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Students' Attributions of Instructor Credibility as a Function of Instructors' Out-of-Class Support

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Instructional communication scholars have examined interactions between teachers and students in order to discover the best educational methods and practices for helping students learn (e.g., Ellis, 2000; Schrodt et al., 2009; Witt, Wheeless, & Allen, 2004). Despite the value of this research, however, scholars have focused primarily on how instructors' *in-class* messages and behaviors influence student learning. Much less is known regarding the interactions that occur between teachers and students *outside of* the classroom setting, and in many ways, out-of-class interactions have the potential to influence in-class activities and student learning outcomes. In fact, students frequently experience non-educational pressures outside of the classroom that can impact the learning process in a meaningful way (Jones, 2008).

In response to these pressures, scholars have recently increased their efforts to more closely examine teacher-student interactions occurring outside of the classroom (Aylor & Oppliger, 2003). For instance, researchers have demonstrated that competent out-of-class communication (OCC) can enhance student retention (Milem & Berger, 1997; Pascarella & Terenzini, 1991; Pike, Schroeder, & Berry, 1997), academic per-

formance (Pascarella, 1980; Terenzini, Pascarella, & Blimling, 1996), positive affect toward learning (Pascarella & Terenzini, 1991), positive multicultural attitudes (Armstrong, 1999), and personal development (Astin, 1993; Kuh, 1995). Additionally, Jaasma and Koper (1999) determined that when students use OCC to interact with teachers, particularly when those interactions go beyond the course material, students not only develop interpersonal relationships with their teachers, but such interactions encourage students to discuss their personal problems. However, while much of the existing OCC research literature focuses on the positive effects of OCC on students' overall academic experience, Myers et al. (2007) recently determined that teacher verbal aggressiveness can actually have a negative impact on students' willingness to communicate with their teachers outside the formal classroom setting. Collectively, this body of research has demonstrated the meaningful role that OCC plays in the instructional communication process, yet questions remain concerning how instructors might best support students who are struggling academically due to stressful, personal situations.

In order to address these questions, Jones (2008) recently advanced the concept of out-of-class support (OCS). According to Jones (2008), OCS can be conceptualized as any form of instructor communication occurring outside of the classroom setting that (a) responds to students' needs, (b) communicates a sense of care, (c) validates students' self-worth, feelings, or actions, and (d) helps students cope with stressful situations through the provision of additional resources. Jones (2008) discovered that students reported being most satisfied and

motivated to learn with highly supportive instructors, and less satisfied and motivated with moderately or non-supportive instructors. Thus, the decision to provide out-of-class support to students should enhance not only classroom satisfaction and motivation for students, but students' perceptions of their instructors as well.

In the present study, we tested this line of reasoning by examining students' attributions of instructor credibility as a function of instructors' OCS. As Finn et al. (2009) argued, instructor credibility "maintains a key position in our current theorizing and understanding of instructor effectiveness" (p. 517), so much so that Myers (2001) identified credibility as one of the most important variables affecting the teacher-student relationship. Given that instructors' supportive communication includes helping students cope with, and manage, stressful situations by providing informational and/or tangible resources (Jones, 2008), it stands to reason that OCS should enhance students' perceptions of their instructors as being caring, trustworthy, and competent individuals. More specifically, when students receive highly supportive messages from their instructors outside of the classroom, they may be more likely to attribute internal characteristics of "caring," "trustworthiness," and "competence" to their instructors (i.e., "My instructor was highly supportive of me *because* he or she is caring, competent, and trustworthy"). Conversely, students who receive less supportive messages from their instructors, in turn, may be less likely to attribute their instructors' behaviors to the fact that he or she is caring, competent, and trustworthy. Therefore, in the present study, we examined the degree to which instructor OCS predicts students' perceptions of instructor credibility, as well as

the extent to which the association between OCS and perceptions of credibility depends on instructor and student biological sex.

THEORETICAL PERSPECTIVE

One theoretical perspective useful for examining students' perceptions of instructor behavior is attribution theory (Jasper, Hewstone, & Fincham, 1983; Weiner, 1986). As Jasper et al. (1983) noted, attribution theory focuses on the common sense way in which individuals attempt to answer "why" questions behind human behavior. In (and outside of) the classroom, this theory helps reveal the extent to which students look for causal reasons that could be used to explain observed instructor behaviors. An important distinction made in attribution theory is between internal attributions, which position the cause of a particular behavior within the person, and external attributions, which position the cause of the behavior within the situation (Weiner, 1986). Nisbett and Ross (1980) observed that such distinctions often lead to a fundamental attribution error, in which observers trying to explain someone else's behavior will have a tendency to underestimate the importance of external factors and overestimate the importance of internal factors.

