Perceived Popularity → Withdrawn         | -.1.379  | .208      | -.235   | < .001   |
| Perceived Popularity → Thought Problems  | -.728    | .208      | -.127   | < .001   |

Children who rated themselves higher in perceived popularity, reported lower levels of anxious/depressed ( $\beta = -.843, p < .001$ ), social problems ( $\beta = -1.378, p < .001$ ), withdrawn ( $\beta = -1.379, p < .001$ ), and thought problems ( $\beta = -.728, p < .001$ ). For every standard deviation increase in perceived popularity, anxious/depressed scores decreased by .164 standard deviations, social problems scores decreased by .253 standard deviations, withdrawn scores decreased by .235 standard deviations, and thought problems scores decreased .127 standard deviations.

Table 5

*Standardized and Unstandardized Coefficients, Standard Errors, and p-values for Paths from Sex to Perceived Popularity to Friendship Qualities to Internalizing Problems*

|                             | <i>B</i> | <i>SE</i> | $\beta$ | <i>p</i> |
|-----------------------------|----------|-----------|---------|----------|
| <b>Paths</b>                |          |           |         |          |
| Sex → Perceived Popularity  | .113     | .060      | .065    | .060     |
| Sex → Validation and Caring | .619     | .044      | .41     | < .001   |
| Sex → Conflict Resolution   | .255     | .055      | .156    | < .001   |
| Sex → Conflict and Betrayal | -.059    | .040      | -.050   | .140     |
| Sex → Help and Guidance     | .405     | .055      | .241    | < .001   |
| Sex → Companionship         | .104     | .043      | .079    | .016     |
| Sex → Intimate Exchange     | 1.018    | .062      | .480    | < .001   |
| Sex → Anxious/Depressed     | -.232    | .366      | -.026   | .526     |
| Sex → Social Problems       | -.967    | .378      | -.102   | .011     |
| Sex → Withdrawn             | -.288    | .413      | -.028   | .486     |
| Sex → Thought Problems      | -1.040   | .412      | -.104   | .012     |

Results indicated that females scored higher in validation and caring, conflict resolution, help and guidance, companionship, and intimate exchange, while males scored higher in social problems and thought problems.

Table 6

*Standardized and Unstandardized Coefficients, Standard Errors, and p-values for Paths from Income to needs to Perceived Popularity to Friendship Qualities to Internalizing Problems*

|   | <i>B</i> | <i>SE</i> | $\beta$ | <i>p</i> |
|---|----------|-----------|---------|----------|
| <b>Paths</b>                            |          |           |         |          |
| Income to needs → Perceived Popularity  | .005     | .005      | .035    | .314     |
| Income to needs → Validation and Caring | .003     | .004      | .020    | .492     |
| Income to needs → Conflict Resolution   | -.003    | .005      | -.022   | .509     |
| Income to needs → Conflict and Betrayal | -.005    | .003      | -.049   | .150     |
| Income to needs → Help and Guidance     | -.014    | .005      | -.092   | .004     |
| Income to needs → Companionship         | -.006    | .004      | -.050   | .129     |
| Income to needs → Intimate Exchange     | -.008    | .005      | -.043   | .136     |
| Income to needs → Anxious/Depressed     | -.004    | .027      | -.006   | .870     |
| Income to needs → Social Problems       | -.051    | .028      | -.061   | .006     |
| Income to needs → Withdrawn             | -.032    | .030      | -.036   | .290     |
| Income to needs → Thought Problems      | -.037    | .030      | -.043   | .212     |

The income-to-needs ratio which was used to approximate the influence of socioeconomic status on mediating and dependent variables. Regarding friendship qualities, income-to-needs only predicted help and guidance ( $\beta = -.092$ ,  $p = .004$ ). Regarding internalizing problems, income-to-needs predicted social problems ( $\beta = -.061$ ,  $p = .006$ ).

