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Links Between Friendship, Psychological Symptoms, and Academic Adjustment
in an Emerging Adulthood Sample

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Psychology Honors Thesis

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It is well established that peer relationships, including friendships, have an important influence on children's adjustment in school (Buhs & Ladd, 2001; Guay, Boivin, & Hodges, 1999). Friendship might contribute to success in school because this relationship often serves as a source of social and emotional support for the child. When a child feels comfortable in his or her environment, he or she is more readily able to participate in his or her learning (Buhs & Ladd, 2001).

Peer Relations & Academic Adjustment

Kingery, Erdley, and Marshall (2011) found that peer relationships are important to academic success. They assessed 365 students across the middle school transition via self-reports at the end of 5th grade and then at the beginning of 6th grade. The study found that peer acceptance served as a unique predictor of academic achievement in the middle school transition. This relation has been explained by previous studies which states that the sense of belongings and social skills obtained through peer relationships is crucial to academic success (Kingery, Erdley, & Marshall, 2011; Wentzel, 2009). It is suggested that the peer interactions enable students to seek support and guidance as they complete academic tasks.

Peer Relations & Psychological Well-Being

Many studies have explored the relationship between peer relationships and psychological adjustment in childhood and adolescence. Specifically, research indicates that friendship competence is a predictor of self-esteem. Research suggests that

friendships may influence psychological adjustment, such as self-esteem, because friendships provide youth with support for managing normative transitions and buffer effects of non-normative problems (Bagwell & Schmidt, 2011). Many studies support these relationships between friendship and psychological adjustment. For example, Bagwell, Newcomb, and Bukowski conducted a study that looked at 5th graders with and without a reciprocal best friend in the 5th grade, and then proceeded to follow up with participants after 12 years to assess their life adjustment and well-being (1998). At the 12 year follow-up, the study found that children who had a reciprocal best friend in the 5th grade indicated higher feelings of self-worth in adulthood (Bagwell, Newcomb, & Bukowski, 1998).

On the other hand, negative peer relationships or lack of peer relationships may contribute to psychological maladjustment (Ladd & Troop-Gordon, 2003). In another study, Ladd and Troop-Gordon investigated the effects of early adverse behavior (anxious/fearful or aggressive) on psychological maladjustment (internalizing problems, externalizing problems, and loneliness) (2003). The study found that negative peer relationships, including friendlessness, are associated with later psychological maladjustment.

Similarly, Kingery, Erdley, and Marshall (2011) found that friendship was associated with psychological well-being. They studied 365 students across the middle school transition, assessing them via self-reports at the end of 5th grade and then at the beginning of 6th grade. The study found that loneliness was buffered by a child's number and quality of friendships. Friendship quality served as a unique predictor of self-esteem across the transition, one suggestion being that intimacy in a relationship (e.g. self-

disclosure) is an important self-esteem support for children. Theory and research, therefore, support the link between friendship as a predictor of self-esteem in childhood and adolescent samples.

Psychological Well-Being & Academic Adjustment

Research also suggests that psychological adjustment, such as self-esteem, predicts academic adjustment. One reason this might be is that when child feels socially and emotionally supported within a classroom setting, he or she is more likely to actively participate in his or her learning and feel more confident about his or her contributions (Buhs & Ladd, 2001). A child's sense of belongings within his or her classroom might contribute to his or her ability and willingness to engage in academic learning activities with his or her classmates (Ladd, Kochenderfer & Coleman, 1997). For example, Juvonen, Nishina, and Graham (2000) examined the mediating effect of psychological adjustment on the relationship between self-perceived peer harassment and school functioning. Based on self-reports from 179 seventh and eighth graders, the study found that self-perceived peer harassment predicted psychological maladjustment (loneliness, self-worth, and depressive symptoms), which in turn predicted poor school functioning. Because psychological adjustment is the mediator, a significant correlation existed between psychological adjustment (self-worth, depression, and loneliness) and school adjustment (GPA and absenteeism). Thus, those who were maladjusted psychologically had lower GPAs and greater absences.

Third, Wentzel and Caldwell (1997) conducted two studies on peer relationships and academic achievement. Study 1 followed participants from 6th to 7th grade, and examined the way in which three types of peer relationships (including reciprocal

friendships) affected academic achievement. Study 1 concluded that friendship was related to academic achievement. In a longitudinal study from 6th-8th grade, Study 2 showed that prosocial behavior served as a partial mediator between peer relationships and later academic achievement. Thus, theory and research combine to reinforce the role of peer relations, and especially friendship, as a predictor of academic adjustment.