When it comes to the college classroom, one of the most important goals an instructor can achieve is establishing credibility and rapport with his or her students (Schrodt & Witt, 2006). As Myers (2004) suggested, it is essential for instructors to establish credibility early in a new semester because students often

begin the first day of class with expectations that their instructors will be knowledgeable, professional, helpful, organized, and competent. Although establishing initial perceptions of credibility is vital to effective instruction, researchers have identified a litany of in-class and out-of-class behaviors that can be used throughout the duration of an entire course to enhance and maintain instructor credibility (Finn et al., 2009; Myers, 2001; 2004; Schrodt, 2003; Schrodt et al., 2009; Thweatt & McCroskey, 1998). In essence, students' perceptions of instructor credibility are not only influenced at the beginning of a new semester, but also throughout the entire semester by their instructors' in-class and out-of-class messages. In light of attribution theory, then, it stands to reason that students' attributions of their instructors are a function, in part, of their perceptions of their instructor's communication behaviors both in and out of the classroom. Thus, students' attributions of instructor credibility should vary as a function of instructors' OCS, particularly during interactions with their instructors in which students are seeking help with difficult or stressful circumstances.

Out-of-Class Support and Instructor Credibility

While the majority of students who attend college have a positive experience, other students may develop chronic stress due to more rigorous academic expectations, schedules, and requirements (Murphy & Archer, 1996). This type of academic stress can negatively impact students' psychological and physical well-being (Tennant, 2002), as well as increase students' symptoms of depression (Arthur, 1998) and physical illness (Tor-

sheim & Wold, 2001). In fact, when students experience these types of mental and physical health problems, it can lead to negative academic outcomes, such as lower grade point averages and retention rates (Haines, Norris, & Kashy, 1996). Consequently, further research is needed to identify ways of reducing the negative health effects of academic stress (MacGeorge, Samter, & Gillihan, 2005).

Jones (2008) suggested that OCS can be a means for improving the academic outcomes of stressed students. Students who are experiencing a stressful situation, particularly one of a personal nature, will perhaps be more likely to seek support from their instructors in a private setting (e.g., during the instructor's office hours) rather than in a classroom while surrounded by their classmates. As Jones (2008) argued, by communicating OCS messages, teachers can help students cope with and manage the stress and pressure they are experiencing. Providing informational and/or tangible support useful for coping with external demands and stressors, in turn, is likely to communicate to students that their instructors care about them and are invested in their personal and academic success. Thus, the more supportive instructors are outside of the classroom environment, the more credible they may become to their students inside the classroom.

Credibility can be defined as "the attitude toward a source of communication held at a given time by a communicator" (McCroskey & Young, 1981, p. 24), with *instructor credibility*, in turn, reflecting students' attitudes toward an instructor as a source of communication (Schrodt et al., 2009). McCroskey, Teven, and their colleagues appropriated the ethos/credibility construct

from empirical research on persuasive discourse (e.g., Hovland, Janis, & Kelley, 1953) to the teacher-student relationship, and subsequently developed a measure of instructor credibility that included three dimensions: competence, trustworthiness, and "goodwill" or perceived caring (McCroskey & Teven, 1999; Teven & McCroskey, 1997). Relying on this three-dimensional conceptualization of credibility, instructional scholars have investigated teacher behaviors thought to enhance credibility, as well as student outcomes that improve once an instructor has established his or her credibility in the classroom (Finn et al., 2009). For example, researchers have demonstrated that instructors who communicate in ways that generate understanding in the minds of their students (Schrodt, Turman, & Soliz, 2006), who are argumentative without being verbally aggressive (Edwards & Myers, 2007; Schrodt, 2003), who use moderate amounts of technology (Schrodt & Turman, 2005; Schrodt & Witt, 2006), and are immediate (Thweatt & McCroskey, 1998), confirming, and clear (Schrodt et al., 2009) are generally perceived as being more competent, trustworthy, and caring in the classroom. As Finn et al. (2009) noted, collectively, the instructor credibility literature supports Thweatt and McCroskey's (1998) claim that "the higher the credibility, the higher the learning" (p. 349).

Although the importance of instructor credibility is well-documented, with one notable exception (i.e., Myers, 2004), researchers have yet to fully examine the degree to which out-of-class interactions between instructors and students influence perceptions of instructor credibility. Specifically, instructor OCS has been conceptualized as messages given to students outside of

class that respond to students' needs, communicate care, validate students' experiences, and help students manage and cope with stressful situations. By definition, then, the successful provision of OCS should enhance students' attributions that their instructors are caring and trustworthy individuals. The degree to which OCS leads to attributions of instructor competence, however, remains less clear. On one hand, the ability to provide appropriate and effective forms of emotional support is one hallmark of what it means to be a skilled and competent communicator (Burleson, 2003). On the other hand, students may derive their primary attributions of instructor competence from teaching behaviors enacted within the classroom, in effect, separating their instructor as "teacher" from their instructor as "friend" or "mentor." Nevertheless, perceptions of instructor goodwill and trustworthiness are positively associated with perceptions of instructor competence (Finn et al., 2009), and thus, the provision of OCS should lead to positive attributions of competence as well.