Table 7

*Standardized Indirect Prediction Coefficients of Popularity and Background Variables through Friendship Qualities on Internalizing Problems*

| Variable   | Mediator              | Anxiety<br>Depression | Social<br>Problem | Withdrawn<br>Behavior | Thought<br>Problems |
|------------|-----------------------|-----------------------|-------------------|-----------------------|---------------------|
| Popularity | Validation and Caring | .036*                 | .042*             | .015                  | .030                |
|            | Conflict Resolution   | -.007                 | -.014*            | -.009                 | -.007               |

(Table 7 Continued)

|                  |                              |       |        |       |        |
|------------------|------------------------------|-------|--------|-------|--------|
|                  | Conflict and Betrayal        | -.009 | -.008  | -.009 | -.012* |
|                  | Help and Guidance            | .001  | .026*  | .017  | .007   |
|                  | Companionship and Recreation | -.017 | -.038* | -.005 | -.011  |
|                  | Intimate Exchange            | -.002 | -.005  | -.015 | -.008  |
| Inc to Needs     | Validation and Caring        | .003  | .003   | .001  | .002   |
|                  | Conflict Resolution          | .001  | .002   | .001  | .001   |
|                  | Conflict and Betrayal        | -.003 | -.003  | -.003 | -.012  |
|                  | Help and Guidance            | .000  | -.011  | -.007 | -.003  |
|                  | Companionship and Recreation | -.003 | -.007  | -.001 | -.002  |
|                  | Intimate Exchange            | .000  | .001   | .003  | .002   |
| Sex <sup>a</sup> | Validation and Caring        | .055* | .065*  | .024  | .047   |
|                  | Conflict Resolution          | -.007 | -.014* | -.009 | -.007  |
|                  | Conflict and Betrayal        | -.003 | -.003  | -.003 | -.004  |
|                  | Help and Guidance            | .001  | .030*  | .019  | .008   |
|                  | Companionship and Recreation | -.005 | -.010  | -.001 | -.003  |
|                  | Intimate Exchange            | -.004 | -.012  | -.036 | -.017  |

Note. Inc. to Needs = Income-to-Needs Ratio.

<sup>a</sup> Sex is coded such that the value for females is higher than the value for males.

\*  $p < .05$

The Sobel test was utilized to examine if friendship qualities mediated the relationship between popularity and background variables on internalizing problems. The results confirmed that validation and caring significantly mediates the relationship between popularity and

anxious/depressed and social problems ( $Z = 2.28, p = .023$ ) and ( $Z = 2.81, p = .005$ ). Conflict resolution significantly mediated the relationship between popularity and social problems ( $Z = -2.05, p = .040$ ). Conflict and betrayal significantly mediated the relationship between popularity and thought problems ( $Z = -2.09, p = .036$ ). Help and guidance significantly mediated the relationship between popularity and social problems ( $Z = 2.31, p = .021$ ). Companionship and recreation significantly mediated the relationship between popularity and social problems ( $Z = 2.72, p = .007$ ). Results additionally confirmed that validation and caring significantly mediates the relationship between sex and anxious/depressed and social problems ( $Z = 2.32, p = .020$ ) and ( $Z = 2.81, p = .005$ ). Conflict resolution significantly mediated the relationship between sex and social problems ( $Z = -2.07, p = .038$ ). Help and guidance significantly mediated the relationship between sex and social problems ( $Z = 2.33, p = .020$ ).

## CHAPTER 5: DISCUSSION

As children develop, the importance of positive friendships and popularity becomes detrimental for adolescent psychological adjustment. Research on adolescent development suggests those who have strong friendships develop more positive emotional and psychological adjustments (Lonardo et al., 2009; Rubin et al., 2004). Further research suggests having high quality friendships is associated with lower internalizing and externalizing problems. Adolescents who are perceived as unpopular among peer groups, have been found to develop greater internalizing problems (Gorman et al., 2011; Long, Zhou, & Li, 2020; Nangle et al., 2003). Research has advanced findings on popularity and friendships on psychological adjustment, however less attention has been directed on the mediational effects of several friendship qualities between popularity and different dimensions of internalizing symptoms.

