

The Relationship Between Students' Family Communication, Transition Efficacy, and Communication Skill

Kristina M. Scharp, Elizabeth Dorrance Hall, Matthew Sanders, and Mitchell Colver

This study explores the relationships between a students' family communication environment and factors that facilitate a successful transition into higher education. Results from 423 first-year students suggest that coming from a family that encourages open communication is related to how confident they feel about their academic performance, growing up, and managing their personal finances (i.e., transition efficacy). Coming from a family that celebrates communication is also related to the degree to which students are skilled at talking with others. Taken together, transition efficacy and communication skill are important factors for student success. Practical implications of this study are promising for both student affairs professionals and family members who want to help their students succeed.

Abstract

Understanding students' ability to transition successfully to college is one of the most pressing concerns for universities (Krause, Hartley, James, & McInnis, 2005). The inability for students to transition with ease might be one reason why 30% of students drop out of college after their first year (Beckstead, 2017) and only 65% of the 21 million undergraduate students in the United States graduate within six years (National Center for Higher Education Management Systems, 2015). From a different perspective, that means that almost 9.5 million students will not graduate, costing institutions of higher learning approximately 16.5 billion dollars over a six-year period (Raisman, 2013). Despite what we know about the experiences of college students during the transition, Cole, Kennedy and Ben-Avie (2009) argue that universities know little about how students' family environments relate to their ability to transition successfully. According to Upcraft, Gardner, and Barefoot (2005), successful transition is not only defined by retention but also factors such as making academic and intellectual progress, developing into an adult, and establishing and maintaining interpersonal relationships. Consequently, the present study, framed in family communication patterns theory (Koerner & Fitzpatrick, 2002; Ritchie & Fitzpatrick, 1990) illuminates the

Dr. Kristina M. Scharp is an Assistant Professor at Utah State University.

Dr. Elizabeth Dorrance Hall is an Assistant Professor at Michigan State University.

Matthew Sanders is an Associate Professor at Utah State University.

Mitchell Colver is a Graduate Student at Utah State University.

relationships between students' family communication environments and their transition efficacy (i.e., academic ability, growing up, and financial management) and communication skill. This study contributes by identifying the relationships among transition success factors and points to areas that student affairs professionals and family members can focus on to help students succeed. Toward these goals, we begin by presenting our theoretical framework.

Family Communication Patterns Theory

Family communication patterns theory (FCP) was first introduced by McLeod and Chaffee (1972), was later adapted in 1990 by Ritchie and Fitzpatrick, and was formally articulated by Koerner and Fitzpatrick in 2002. The theory is primarily used by communication studies scholars interested in how a family's communication environment predicts a variety of outcomes. FCP suggests that families communicate in fairly predictable ways that get reinforced through the process of social learning (see Kunkel, Hummert, & Dennis, 2008). According to Kunkel and her colleagues (2008), social learning is the process by which children learn particular behaviors, beliefs, and values from their parents' teaching and modeling of those behaviors/attitudes/values.

According to FCP, two factors determine a family's communication environment; conversation orientation and conformity orientation. These two orientations serve as socialization mechanisms for children. Specifically, conversation orientation refers to the extent to which families encourage open communication. Thus, conversation orientation not only encompasses topic breadth but also topic depth. To date, research suggests that students who come from high conversation oriented families are generally more efficacious (Curran & Allen, 2016), more likely to discuss sensitive topics (Booth-Butterfield & Sidlinger, 1998), and less likely to exhibit avoidant behavior (Schrodt, Ledbetter, & Ohrt, 2007). Put simply, children from high conversation oriented families feel free to ask their parents questions even when the topics are uncomfortable or emotionally charged, which often leads to positive outcomes (Koerner & Fitzpatrick, 2002). Families who are high in conformity orientation value homogenous attitudes, beliefs, and values. These families avoid conflict when possible and do not emphasize members' individuality. Existing research suggests that high conformity works differently than conversation and often yields very mixed results depending on the context.