OCS, Instructor Credibility, and Teacher and Student Biological Sex

Although the proposed link between OCS and attributions of credibility merits investigation, there remains one final factor that could potentially alter how instructors' supportive messages are interpreted and processed by students, namely, biological sex. In general, social support researchers have suggested that women are more supportive than men (Kunkel & Burleson, 1999). For instance, researchers have found that women are often more willing to provide support

(Trobst, Collins, & Embree, 1994), produce more emotionally supportive and comforting messages (Barbee, Gulley, & Cunningham, 1990), view support as important for maintaining interpersonal relationships (Burleson, Kunkel, Samter, & Werking, 1996), and seek more social support from others (Ashton & Fuehrer, 1993). In addition, men are more likely to offer instrumental support or to try to minimize the importance of problems, whereas women tend to provide more emotional support and empathy (Goldsmith & Dun, 1997).

Despite these trends, however, other scholars have argued that sex differences are too small and inconsistent to be the continued focus of communication research (Canary & Hause, 1993). Nevertheless, there is indirect evidence to suggest that sex differences may moderate the impact of instructors' behaviors (e.g., OCS) on students' attributions of instructor credibility. Specifically, Schrodt and Turman (2005) found that in the college classroom, student sex moderated the curvilinear effect of instructors' technology use on students' perceptions of instructor caring and competence. When coupled with Kunkel and Burleson's (1999) finding that women, in general, are more socially supportive than men, it stands to reason that biological sex may moderate the potential impact that instructors' OCS messages have on students' attributions of instructor credibility.

In sum, researchers have demonstrated that instructor credibility is positively associated with satisfying out-of-class communication between instructors and students (Myers, 2004). OCS represents a form of out-of-class communication that recognizes and validates students' experiences, and provides informational and/or tangible support useful for coping with external de-

mands and stressors. Thus, it stands to reason that the competent provision of OCS should enhance students' perceptions of instructor credibility. At the same time, social support researchers have found that women are more supportive than men (Kunkel & Burleson, 1999) and that women view social support as an important means for maintaining interpersonal relationships (Burleson et al., 1996). Consequently, students' interpretations of OCS and their subsequent attributions of instructor credibility may vary as a function of biological sex, though the precise direction and magnitude of such interaction effects remain in question. Given our inability to predict the precise direction and magnitude of any potential interaction effects, we advanced a research question rather than a hypothesis to explore this line of reasoning:

> RQ: How do instructors' out-of-class support messages and biological sex (i.e., instructor and student sex) interact to influence students' attributions of instructor credibility (i.e., competence, trustworthiness, and caring)?

METHOD

Participants

Participants were 634 undergraduate students enrolled in basic communication courses at two Midwestern universities. Participants included 372 females and 262 males, with a mean age of 20.22 years ($SD = 3.79$). The majority of students classified themselves as "white or Caucasian" (89.10%), and most students were classi-

fied as either first-year students (47.30%) or sophomores (30.60 %). Since the basic courses were part of general university requirements, students from a variety of majors participated. In exchange for minimal course credit, student volunteers completed a questionnaire which took approximately 15 minutes to complete.

Procedures

Given potential sensitivities associated with examining student stress, and consistent with the methodological approach used in previous social support research (e.g., Jones, 2008; Jones & Burleson, 1997; MacGeorge, 2001; Xu & Burleson, 2001), participants were randomly assigned to one of six hypothetical scenarios. After completing a series of brief demographic questions, the participants were asked to read a hypothetical scenario containing three separate sections (see Appendix). Specifically, the first section of the scenario was designed to control for any potential confounding variables related to the type of course (i.e., participants were asked to imagine that they are enrolled in a small, introductory communication course at a large, Midwestern university). Additionally, the first section of the scenario was designed to allow the biological sex of the teacher to be manipulated (i.e., participants were told that the instructor for the course is named either "Mr. Smith" or "Ms. Smith," depending on which teacher biological sex condition they were assigned). The second section was designed to control for the level and type of stress to which the participants were exposed. Finally, the third section described the type of OCS the students received from their hypothetical teacher. At this point in

the survey, participants were told that they received one of three messages from their instructor in response to the participant's problem: highly supportive, moderately supportive, or a non-supportive message. After reading all three sections of their assigned scenario, participants completed measures that assessed their perceptions of instructor credibility. The hypothetical scenarios used in this report have been validated in previous research on instructor OCS (i.e., Jones, 2008).

Quasi-Experimental Design

Out-of-class support. OCS was manipulated by randomly assigning participants to scenarios that included either a highly supportive, moderately supportive, or non-supportive instructor. The messages of OCS reflected in each of the scenarios were developed from Xu and Burleson's (2001) social support scale. Using the supportive characteristics and behaviors outlined by Xu and Burleson to systematically differentiate between OCS conditions, both informationally and emotionally supportive messages were included in the *highly supportive* condition (e.g., "This type of situation can be very upsetting and you have every right to feel the way you do" and "Let's take a closer look at your situation and see if we can come up with a couple of solutions to help you manage this problem and get you through this semester"), while only informationally supportive messages were included in the *moderately supportive* condition (e.g., "I only have a few minutes before my next class starts, but let's make an appointment for you to come back during my office hours when we can spend more time discussing this"), and no supportive messages

were included in the *non-supportive* condition (e.g., "I wish I had more time to help you out with this problem, but I am really busy right now with a couple of deadlines that must be finished by the end of the day. Maybe we can talk more about your situation next week").