Pathways from Peer Relations to Academic Adjustment

Further, there is some evidence that suggests a relationship between peer relationships, academic adjustment, and psychological adjustment in child samples. Research suggests that psychological symptoms serve as a mediator between the link of peer relationships and academic adjustment. One reason might be that if a child has positive peer relationships, he or she will feel more confident in the classroom setting, and thus, will more likely engage in learning activities with peers (Buhs & Ladd, 2001). Another reason might be that positive peer relationships reinforce children's behaviors and allow them to feel more competent socially, and in turn, academically (Guay, Boivin, & Hodges, 1999). For example, Guay, Boivin, and Hodges studied academic achievement in relation to peer relations and self-esteem in elementary school children (1999). The study suggests that the negative peer relationships (e.g., peer rejection) lead to negative psychological symptoms, which in turn affects low academic outcome; thus, negative psychological symptoms serve as a mediator for the interaction between peer relationships and academic achievement (Guay, Boivin, & Hodges, 1999).

Additionally, Buhs & Ladd studied negative peer relationships, psychological adjustment, and academic achievement in a kindergarten sample (2001). The study found that negative peer treatment and reduced participation partially mediated the effect of

peer rejection on academic adjustment. Thus, both theory and research provide evidence for psychological symptoms serving as a mediator between the relationship of peer relationships and academic adjustment in childhood and adolescent samples.

Researchers have rarely investigated links between friendship, self-esteem, and scholastic competence in the emerging adulthood age group. Emerging Adulthood is a period of development that falls between adolescence and adulthood and marks a time of independence and exploration of self (Arnett, 2000). Investigating the pathway from friendship to scholastic competence in emerging adults is important because it provides insight into the importance of friends as sources of social and emotional support during this time. Emerging adulthood is important for identifying possible life directions, and so it is important to consider the effects of peer relationships during this time. The study aim was to investigate self-esteem as a mediator of the link between friendship competence and scholastic competence in an emerging adulthood sample.

Method

Participants

All participants (N=81; 70.4% females) were sophomores (Mean age=19; range of 18-21) at the University of Richmond. Participants were all active members of 6 living and learning programs: 9 from Living on the Frontera, 13 from Stories of Work, 10 from Technology, Cognition and Behavior, 8 from Urban Americas, 14 from Business of Science, 10 from Global Health, and 12 from Living a Life of Consequence. In each program, participants lived on the same hall and took 1 class together; thus, participants in the same program were familiar with each other. 12.3% of participants identified themselves as Hispanic, 65.4% as White, 7.4% as Black or African American, 19.8% as

Asian, 2.5% as Native Hawaiian or Pacific Islander, and 1.2% as other. 14.8% of participant's mothers received a high school diploma or the equivalency (GED), 7.4% earned an associate degree, 43.2% earned a Bachelor's degree, and 30.8 % have earned higher education degrees (master's or above). 14.8 % of participant's fathers received a high school diploma or the equivalency (GED), 4.9 % have earned an associate degree, 35.8 % bachelor's degree, and 40.8% have earned a master's degree or higher.

Procedure

Participants completed an approximately 30-45 minute survey via the University of Richmond Qualtrics website. Participants were recruited from Sophomore Scholars in Residence (SSIR) Living-Learning programs. Members of the research team attended SSIR classes, gave a brief overview of the study, and invited students to participate. Interested students then filled out an availability form and indicated time slots during which they were available to take the survey. Survey administration occurred throughout the months of November and December, 2013 and January and February 2014. The research team administered the survey in an on campus computer lab. Informed consent was obtained in person through the signing of a consent form presented at the time of survey administration, and only thereafter could the participants begin the survey. Following the survey, each participant was provided with a resources sheet which contained contact information for Counseling and Psychological Services, as well as faculty members, and information in case of emergency. Each student was given \$10 for their participation in the study, and signed a payment receipt to indicate that their compensation had been received.

Measures

All measures were assessed through self-report instruments administered using Qualtrics Survey Software via the University of Richmond Qualtrics website.

Social Competence

The Interpersonal Competence Questionnaire—Disclosure & Emotional Support subscales (Buhrmester, Furman, Wittenberg, & Teis, 1988) —was used to assess participants' comfort level and capability in interacting with their classmates. Participants were asked to respond on a four-point Likert scale from 1=*I'm poor at this* to 5=*I'm extremely good at this*.

Self-Esteem

The Self-Esteem Scale (Rosenberg, 1979) was used to assess psychological wellbeing of participants. Participants were given ten statements, and were instructed to indicate how much they agreed or disagreed with each statement. Ratings were made on a Likert-type four-point scale that ranged from 0=*strongly disagree* to 3=*strongly agree*. Five of the items have positively worded statements, and five have negatively worded statements.