Not only does a family's communication environment influence children while they are in the home, but FCP theory also posits that families influence children's behaviors even after they leave home by shaping their perceptions of their social environment and influencing the development of protective traits (e.g., communication skills) that can help them cope with stressors (Koerner & Fitzpatrick, 2002; Koerner & Schrodt, 2014). Specifically, researchers have begun to use FCP to explore how college students cope with a variety of stressors. For example, Dorrance Hall and her colleagues (2016) used FCP to examine U.S and Belgian student experiences of stress and loneliness (Dorrance Hall et al., 2016).

They found that parental advice mediated the relationship between conversation orientation and self-efficacy and loneliness in U.S. students. Indeed, students who perceive that their parents give good advice are more likely to be confident and less likely to be lonely. For Belgian students, high conformity proved to be a risk factor which was related to increased stress and more loneliness. High and Scharp (2015) also used FCP to determine how motivated and able students were to seek support when they experienced moderate to severe problems at college. They found that high conversation orientation had a positive indirect effect on seeking supportive communication through ability and motivation. Put simply, ability and motivation mediated the relationship between conversation orientation and direct support seeking. Results also indicated that motivation also mediated the relationship between conformity orientation and support seeking. Several of these indirect effects were significant for only women. Thus, unlike for Belgian students, high conformity yielded better outcomes for students. Because FCP has such good explanatory power pertaining to students at college, it is likely that FCP factors will also shed light on the transition experience.

Factors that Influence Successful Transition

Transition Efficacy

According to a recent study, college students have a variety of concerns in their first year of college about their academic achievement (i.e., tests/homework, managing time), their independence (i.e., detaching from their legal guardians, not living at home, having to grow up, taking on more responsibility), and their finances (i.e., paying for school, employment status, paying for housing, financial aid; Dorrance Hall et al., 2017). These concerns are important considering Raisman (2013) suggests that universities could improve their retention rates by up to 84% if they paid more attention to the concerns that students have while at college.

But concerns are only one part of the equation; researchers have established that student success also depends on their level of confidence in themselves (Zajacova, Lynch, & Espenshade, 2005). Specifically, Zajacova and her colleagues (2005) found that self-efficacy was linked to higher first-year college GPAs, number of accumulated credits, and college retention after the first year. High self-efficacy has been linked to students who are better able to complete educational requirements, earn higher grades, remain engaged, and persist until graduation compared to students with lower self-efficacy (Finn, 1993; Hsieh, Sullivan, & Guerra, 2007; Lent, Brown, & Larkin, 1984; Lucio, Rapp-Paglicci, & Rowe, 2011). Indeed, a study by Fenning and May (2013) found that self-efficacy was the best predictor of high school GPA and learning self-efficacy was the best predictor of current GPA. Thus, self-efficacy is one of the most important determinants of success at institutes of higher learning.

While self-efficacy is a global confidence in one's self, we argue that students might vary in their degree of confidence surrounding the specific concerns they

identify as part of the transition to college (Dorrance Hall et al., 2017). Indeed, as indicated by the Fenning and May (2013) study, learning self-efficacy predicted GPA better than global self-efficacy. Thus, we define transition efficacy as the level of confidence students feel about achieving their academic goals, growing up, and managing their finances. Because transition efficacy is the confidence students have to address three interrelated concerns, we pose our first hypothesis:

H1: Academic, growing up, and financial efficacy will be positively associated with one another.

Communication Skill

Although efficacy is important in determining student success, simply having confidence might not guarantee success. Hsieh and her colleagues (2007) contend that self-efficacy influences student success in three ways: (1) self-efficacy influences students' motivation to develop and improve their ability, (2) efficacious students have a higher desire to demonstrate their ability, and (3) efficacious students can remain resilient when confronted with difficult tasks. Put simply, it is not only important that students have confidence, it is also important that students have ability, or in this case, the communication skill to transition successfully.