Manipulation check. A manipulation check was used to assess the effectiveness of the six scenarios in differentiating among the three levels of OCS. A separate sample of 64 students who were unaffiliated with the current study were randomly assigned to one of the six scenarios and asked to recall how supportive the instructor was in each scenario. Using four questions derived from a modified version of Xu and Burleson's (2001) social support scale (e.g., "How supportive is the instructor?", "How helpful is the instructor?"), students were asked to rate the level of OCS described in the scenario by responding to five, semantic differential items (e.g., unsupportive/supportive, very unhelpful/very helpful), with higher ratings reflecting higher levels of OCS. ANOVA results supported the validity of the scenarios, $F(2, 62) = 29.24$, $p < .001$, as students perceived the most OCS in the highly supportive condition ($M = 4.50$, $SD = .46$), followed by the moderately supportive condition ($M = 3.67$, $SD = .84$) and the non-supportive condition ($M = 2.54$, $SD = 1.00$) in successive order.

Instructor credibility. Students' attributions of instructor credibility were measured using McCroskey and Young's (1981) Teacher Credibility Scale (TCS), and Teven and McCroskey's (1997) 10-item perceived caring scale. The TCS is a 12-item, semantic differential scale asking students to evaluate their instructor in terms of specific bipolar adjectives listed on a five-point scale. Six of the items measure instructor competence (e.g., "Un-

trained/Trained"), and six items measure instructor trustworthiness (e.g., "Honest/Dishonest"). These twelve items were combined with the 10-item, semantic differential scale developed by Teven and McCroskey (1997) for assessing students' perceptions of instructor caring (e.g., "Cares about me/Doesn't care about me"). The validity and reliability of the instructor credibility measure are well documented (Finn et al., 2009), with previous alpha coefficients ranging from .82 to .96 for all three dimensions (McCroskey & Teven, 1999; Schrodt, 2003; Schrodt & Turman, 2005). In this study, the three dimensions produced strong reliability with Cronbach's alpha coefficients of .93 for perceived caring ($M = 3.50$, $SD = 1.05$), .93 for competence ($M = 3.87$, $SD = .87$), and .93 for trustworthiness ($M = 3.73$, $SD = .97$).

Data Analyses

To address the research question, a 3 X 2 X 2 factorial multivariate analysis of variance (MANOVA) was computed to examine the combined and unique influences of instructor OCS (highly supportive, moderately supportive, and non-supportive), instructor sex, and student sex on students' perceptions of instructor credibility (i.e., caring, competence, and trustworthiness). To aid in the interpretation of all significant interaction effects, univariate factorial ANOVAs were examined for each of the three dimensions of instructor credibility, followed by post-hoc cell comparisons where justified by significant interaction effects. Due to concerns over Type I and Type II error rates when using Multiple Comparison Procedures (MCP) to assess higher-order factorial designs (Smith, Levine, Lachlan, & Fediuk,

2002), planned cell comparisons using a Bonferroni adjustment of the alpha level were obtained for significant effects.

RESULTS

The research question guiding this study explored how instructor OCS and biological sex (i.e., instructor and student sex) interact to influence students' perceptions of instructor credibility. The results of the factorial MANOVA revealed no significant three-way interaction effect of instructor OCS by instructor sex by student sex, Wilks' λ = .997, $F(6, 1240)$ = .287, $p > .05$, and no significant two-way interaction effects of instructor OCS by instructor sex, Wilks' λ = .994, $F(6, 1240)$ = .588, $p > .05$, or instructor sex by student sex, Wilks' λ = .992, $F(3, 620)$ = 1.59, $p > .05$. There was, however, a significant two-way interaction effect of instructor OCS by student sex, Wilks' λ = .978, $F(6, 1240)$ = 2.26, $p < .05$, η^2 = .02, as well as a significant, multivariate main effect for instructor OCS, Wilks' λ = .482, $F(6, 1240)$ = 90.99, $p < .001$, η^2 = .52. To aid in the interpretation of these effects, tests of between-subjects effects (i.e., factorial ANOVAs) were then examined for each dimension of instructor credibility and reported below.

Instructor Competence

For instructor competence, the results revealed a small, but statistically significant two-way interaction effect of instructor OCS by student sex, $F(2, 622)$ = 4.14, $p < .05$, η^2 = .01, as well as a moderate and significant