Academic Adjustment

The Self-Perception Profile for College Students—Scholastic Competence (Neeman & Harter, 2012) was used to assess participants' scholastic competence. Participants were asked to rate their academic abilities in comparison to the abilities of their classmates on 4 items. Participants identified which of two statements described them, and then indicated whether the statement was "*really true*" or "*sort of true*" for them. Participants were then given a rating from 1=*least perceived competence* to 4=*most perceived competence*.

Results

Descriptive statistics were conducted. See Table 1. The means on friendship competence, self-esteem, and scholastic competence were moderate to high. The correlations were of low to moderate magnitude and significant.

A series of regressions were conducted in order to examine whether self-esteem mediated the relationship between friendship competence and scholastic competence. Regression equations provided estimates and standard errors (See Figure 2), which would permit the examination of the significance of the mediated effect. The most important conditions for mediation are that the *a* path (i.e., independent variable to mediator) and *b* path (i.e., mediator to dependent variable) are significant.

Consistent with recommendations advanced by MacKinnon (2008), two other conditions I considered include (1) the significance of the total effect (i.e., the path from the independent variable to the dependent variable), and (2) the significance of the direct effect after the mediator is included. A regression analysis was first conducted to examine the total effect between friendship competence and scholastic competence. See Figure 1 for estimates and standard errors. Friendship competence was significantly related to scholastic competence ($c=32(.12)$, $p<.01$), indicating that the relationship between the independent and dependent variable is statistically significant.

The effect of friendship competence on self-esteem was statistically significant (*a* path, $p<.05$). Self-esteem had a significant effect on scholastic competence (*b* path, $p<.01$). The adjusted effect of friendship competence on scholastic competence was also statistically significant (*c'* path, $p<.01$)

The significance of the link between the independent variable, friendship

competence, on the dependent variable, scholastic competence weakened when controlling for the moderator, self-esteem, providing evidence for partial mediation. Mediation was tested using the upper and lower confidence limits (UCL:.230; LCL:.009). Since the limits did not contain zero, significant mediation exists.

Discussion

From these results, it appears that friendship competence affects scholastic competence through the mediating effect of self-esteem in an emerging adulthood sample. In other words, friendship competence affects self-esteem, and in turn, self-esteem affects scholastic competence. These results give insight into the importance of friendships for promoting emerging adults' adjustment in other areas, such as psychological well-being and scholastic competence.

The significance of the total effect, the relationship between friendship competence and scholastic competence, might be explained by the fact that friendships provide a person with a tremendous amount of social and emotional support (Buhs & Ladd, 2001). When an emerging adult feels this sense of support, he or she might feel better prepared to accomplish academic tasks, especially tasks that seem difficult or overwhelming. As Buhs & Ladd (2001) suggest, a child's comfort level in his or her learning environment can have a huge impact on his or her participation in classroom activities. Thus, it may be that because of the emotional support that friendship provides, emerging adults feel better prepared and capable of completing their scholastic endeavors.

The finding that friendship competence predicted self-esteem among emerging adults is consistent with past research. For example, in studying students across the

middle school transition, Kingery, Erdley, and Marshall (2011) found that friendship quality uniquely predicted a student's self-esteem. The researchers suggested that intimacy (e.g. self-disclosure), an important aspect of friendship quality, provides a unique sense of support that affects self-esteem (Kingery, Erdley, & Marshall, 2011). Thus, one's ability to self-disclose in their friendship might positively affect their self-esteem. This could be the case because one could feel their ideas and thoughts are supported by that friendship, enhancing their confidence in themselves, and thus increasing their self-esteem.

The finding that self-esteem predicted scholastic competence is also consistent with theory and past research. When a child feels a sense of confidence in his or her classroom setting, he or she is more likely to raise his or her hand, ask questions, and actively participate in his or her learning (Buhs & Ladd, 2001). Juvonen, Nishina, and Graham (2000) found a significant correlation between psychological maladjustment (loneliness, self-worth, and depressive symptoms) and school adjustment (GPA and absenteeism) in older middle school students. Thus, the Juvonen, Nishina, and Graham (2000) study reinforces the concept that self-esteem might predict classroom participation, which in turn, predicts one's scholastic competence.

In looking at children and adolescent age groups, researchers have found similar results to this study's finding, that self-esteem serves as a mediator between friendship competence and scholastic competence (Buhs & Ladd, 2001; Guay, Boivin, & Hodges, 1999). It is necessary to consider the importance of this finding within the emerging adulthood age group. Falling between adolescence and adulthood, emerging adulthood is an important period for self-exploration and establishing one's independence (Arnett,

2000). Emerging adults are often investigating possible career paths and establishing a greater sense of self as they pursue possible life directions. It might be the case that friendship competence is particularly crucial for emerging adults, as their need for social and emotional support is particularly strong during this significant transitional period. Specifically, it is possible that the need for intimacy (e.g. self-disclosure), an aspect of friendship quality, increases in emerging adults, as they are asking themselves bigger life questions (Kingery, Erdley, & Marshall, 2011). With higher friendship competence, an emerging adult's ideas and beliefs are being reinforced, increasing their self-esteem. In turn, with greater self-esteem, it is likely that emerging adults are more likely to seek academic support when needed, as is the case with younger students (Kingery, Erdley, & Marshall, 2011; Wentzel, 2009).