Possessing the ability to communicate with others is an essential skill during the transition to college. Existing research on interpersonal communication skill suggests that the stress which students experience surrounding real or anticipated communication with others serves as a barrier to students' leadership, adaptability, and multicultural appreciation (Blume, Baldwin, & Ryan, 2013). A study by Hawken, Duran, and Kelly (1991) found that communication competence was positively linked with roommate rapport and GPA whereas it was negatively related to loneliness. Students report that it would be problematic if they were unable to find a close group of friends and/or unable to get along with their roommates (Dorrance Hall et al., 2017). Furthermore, communication skills might be especially important for students who need to reach out to professors or academic affairs professionals to address issues like academic performance or financial aid respectively. This might be one reason that research suggests that students who have higher communication skill also have higher academic achievements and are less likely to drop out over a four-year period compared with students who are more apprehensive about their communication abilities (Ericson & Gardner, 1992; McCroskey & Andersen, 1976).

In sum, both transition efficacy and communication skill might independently influence a students' ability to transition to college successfully. Yet, as Hsieh and her colleagues (2007) point out, people with high efficacy often have the motivation to improve their skill as well as the desire to demonstrate it. With this relationship in mind, we pose the second part to our first hypothesis:

H2: Transition efficacy (i.e., academic, growing up, and financial efficacy) will be positively associated with communication skill.

Proposed Relationships between Family Communication Factors and Transition Factors

FCP posits that a family's communication environment influences attitudes, beliefs, and behaviors that might help a student transition successfully. Research suggests that families who promote an open communication environment have globally better outcomes (Schrodt, Witt, & Messersmith, 2008). For example, existing studies report that students who come from families with a higher conversation orientation perceive more support from their families, are more resilient when dealing with college stressors, and are more likely to perceive that the transition to college will help them grow (Dorrance Hall & Scharp, 2018). Specifically, being raised in a high conversation orientation family has also been found to be associated higher self-efficacy with regards to scholastic achievement (Dorrance Hall et al., 2016). Kindergarten through college-aged students who came from families with higher conversation orientations also felt generally less apprehensive about communicating (Elwood & Schrader, 1998). This might come as no surprise considering family members who are high in conversation orientation are more likely to discuss sensitive topics and personal matters (Booth-Butterfield & Sideling, 1998; Huang, 1999). Based on the existing research we pose the following two hypotheses:

H3: Conversation will be positively associated with transition efficacy.

H4: Conversation will be positively associated with communication skill.

Whereas conversation orientation globally yields positive implications, existing research suggests that conformity orientation is less consistent (Schrodt et al., 2008). Yet, given the context of the study, we base our last two hypotheses on the research suggesting conformity might not encourage feelings of efficacy or foster communication skill. For example, a recent study suggests that students who come from high conformity families are less resilient when they are forced to face challenges (Dorrance Hall et al., 2017). Dorrance Hall et al. (2016) found that Belgian students from high conformity families experienced more stress about college. Research also suggests that when coming from a family with high conformity, individuals perceive less social support and are less likely to maintain their friendships (Koerner & Maki, 2004; Ledbetter, 2009). Furthermore, Avtgis (1999) found that people who grew up in families that focus on strict norms, rules, and a culture of homogeneity limit the expression of personal needs rather than encouraging communication skills. This corresponds to research conducted by Ledbetter (2009) who found that children who grow up in high conformity families are encouraged less to develop their skills, in particular the skill to adapt to new situations. Consequently, we hypothesize:

H5: Conformity will be negatively associated with transition efficacy.

H6: Conformity will be negatively associated with communication skill.

Method

Participants

Participants included 138 male (31.7%) and 284 female (65.1%) first-year students (total $N = 423$). One participant reported “other” sex (.2%). Most participants were White ($n = 392$, 89.9%), 12 were Hispanic (2.8%), 6 were African American (1.4%), 5 were Asian/Pacific Islander (1.1%), and 8 participants selected other or chose not to disclose their racial/ethnic background. Most participants were not the first to attend college in their family ($n = 390$, 89.4%) but 32 participants were first-generation students (7.3%).

In order to collect data about their family communication patterns, students were asked to complete an online survey as part of signing up for first-year student orientation between March and June before they started their first year of college at a large university in the Western United States. Students were surveyed again in November during their first semester of college to assess transition efficacy and skills. Over 2,000 students completed the Time 1 survey, but only 423 completed the survey at both Time 1 and 2. Only those 423 students are reported on in the present study. Students were compensated with a \$5 Amazon gift card for completing the survey at Time 2.