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main effect for instructor OCS, $F(2, 622) = 106.61$, $p <$ .001, $\eta^2 = .20$. Cell comparisons revealed that although both male and female students reported a decrease in perceptions of instructor competence as OCS became less and less supportive, the decline in perceptions of instructor competence was somewhat greater for female students than for male students (see Table 1 and Figure 1). For the main effect of instructor OCS, students attributed higher levels of competence to instructors who were described as being highly supportive ($M = 4.45$, $SD = .55$) than to instructors who were described as being moderately supportive ($M = 3.77$, $SD = .72$), though instructors described as being moderately supportive were perceived to be more competent than those described as being non-supportive ($M = 3.37$, $SD = .91$).
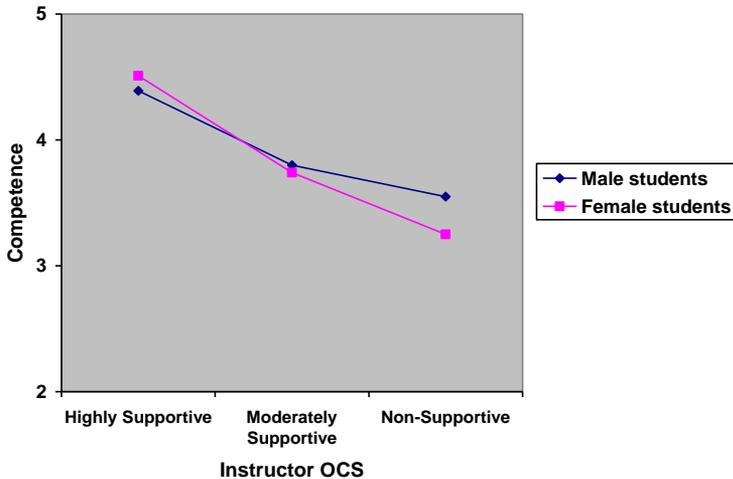

Figure 1. Two-way Interaction Effect of Instructor Out-of-Class Support (OCS) and Student Sex for Perceptions of Instructor Competence.

Table 1

Cell Means for the Two-Way Interaction Effect of Out-of-Class Support (OCS) and Student Sex on Instructor Credibility (N = 634)

Instructor Credibility	Instructor Out-of-Class Support					
	Highly Supportive		Moderately Supportive		Non-Supportive	
	Male Students	Female Students	Male Students	Female Students	Male Students	Female Students
1. Competence	4.39$_a$ (.61)	4.51$_a$ (.50)	3.80$_b$ (.74)	3.74$_b$ (.72)	3.55 (.77)	3.25 (.98)
2. Trustworthiness	4.43$_c$ (.59)	4.58$_c$ (.53)	3.77$_d$ (.71)	3.74$_d$ (.78)	3.06 (.73)	2.80 (.85)
3. Caring	4.31$_e$ (.56)	4.45$_e$ (.53)	3.57$_f$ (.80)	3.48$_f$ (.78)	2.83 (.85)	2.44 (.89)

Note. Standard deviations are in parentheses. Means in rows with the same subscript are not significantly different at $p < .05$.

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Instructor Trustworthiness

For instructor trustworthiness, again, the results revealed a small, but statistically significant two-way interaction effect of instructor OCS by student sex, $F(2, 622) = 4.43$, $p < .05$, $\eta^2 = .01$, as well as a moderate and significant main effect for instructor OCS, $F(2, 622) = 252.04$, $p < .001$, $\eta^2 = .30$. Consistent with the trends for instructor competence, cell comparisons revealed a decrease in perceptions of trustworthiness as OCS became less and less supportive, though the decline in perceptions of instructor trustworthiness was somewhat greater for female students than for male students (see Table 1 and Figure 2). For the main effect of instructor OCS, instructors who were described as being highly
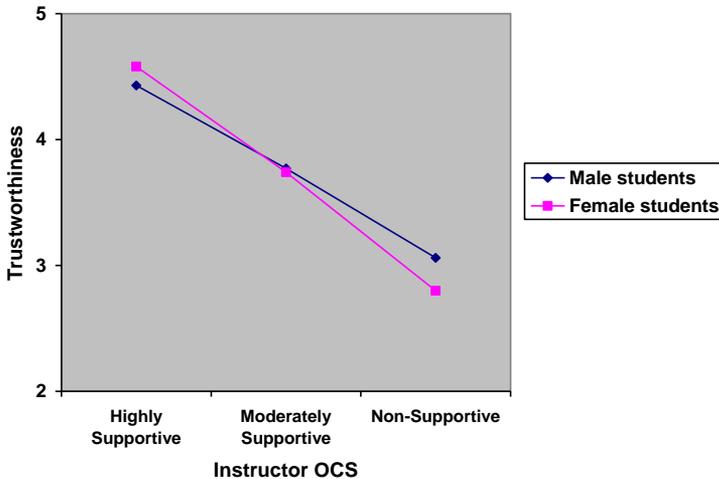

Figure 2. Two-way Interaction Effect of Instructor Out-of-Class Support (OCS) and Student Sex for Perceptions of Instructor Trustworthiness.

supportive (M = 4.52, SD = .56) were perceived as being more trustworthy than were instructors who were described as being moderately supportive (M = 3.75, SD = .75), though instructors described as being moderately supportive were perceived to be more trustworthy than those described as being non-supportive (M = 2.91, SD = .81).