The goal of this study was to explore the relation between popularity and internalizing problems. Further, this study also aimed to establish if friendship qualities mediated the relation between popularity and internalizing problems. Exploring these relations is vital to develop a deeper understanding of the underlying causes of internalizing problems in adolescents. In support of previous research, statistically significant findings revealed that adolescents who rated themselves as being high in popularity, reported higher levels of positive friendship qualities that included validation and caring, conflict resolution, help and guidance, companionship, and intimate exchange (Oldenberg and Kerns, 1997). These findings are not surprising given that Nangle and colleagues (2003), found that popularity among youth has been shown to predict friendship quality, particularly those deemed as more preferred and popular report higher friendship quality with their best friend. Research by Rose, Swenson, and Carlson (2004) found

popular youth have more friendships displaying higher levels of intimacy and less conflict compared to less popular youth. Perhaps a possible explanation for these findings may be that those who are highly socially accepted exhibit more prosocial behaviors (e.g., cooperation, kindness, trustworthiness) which likely results in more opportunities to form friendships and develop necessary skills needed for building positive friendships (LaFontana & Cillessen, 2002).

Past research has examined the associations between social relationships and adjustment and has found negative peer experiences to correspond with poor adaptation (Lopez & DuBois, 2005). Further research on the effects of popularity has found low popularity predicted early adolescents' depressive symptoms three years later (Nolan, Flynn, & Garber, 2003). Being regarded as less popular has been linked with having a negative reputation which has been found to affect adolescents' self-esteem and lead to greater internalizing problems (Mali et al., 2019). Findings from the current study seem to align with previous research as findings indicated a significant relationship among perceived popularity and internalizing problems. As expected, results indicated that adolescents who rated themselves as being high in popularity were also reported by their mothers as having lower levels of anxiety/depression, social problems, withdrawn behavior, and thought problems. As popularity has been associated with more friendships that are high in quality (Rose, Swenson, and Carlson (2004) it follows that popularity would be related to better adolescent adaptation.

Contrary to what was hypothesized, greater levels of validation and caring and help and guidance resulted in higher levels of social and thought problems. Although children may have perceived their friendship as being high in validation and caring and help and guidance, mother's reported greater levels of anxiety/depression, social problems, withdrawal, and thought problems. This finding is surprising considering the research which has found positive friendship qualities to

be related to lower levels of internalizing problems. Research suggests adolescents who perceive having high quality friendships, benefit the most from positive adaptation. Feeling supported and valued in a friendship is supposed to help develop positive social emotional functioning. This finding did not support the finding from Buhrmester (1990) who found that youth who perceived a lack of validation in their friendships reported feeling less secure, more anxious, and less worthy. The findings of the current study may be a function of having participants rate their self-proclaimed “best friend” regardless of how often the participant actually sees that friend. Participants in this study completed the Friendship Quality Questionnaire to assess the perceptions of their friendship with their very best friend, however these were self-report measures only versus the nomination procedure used in other studies by which pairs of adolescents reciprocally report that they are friends. It could be that the participant perceived that friend as their “best friend” while the other individual may not consider themselves to in fact be their best friend. This could result in misperceptions of true friendship that may have misconstrued perceived friendship qualities.

When children rated their friendships as being high in conflict resolution, companionship, and intimate exchange, mother’s reported lower levels of anxiety/depression, social problems, withdrawal, and thought problems among their children. The claims that greater positive friendship qualities relate to lower internalizing problems was supported by this finding. Children’s high ratings of conflict and betrayal among their best friends resulted in higher ratings of internalizing problems reported by their mothers as was hypothesized. High conflict and betrayal in any relationship is expected to result in lower relationship satisfaction that in turn could lead to greater feelings of internalizing symptoms which is consistent with what was found in this study.