Limitations and Future Directions

It is important to acknowledge some limitations of our study. First, our small sample size provides some support for mediation, but data on more participants should be collected in order to verify and extend our findings. Second, our participants were all a part of a living and learning program, and so our results are limited to emerging adults who would be inclined to join such a community. Likewise, every participant was a sophomore enrolled at a small liberal arts university. Thus, our results may not extend beyond the viewpoint of a student who would be likely to attend a liberal arts university, and further, participate in a living and learning program. Because all students were sophomores, we do not know if this specific age group within emerging adulthood would report particularly different results than older or younger emerging adults. Thus, it will be important to expand the participant pool to include a broader range of emerging

adults that vary with age, interests, and academic goals.

Additionally, all of our data was collected within time, and so we do not know if our results would maintain their significance over time. It may be important to consider conducting a longitudinal study, collecting data from the same living and learning students when they are in their junior year. Lastly, it would be interesting to investigate the opposing pathways in the mediator model. For example, we could see if academic competence has an effect on friendship competence, and further, if self-esteem serves as a mediator in this relationship. We were able to collect compelling data that provide evidence for the significance of self-esteem as a mediator for the relationship of friendship competence and scholastic competence, but future research will need to be conducted to verify these findings.

Implications

Friendship competence affects scholastic competence through the mediating effect of self-esteem in an emerging adulthood sample. Our results give insight into the importance of friendships for promoting emerging adult's adjustment in other areas, such as psychological well-being and scholastic competence. For an emerging adult's psychological well-being and academic success, it is crucial to emphasize the importance of fostering friendships. The social and emotional support that friendships provide create a strong foundation for emerging adult's competence and well-being.

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Bivariate Correlations, Means, and Standard Deviations

Table 1

Bivariate Correlations, Means, and Standard Deviations

| Variable | Friendship Competence | Self-Esteem | Scholastic Competence |
|-----------------------|-----------------------|-------------|-----------------------|
| Friendship Competence | 2.99(.81) | | |
| Self-Esteem | .42 | 2.27(.53) | |
| Scholastic Competence | .33 | .32 | 3.13(.78) |

Note: All correlations are significant at $p < .01$. Means and standard deviations are presented along the diagonal.

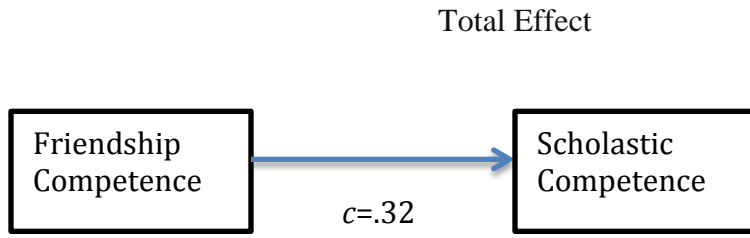


Figure 1. Total Effect

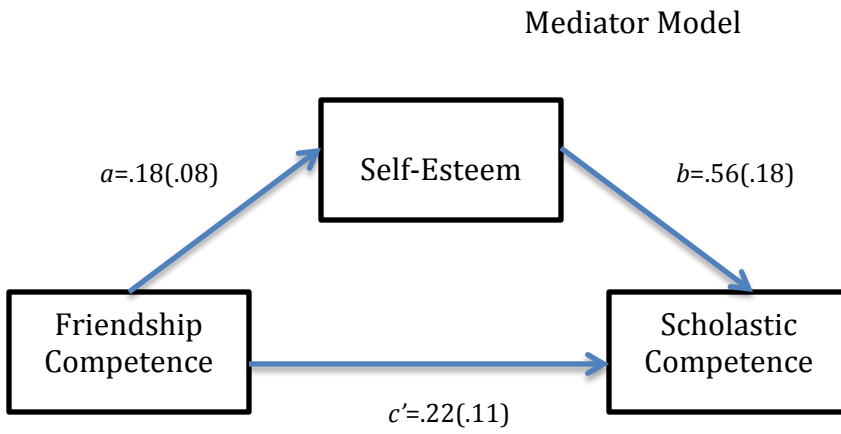


Figure 2. Mediator Model