Instructor Caring

For instructor caring, the results revealed a small, but statistically significant two-way interaction effect of instructor OCS by student sex, $F(2, 622)$ = 6.43, $p < .01$, η^2 = .01, as well as a moderate and significant main effect for instructor OCS, $F(2, 622)$ = 252.04, $p < .001$, η^2 =
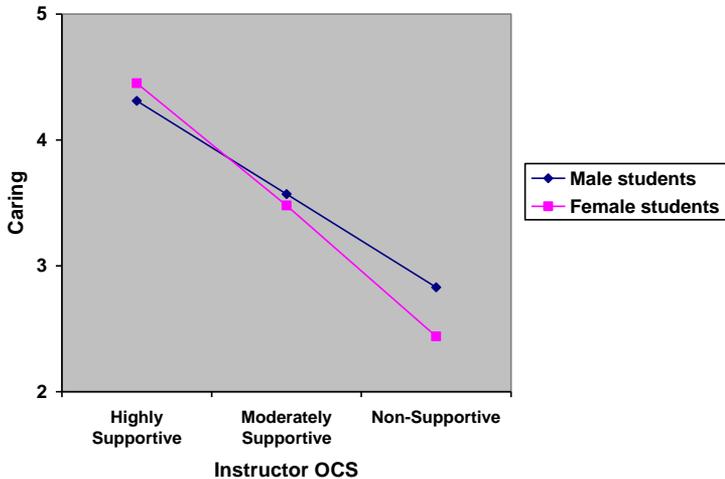

Figure 3. Two-way Interaction Effect of Instructor Out-of-Class Support (OCS) and Student Sex for Perceptions of Instructor Caring.

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.29. Consistent with the trends for instructor competence and trustworthiness, cell comparisons revealed a decrease in perceptions of instructor caring as OCS became less and less supportive, though the decline in perceived caring was somewhat greater for female students than for male students (see Table 1 and Figure 3). For the main effect of OCS, instructors who were described as being highly supportive (M = 4.39, SD = .54) were perceived as being more caring than instructors who were described as being moderately supportive (M = 3.51, SD = .79), though instructors described as being moderately supportive were perceived to be more caring than those described as being non-supportive (M = 2.60, SD = .89).

Post Hoc Analyses

An inspection of the effect sizes generated for each dimension of instructor credibility suggests that the effects of instructor OCS on students' attributions of instructor trustworthiness (η = .54) and caring (η = .55) may be greater in magnitude than the effect OCS has on instructor competence (η = .45). To test these differences statistically, a series of Hotelling's t-tests were conducted to compare the magnitude of effect sizes for each dimension of instructor credibility. These tests revealed that the effect of instructor OCS on perceptions of instructor trustworthiness, $t(631)$ = 4.52, p < .01, and instructor caring, $t(631)$ = 2.93, p < .01, were greater in magnitude than the effect of OCS on perceptions of instructor competence, though the difference in the effect for trustworthiness and caring was not statistically significant, $t(631)$ = 0.53, p > .05.

DISCUSSION

The principal goal of this study was to examine the degree to which instructor OCS influences students' attributions of instructor credibility. In general, the findings indicate that students attribute more credibility to instructors who provide high levels of OCS than to instructors who provide only moderately supportive or non-supportive messages. In fact, instructor OCS has a positive effect on students' perceptions of all three dimensions of instructor credibility, though the magnitude of the effect is slightly greater for two of the three dimensions (i.e., caring and trustworthiness). Although the positive effect of instructor OCS on credibility is consistent for both male and female instructors, the trend varies somewhat for male and female students in that the decline in perceptions of credibility is slightly larger for female students than for male students, particularly when comparing non-supportive messages. Consequently, these findings provide different implications for the potential use of OCS messages to enhance students' perceptions of instructor credibility, further extending the tenets of attribution theory to the instructor-student relationship.

When instructors interact with their students outside of the classroom in ways that validate students' self-worth and experiences, and when they help students cope with external demands and stressors by providing informational or tangible support, students are perhaps more likely to believe that their instructors are communicating with them in this manner because they are caring, trustworthy, and competent individuals. An

important implication of this research, then, is the notion that college instructors can increase their credibility by communicating OCS messages in response to students seeking help for personal stress situations. Given that higher instructor credibility often leads to increased student learning (e.g., Finn et al., 2009; Thweatt & McCroskey, 1998), these results are meaningful because they highlight the fact that instructors can not only increase their credibility via their in-class behavior, but they may also enhance their credibility through their out-of-class interactions with students (i.e., by communicating OCS). Thus, an indirect, causal relationship may exist between instructor OCS and student learning through enhanced instructor credibility, though of course, empirical research is needed to further investigate this line of reasoning given the correlational nature of our data.

When coupled with Jones' (2008) research on OCS, the results of the present study suggest that the competent provision of OCS could potentially enhance a variety of educational outcome variables (e.g., student learning, satisfaction, and motivation to learn). Nevertheless, some college instructors may be reluctant to provide OCS to students, in part, because they do not consider the provision of emotional support to students outside of class to be part of their professional responsibilities. Other instructors may be concerned that they will be perceived by students as giving preferential treatment to those students seeking help outside of class. Then, there are the difficulties associated with trying to determine the authenticity of students' accounts, particularly when students are requesting additional time to finish incomplete course requirements.