Statistical evidence revealed that validation and caring significantly mediated the relationship between popularity and anxiety/depression, and social problems. Such that as popularity goes up, so does anxiety/depression, and social problems which is surprising given previous research emphasizes the influence of strong quality friendships relating to decreases in feelings of loneliness and anxiety as children feel more validated and supported (Parker and Asher, 1993). The experiences of being understood, validated, and cared for, appeared to have a surprising influence on popularity and feelings of anxiety, depression, and social problems. Accompanying the increase in popularity is an increase in friendship validation that resulted in significant increases in anxiety/depression, and social problems.

Statistical evidence also revealed that conflict and betrayal serve as a mediator for the relation between popularity and thought problems. In other words, adolescents that believe they are popular experience less conflict and betrayal and fewer thought problems. Relationships that are characterized as having low arguments, disagreements, and disloyalty are also characterized by having greater positive adaptation, perhaps suggesting conflict resolution interventions could be further explored to explain how popularity relates to thought problems.

Additionally, conflict resolution and companionship and recreation each significantly mediated the relationship between popularity and social problems. Perhaps this is because adolescence is a time where more social encounters emerge and having high positive friendship qualities becomes especially important for protecting against social problems. This finding supports findings from previous research which suggest that having a friend you can rely on for companionship, intimacy and support serves as a buffer from the negative consequences of social problems and victimization (Burndt, 2004). Conversely, help and guidance also significantly mediated the relationship between popularity and social problems such that help and guidance as

a mediator resulted in a positive relation between popularity and social problems which was unexpected.

Lastly, validation and caring significantly mediated the relationship between sex and anxiety/depression, and social problems, and conflict resolution and help and guidance significantly mediated the relationship between sex and social problems. These findings suggest that females demonstrate higher validation, caring, help, and guidance in relationships, and that females also demonstrate more social problems compared to males. There is no statistical evidence that income to needs serves as a mediator for the relation between popularity and internalizing problems.

This study provided further evidence that having strong friendships and being perceived as popular may lead to better adolescent adjustment. There are however several limitations to this research. One limitation being the data gathered for perceived popularity and friendship quality was self-reported and as such, the participants may have responded in a socially desirable way. Another limitation is that only mothers' reports on their child's internalizing symptoms were included in the analysis. Perhaps the study may have been more exhaustive had it utilized multiple raters to obtain a more accurate understanding of adolescents' internalizing problems. It may have also proven useful to have additional measures of internalizing problems rather than the CBCL only. Another limitation was that the measures were gathered at the same age, perhaps a longitudinal perspective may have provided additional insight. The research may have also been limited due to the use of the NICHD dataset as the majority of the participants were White. This may have had an impact on the results of the current study.

Future studies may consider further exploring friendship qualities among adolescents utilizing reciprocal friendships and could even include assessment of friendship at earlier and later

developmental periods. Future research should have equal representation of ethnic backgrounds to make valid inferences of the impact of these variables. Additionally, future studies may also focus more closely on the mediational relationship of friendship qualities among popularity and specifically anxiety, depression, and social problems as this study revealed findings contrary to what previous studies have found. While the emphasis on this study was on how different friendship qualities are related to internalizing problems, future research should also examine externalizing outcomes.

Taken together, the findings of this study have important implications for the prediction of adolescent psychological adjustment. Being perceived as unpopular may be particularly distressing and is attributed to greater feelings of loneliness and depression and withdrawal (Gorman, Schwartz, Nakamoto, & Mayeux, 2011). The findings of this study support claims that popularity is linked to having high quality friendships that in turn may protect against internalizing problems. These findings can help to develop possible social interventions to promote positive adjustment and reduce internalizing problems for children. Such social skills interventions can serve to enhance children's understanding of positive friendship qualities in relation to how it affects their social emotional well-being. Interventions could be used both in the home and school settings for children. Adolescence is a period where peer relations become one of the most important sources of support and validation, and in which internalizing problems become more prevalent, as such, prevention and intervention methods will be particularly important.

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