Measures

Family Communication Patterns

Students’ reported family conversation and conformity orientations were measured at Time 1 using the Revised Family Communication Patterns Scale (RFCP-SF; Wilson, Chernichky, Wilkum, & Owlett, 2014). Conversation orientation was measured using six items from the original RFCP (Ritchie & Fitzpatrick, 1990). Example conversation orientation items include: “I can tell my parents almost anything,” and “I really enjoy talking to my parents, even when we disagree.” Conformity orientation was also measured using six items from the original RFCP. Example conformity orientation items include: “My parents feel it is important to be the boss,” and “My parents often say something like ‘my ideas are right and you should not question them.’” All items were measured with a Likert-type scale ranging from (1) *strongly disagree* to (7) *strongly agree*. The conversation orientation scale was reliable ($M = 3.57$, $SD = .89$, $\alpha = .90$), as was the conformity orientation scale ($M = 2.59$, $SD = .75$, $\alpha = .814$).

Transition Efficacy

Students reported their confidence in three areas of the transition to college:

academics, growing up, and finances. Eighteen items from existing measures on college self-efficacy (Zajacova et al., 2005) were used to assess *academic efficacy*. Example items included asking the students how confident they were in their ability to “motivate yourself to do schoolwork,” “find time to study,” and “finish homework assignments by deadlines.” This scale ranged from 0-100 where higher scores indicated more academic efficacy ($M = 72.89$, $SD = 13.96$, $\alpha = .913$). A *growing up efficacy* scale was created to measure student confidence about living on their own and “growing up and becoming an adult.” This reliable scale consisted of four items and ranged from 0-100 where higher scores indicated more growing up efficacy ($M = 78.22$, $SD = 17.14$, $\alpha = .803$). A three-item *financial efficacy scale* was created to measure confidence about paying for college and other costs associated with attending college. For example, questions asked how confident students were about: “Paying for college tuition,” and “Finding scholarships to lower the cost of tuition.” This reliable scale ranged from 0-100 where higher scores indicated more financial efficacy ($M = 61.02$, $SD = 24.27$, $\alpha = .830$).

Communication Skill

Fourteen items from Wrench, Brogan, McCroskey, and Jowi’s (2008) scale were used to assess communication skill at Time 2. All questions were asked on a five point Likert-type scale ranging from strongly disagree (1) to strongly agree (5). Example items include: “I always feel anxious in social situations,” and “social interaction is the best part of my day” (reverse coded). Seven items total were reverse coded. Scores were averaged to create a composite variable where higher values indicate more communication skill ($M = 3.30$, $SD = .79$). The scale was reliable ($\alpha = .94$).

Data Analysis

Composite variables were created for each scale detailed above. Zero-order bivariate correlations were then run among variables to test all hypotheses. Table 1 contains the correlation results.

Results

The three types of efficacy (i.e., academic, growing up, and financial) were highly correlated with one another (see Table 1). This indicates that as efficacy in one area increases, efficacy in the other two areas increases as well (H1). Similarly, as communication skill increases, academic, growing up, and financial efficacy all increase (H2), though the correlations between communication skill and the three types of efficacy were smaller than the correlations among the three types of efficacies. H1 and H2 were supported.

Conversation orientation at Time 1 was positively associated with transition efficacy (i.e., academic efficacy, growing up efficacy, and financial efficacy)

and communication skill at Time 2. This means that students who come from families that value open conversation about a variety of topics tend to have more confidence in their abilities to complete schoolwork, manage their time, take on adult roles, and pay for college (H3). As predicted by H4, students also tended to have more communication skill and less anxiety in social situations. As such, H3 and H4 were supported.

Conformity orientation at Time 1 was not associated with any of the adjustment outcomes at Time 2. Therefore, H5 and H6 were not supported.