Personally, instructors may simply be concerned that providing OCS will exhaust their time and energy, or they may simply lack the communication skills necessary for providing *competent* OCS to students in need. Consequently, continued research is needed to investigate the potential risks that instructors face as they decide whether or not to provide out-of-class support to students experiencing stressful situations. Clearly, instructors can enhance their own credibility by communicating sensitivity to students' extenuating circumstances and a willingness to provide emotional support when needed, though the decision to do so may carry a number of drawbacks that should be considered as well.

A second noteworthy finding from this research is that the effect of instructor OCS is somewhat larger for students' attributions of instructor care and trustworthiness than for attributions of instructor competence. This finding may simply reflect the conceptual similarities between OCS and the trustworthiness and caring dimensions of instructor credibility, as students who seek help from their instructors outside of class may already perceive that their instructor is a caring and trustworthy individual to begin with. Less clear from the present study is whether perceptions of *instructor* (as opposed to personal) competence are truly enhanced by the provision of competent emotional support, or whether competence is enhanced because it is positively associated with perceptions of care and trustworthiness. Theoretically, the difference may depend on the distinctions that students make (or do not make) between the instructor as "teacher" and the instructor as "mentor" or "friend." In other words, students may derive their perceptions of instructor competence primarily from teach-

ing behaviors enacted *within* the classroom, whereas perceptions of instructor care and trustworthiness may emanate equally from behaviors enacted both within and outside of the classroom. As some scholars have argued (e.g., Frymier & Houser, 2000; Schrodt et al., 2006), the instructor-student relationship often constitutes an interpersonal relationship, one where the competent provision of OCS becomes an expectation that students have of their instructors rather than an added benefit of competent teaching. At a minimum, then, future research is needed to tease out the distinctions that students may make among the different roles that college instructors enact, as well as the degree to which students may come to expect the competent provision of OCS.

In terms of sex differences, both male and female students perceived instructors providing non-supportive messages to be the least credible, though female students were more likely to rate instructors who used non-supportive messages to be less competent, trustworthy, and caring than male students. One possible explanation for this small trend is that women are generally viewed as being more supportive than men (Kunkel & Burleson, 1999), and thus, women may have certain expectations about the proper way in which supportive interactions should occur. That being said, the effect size for student sex was relatively small, and consistent with previous research on sex differences in the provision and evaluation of supportive messages (e.g., MacGeorge, Graves, Feng, Gillihan, & Burleson, 2004), there were more similarities than differences between female and male students' attributions of credibility based on instructor OCS.

Overall, then, the results of this study offer at least two implications for college instructors seeking to enhance their credibility. First, instructors should carefully consider how they respond to students who come to them seeking support. The results of this study suggest that college instructors need to be aware that when students come to them for help with a stressful situation, this is not only an opportunity to help students manage their problems, but also to increase their own credibility as an instructor. Specifically, when encountering a student seeking help for a personally stressful situation, instructors can enhance their credibility by communicating high OCS messages (i.e., both informationally and emotionally supportive) in order to effectively support the student. Instructor and Graduate Teaching Assistant (GTA) training programs may build upon this research by incorporating useful examples of emotionally and/or informationally supportive messages based on the hypothetical scenarios used in this study , as well as more general guidelines of how to assist students who may be experiencing stressful situations outside of the classroom. Because these types of stressful situations can often be challenging to manage for even the most capable of faculty members, basic course directors should provide training sessions that include "realistic" OCS examples in order to better educate and prepare instructors and GTAs on the most effective methods for responding to students who come to them seeking support. This may be achieved by having instructors and GTAs participate in role-playing scenarios or case study activities based on the hypothetical scenarios from this study. Second, and perhaps most importantly, the results of this study extend the tenets of attribution the-

ory by providing evidence that students' attributions of instructors may vary as a function of their perceptions of an instructor's communication behaviors outside of the classroom setting. To the extent that instructors communicate emotional support in an appropriate and effective manner, students are more likely to grant them increased credibility as valid and legitimate sources of information. This, in turn, is likely to increase both the student's motivation to learn and, hopefully, their academic performance in the classroom (cf. Finn et al., 2009; Jones, 2008).

Despite the contributions of this study, however, the results should be interpreted with caution given the inherent limitations of the research design. Although hypothetical scenarios have been used successfully in other lines of research (e.g., Schrodt & Witt, 2006; Thweatt & McCroskey, 1998), the limitations of this approach and other categorical, experimental designs are well documented (Jackson & Jacobs, 1983). An important limitation of this approach is that it cannot reveal the ways in which actual instructor OCS messages influence students' perceptions of instructor credibility over the course of a semester. Nevertheless, given the theoretical focus on students' attributions of credibility, as well as the practical and methodological challenges associated with conducting a study with potential sensitivities in actual communication courses, the use of hypothetical scenarios was deemed appropriate.