TABLE 1

Correlation matrix

	1	2	3	4	5	6
1. Conversation	-					
2. Conformity	-.43**	-				
3. Academic Efficacy	.13**	-.07	-			
4. Growing Up Efficacy	.12*	-.08	.59**	-		
5. Financial Efficacy	.11*	-.05	.55**	.52**	-	
6. Communication Skill	.10*	.09	.22**	.26**	.19**	-

Discussion

The goal of this research was to understand the associations between family communication environments (i.e., conversation and conformity orientation) and factors important for students’ successful transition to college. As expected, growing up in a family marked by high conversation orientation was positively associated with transition efficacy including academic, growing up, and financial self-efficacy. Students from high conversation orientation families also reported higher communication skill during the first semester of college. This means that families who talk often, and about a wide variety of topics, tend to have children who feel confident in their ability to complete their schoolwork, participate in class, take on grown-up tasks on their own, and pay for their tuition through work or scholarships. These families also have children who feel confident in social situations and are likely good at making friends and establishing connections with their professors, classmates, and coworkers.

Interestingly, growing up in a family that places high value on homogeneity of attitudes, values, and beliefs (i.e., conformity orientation) was not associated with transition efficacy or communication skill. This means that unlike we predicted, conformity orientation does not have negative effects on student efficacy, but instead seems to play little to no role in students’ confidence in their academic,

growing up, or financial abilities or their actual communication ability. These results echo the body of FCP literature that suggests that conformity orientation matters in some contexts and is less important in others (Schrodt et al., 2008).

Finally, students who reported high levels of communication skill also tended to report higher levels of efficacy in all areas. This means that increasing transition efficacy or communication skill can make a big difference for students. In light of results such as these, we present practical implications for student affairs professionals and family members seeking to support transitioning students, but first we address the limitations of our study.

Limitations

This longitudinal study captures a representative sample of a single large university in the United States, which is at once a strength and limitation. Future researchers should aim to expand these findings to other campuses that range in size, diversity of the student population, and geographic location (both domestic and international). It is also possible that students who attend commuter colleges have different experiences that require more or less transition efficacy and communication skill. Furthermore, students who come from diverse socioeconomic statuses might feel more or less efficacious about their transition.

Limitations also exist in reference to the data analysis. The three types of efficacy were correlated, indicating that either they move together or they are measuring the same construct. Theoretically we believe they are distinct due to qualitative differences in the items (e.g., experiencing financial challenges is not the same as social challenges). In the future, researchers should continue to explore how these three areas of efficacy are related for students going through the transition to college. Finally, many survey items were chosen from pre-existing scales, but the scales were not used in full due to time restrictions of the survey. Other items were created for this study. The findings presented here should be interpreted with these limitations in mind. Although limitations exist, we argue that better understanding a student's communication environment is valuable and can inform practical applications.

Practical Applications

Practical Implications for Student Retention and Transition Professionals

Despite the limited opportunities that student affairs professionals might have in intervening with potential students as they grow up, results from the present study suggest that there are many opportunities to help students improve their confidence and their communication skills. Results from this study suggest, for example, that the types of efficacy are related, even if academic performance, growing up, and finances seem like unrelated concerns. In addition, we contend

that when one of these types of efficacy goes up, then the rest do as well, although it is possible that transition efficacy measures the same construct (see limitations). Nevertheless, our findings suggest that a workshop on managing personal finances might help students feel more confident overall, thereby increasing their academic performance and their ability to function independently. We also know that communication skill is something that can be taught, as evidenced by the thousands of interpersonal communication courses taught across the nation. If available, these instructors might be able to partner with student affairs to put on a workshop during orientation to help students communicate with a variety of audiences more effectively.

Practical Implications for Parents

Although family communication orientations are often considered relatively enduring, the transition to college might mark an opportunity to make subtle changes where parents can help their child thrive. For example, as students move away from home and become more autonomous, parents might be able to change the extent they require their students' to adhere to their beliefs and values. If that is untenable, parents might at least encourage their children to talk to them about the new beliefs and attitudes they encounter. They might also signal to their children that new topics such as personal finances are available for discussion. Based on the results from this study, this not only benefits students who might need to reach out to their parents for help but also parents who now have to rely on their children's disclosures to learn about information such as their academic performance.

In addition to the interventions student affairs professionals might implement to improve students' communication skills and transition efficacy, they might also have the opportunity to help educate parents to support their child through the transition. Nevertheless, student affairs professionals might talk to parents during orientation about ways they can support their children through the transition. For example, they might help parents see the benefits of having an open communication environment where students are allowed to bring up a variety of uncomfortable topics.

Taken together, results from this longitudinal study suggest that students' communication environment when they grow up can influence factors that contribute to a successful transition to college. In light of these findings, practical applications exist that could help parents and student affairs professionals facilitate a successful college transition.

References

- Avtgis, T. A. (1999). The relationship between unwillingness to communicate and family communication patterns. *Communication Research Reports, 16*, 333–338. doi:10.1080=08824099909388734
- Beckstead, R. (2017). College dropout rates and statistics. *College Atlas*. Retrieved June 27, 2017 from: <https://www.collegeatlas.org/college-dropout.html>
- Blume, B. D., Baldwin, T. T., & Ryan, K. C. (2013). Communication apprehension: A barrier to students' leadership, adaptability, and multicultural appreciation. *Academy of Management Learning & Education, 12*, 158-172. doi:10.5465/amle.2011.0127
- Booth-Butterfield, M., & Sidelinger, R. (1998). The influence of family communication on the college-aged child: Openness, attitudes and actions. *Communication Quarterly, 46*, 295–308. doi:10.1080=01463379809370103
- Cole, J. S., Kennedy, M., & Ben-Avie, M. (2009). The role of precollege data in assessing and understanding student engagement in college. *New Directions for Institutional Research, 141*, 55-69. doi: 10.1002/ir.286
- Curran, T., & Allen, J. (2016). Family communication patterns, self-esteem, and depressive symptoms: The mediating role of direct personalization of conflict. *Communication Reports*, doi:10.1080/08934215.2016.1225224
- Dorrance Hall, E., McNallie, J., Custers, K., Timmermans, E., Wilson, S., & Van den Bulck, J. (2016). A cross-cultural examination of the mediating role of family support and parental advice quality on the relationship between family communication patterns and first-year college student adjustment in the United States and Belgium. *Communication Research*, doi:10.1177/0093650216657755
- Dorrance Hall, E. & Scharp, K. M. (May, 2018). The communication model of transition resilience (CMTR): Factors that predict resilience during transition periods. *Paper presented at the International Communication Association Conference, Prague, Czech Republic.*
- Dorrance Hall, E., Scharp, K. M., Beaty, L., & Sanders, M. (May, 2017). Family communication patterns and the mediating effects of support and resilience on students' concerns about college. *Paper presented at the International Communication Association Conference, San Diego, CA.*
- Elwood, T. D., & Schrader, D. C. (1998). Family communication patterns and communication apprehension. *Journal of Social Behavior and Personality, 13*(3), 493.
- Ericson, P. M., & Gardner, J. W. (1992). Two longitudinal studies of communication apprehension and its effects on college students' success. *Communication Quarterly, 40*, 127-137.
- Fenning, B. E., & May, L. N. (2013). Where there is a will, there is an A: Examining the roles of self-efficacy and self-concept in college students' current educational attainment and career planning. *Social Psychology of Education, 16*, 635-650. doi:10.1007/s11218-013-9228-4