Future researchers might extend these efforts by examining the ways in which students' perceptions of instructor credibility vary as a function of the *content* of specific instructor OCS messages over time. Clearly, no two stressful situations or external demands are exactly

alike, and the emotional support literature (including constructivism theory) points to the importance of using person-centered messages that account for the subjective, emotional, and relational aspects of communicative contexts (Burleson & Rack, 2008). Researchers might also consider how students provide emotional support to their instructors, as the relational perspective to instructional communication (see Mottet & Beebe, 2006) positions teachers and students as co-owners of shared meaning within the context of an interpersonal relationship. Through these types of investigations, scholars and educators may develop a more complete understanding of the various ways in which OCS enhances the instructor-student relationship, and ultimately, classroom learning.

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APPENDIX

Experimental Manipulations

Highly Supportive Instructor*

Section 1: Please imagine the following scenario. You are currently taking a small, introductory communication course at a large, Midwestern university from an instructor named Mr. Smith. Mr. Smith has been consistently rated as one of the best instructors, in terms of teaching ability, at the university. Over the semester you have gotten to know Mr. Smith and you have started building a connection with him. In addition, you've come to respect and trust this instructor.

Section 2: Approximately five weeks into the semester, you are diagnosed with a long-term illness. While it is not life-threatening, you are **extremely concerned** about how the illness will affect you physically and mentally. In addition, because your doctors indicate that

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you will be receiving regular treatment for your illness throughout the upcoming semester, which may interfere with some of your classes, you are **extremely nervous** that your performance in this class will be negatively affected. If stress was rated on a scale between 1 and 5 (1 = no stress; 5 = severe stress), you are currently experiencing a 4 in reaction to this situation.

Section 3: Think back to the stressful situation described in Section 2 of the scenario. Because you are not sure what to do about your problem, out of necessity, you decide to go to Mr. Smith for help. After explaining your problem, Mr. Smith says:

> "I understand what you're going through. This type of situation can be very upsetting and you have every right to feel the way that you do. I am so sorry to hear that you've been forced to deal with this situation this semester. Actually, one of my best friends in college dealt with a very similar situation during our sophomore year so I can really relate to what you're experiencing. Let's take a closer look at your situation and see if we can come up with a couple of solutions to help you manage this problem and get you through this semester. We will go over all of your options and figure out what's best for you. Oh, and one more thing, I promise that I won't discuss your situation with anyone else…I'll keep our conversation confidential."

Moderately Supportive Instructor*

Section 1: Please imagine the following scenario. You are currently taking a small, introductory communication course at a large, Midwestern university from an instructor named Mr. Smith. Mr. Smith has

been consistently rated as one of the best instructors, in terms of teaching ability, at the university. Over the semester, you have gotten to know Mr. Smith and you have started building a connection with him. In addition, you've come to respect and trust this instructor.

Section 2: Approximately five weeks into the semester, you are diagnosed with a long-term illness. While it is not life-threatening, you are ***extremely concerned*** about how the illness will affect you physically and mentally. In addition, because your doctors indicate that you will be receiving regular treatment for your illness throughout the upcoming semester, which may interfere with some of your classes, you are ***extremely nervous*** that your performance in this class will be negatively affected. If stress was rated on a scale between 1 and 5 (1 = no stress; 5 = severe stress), you are currently experiencing a 4 in reaction to this situation.

Section 3: Think back to the stressful situation described in Section 2 of the scenario. Because you are not sure what to do about your problem, out of necessity, you decide to go to Mr. Smith for help. After explaining your problem, Mr. Smith says:

> "That's a tough one…you must be pretty upset. Believe it or not, I've never really experienced a situation like this before, so I don't know how much help I can actually give you. I only have a few minutes before my next class starts, but let's make an appointment for you to come back during my office hours when we can spend more time discussing this."

*Non-Supportive Instructor***

Section 1: Please imagine the following scenario. You are currently taking a small, introductory communication course at a large, Midwestern university from an instructor named Mr. Smith. Mr. Smith has been consistently rated as one of the best instructors, in terms of teaching ability, at the university. Over the semester, you have gotten to know Mr. Smith and you have started building a connection with him. In addition, you've come to respect and trust this instructor.

Section 2: Approximately five weeks into the semester, you are diagnosed with a long-term illness. While it is not life-threatening, you are ***extremely concerned*** about how the illness will affect you physically and mentally. In addition, because your doctors indicate that you will be receiving regular treatment for your illness throughout the upcoming semester, which may interfere with some of your classes, you are ***extremely nervous*** that your performance in this class will be negatively affected. If stress was rated on a scale between 1 and 5 (1 = no stress; 5 = severe stress), you are currently experiencing a 4 in reaction to this situation.

Section 3: Think back to the stressful situation described in Section 2 of the scenario. Because you are not sure what to do about your problem, out of necessity, you decide to go to Mr. Smith for help. After explaining your problem, Mr. Smith says:

> "That's too bad. Unfortunately, your situation happens to a lot of people and everyone has to figure out how to deal with it in their own way. I wish I had more time to help you out with this problem, but I am really busy right now with a couple of deadlines that

must be finished by the end of the day. Maybe we can talk more about your situation next week."

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*Conditions were rewritten describing a female teacher to manipulate teacher biological sex.