- Finn, J. D. (1993). School engagement and students at risk. Washington, D. C.: National Center for Educational Statistics. Retrieved from: <http://files.eric.ed.gov/fulltext/ED362322.pdf>
- Hawken, L., Duran, R. L., & Kelly, L. (1991). The relationship of interpersonal communication variables to academic success and persistence in college. *Communication Quarterly*, 39, 297-308.
- High, A. C., & Scharp, K. M. (2015). Examining family communication patterns and seeking social support: Direct and indirect effects through ability and motivation. *Human Communication Research*, 41, 459-621. doi:10.1111/hcre.12061
- Hsieh, P., Sullivan, J. R., & Guerra, N. S. (2007). A closer look at college students: Self-efficacy and goal orientation. *Journal of Advanced Academics*, 18, 454-476. doi:10.4219/jaa-2007-500
- Huang, L. N. (1999). Family communication patterns and personality characteristics. *Communication Quarterly*, 47, 230-243. doi:10.1080=01463379909370136
- Koerner, A. F., & Fitzpatrick, M. (2002). Toward a theory of family communication. *Communication Theory*, 12, 70-91. doi:10.1111/j.1468-2885.2002.tb00260.x
- Koerner, A. F., & Maki, L. (2004, July). Family communication patterns and social support in families of origin and adult children subsequent intimate relationships. *International association for relationship research annual conference*.
- Koerner, A. F., & Schrodt, P. (2014). An introduction to the special issue on family communication patterns theory. *Journal of Family Communication*, 14, 1-15. doi:10.1080/15267431.2013.857328
- Krause, K., Hartley, R., James, R., & McInnis, C. (2005). The first-year experience in Australian universities: Findings from a decade of national studies. Canberra: Australian Department of Education, Science and Training.
- Kunkel, A., Hummert, M. L., Dennis, M. D. (2008). Social learning theory: Modeling communication in the family. In D. O. Braithwaite & L. A. Baxter (Eds.), *Engaging theories in family communication* (p. 260-275). Thousand Oaks, CA: Sage.
- Ledbetter, A. M. (2009). Family communication patterns and relational maintenance behavior: Direct and mediated associations with friendship closeness. *Human Communication Research*, 35, 10-147. doi: 0.1111/j.1468-2958.2008.01341.x
- Lent, R. W., Brown, S. D., & Larkin, K. C. (1984). Relation of self-efficacy expectations to academic achievement and persistence. *Journal of Counseling Psychology*, 31, 356-362. doi:10.1037/0022-0167.31.3.356
- Lucio, R., Rapp-Paglicci, L., & Rowe, W. (2011). Developing an additive risk model for predicting academic index: School factors and academic achievement. *Child & Adolescent Social Work Journal*, 28, 153-173. doi:10.1007/s10560-010-0222-9
- McCroskey, J. C., & Andersen, J. F. (1976). The relationship between communication apprehension and academic achievement among college students. *Human Communication Research*, 3, 73-81. doi:10.1111.j.1468-2958.1976.tb00506.x

- McLeod, J. M., & Chaffee, S. H. (1972). The construction of social reality. In J. T. Tedeschi (Ed.), *The social influence process* (pp. 50–99). Chicago: Aldine.
- National Center for Higher Education Management Systems. (2015). Graduation rates. *NCHEMS Information Center*. Retrieved from <http://www.higheredinfo.org/dbrowser/index.php?measure=19>
- Raisman, N. (2013). The cost of college attrition at four-year colleges and universities. Retrieved from Educational Policy Institute website: http://www.educationalpolicy.org/pdf/1302_PolicyPerspectives.pdf
- Ritchie, L. D., & Fitzpatrick, M. A. (1990). Family communication patterns: Measuring intrapersonal perceptions of interpersonal relationships. *Communication Research*, 17, 523–544. doi:10.1177/009365090017004007
- Schrodt, P., Ledbetter, A. M., & Ohrt, J. K. (2007). Parental confirmation and affection as mediators of family communication patterns and children's mental well-being. *Journal of Family Communication*, 7, 23-46. doi:10.1080/15267430709336667
- Schrodt, P., Witt, P. L., & Messersmith, A. S. (2008). A meta-analytical review of family communication patterns and their associations with information processing, behavioral, and psychosocial outcomes. *Communication Monographs*, 75, 248–269. doi:10.1080= 03637750802256318
- Upcraft, M. L., Gardner, J. N., & Barefoot, B. O. (2005). *Challenging and supporting the first-year students: A handbook for improving the first year of college*. San Francisco, CA: John Wiley & Sons, Inc.
- Wilson, S. R., Chernichky, S. M., Wilkum, K., & Owlett, J. S. (2014). Do family communication patterns buffer children from difficulties associated with a parent's military deployment? *Journal of Family Communication*, 14, 32-52. doi:10.1080/15267431.2013.857325
- Wrench, J. S., Brogan, S. M., McCroskey, J. C., & Jowi, D. (2008). The relationships among social phobia, communication apprehension, and willingness to communicate. *Human Communication*, 11, 409-430.
- Zajacova, A., Lynch, S. M., & Espenshade, T. J. (2005). Self-efficacy, stress, and academic success in college. *Research in Higher Education*, 46, 677-706. doi:10.1007/s11162-004-4139-z