Recognition of Emotion in Facial Expressions and Resident Advisor Effectiveness

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INTRODUCTION

Students who reside in residence halls have the opportunity for personal and community development by living, working, and learning together with other residents. The resident advisor (or resident assistant) serves a crucial role in establishing, facilitating, cultivating, and maintaining an environment for personal and community development for their residents. Of the responsibilities performed by resident advisors, an important responsibility is getting to know residents on an individual level by developing effective interpersonal relationships with their student advisees (St. Onge, Nestor, Peter, & Robertson, 2003). In general, to demonstrate interest in others and develop effective interpersonal relationships, people must communicate well. This is contingent on the ability to correctly interpret, recognize and understand the emotions of others (DeVito, 2001; Knapp, 1999; Nowicki & Duke, 1994). This study attempts to demonstrate the importance of identifying emotions in facial expressions in resident advisor performance because forming interpersonal relationships with student advisees is an important responsibility of resident advisors.

The purpose of this article is to examine whether effective resident advisors are more capable of correctly identifying facial expressions of emotion in others. We first demonstrate the importance of interpersonal relationships in the resident advisor role. We then describe how recognition of nonverbal communication is important in fostering and building interpersonal relationships between resident advisors and their residents. Next, we detail our study and the results. We then discuss our findings and limitations. We end by drawing implications and suggestions for future research surrounding nonverbal communication in a population of resident advisors, and recommend how our results can be integrated in the practice and training of resident advisors.

COMMUNICATION AND NONVERBAL COMMUNICATION

According to researchers, effective resident advisors show interest in their residents and desire to know their residents on a personal level by forming effective interpersonal relationships with them (Aamodt, Keller, Crawford, & Kimbrough, 1981; St. Onge et al., 2003). In addition, many residents rely on the resident advisor to provide social and emotional support (Elleven, Allen, & Wircenski, 2001; Twale & Muse, 1996) as well as to provide some aspects of counseling (Blimling, 1998). In effect, resident advisors must maintain interpersonal relationships with their residents. Therefore, resident advisors must communicate effectively with their residents as communication is essential for developing effective interpersonal relationships (DeVito, 1993, 2001; Giles & Street, 1994; Knapp, 1999; Wright, 1999). Previous research also has described highly effective and assertive resident advisors as being better communicators than less effective resident advisors (Shelton & Mathis, 1976). These studies uncover the importance of communication for effective resident advisor performance.

In their theory of communication, Adler and Rodman (1997) believe communicators have the ability to receive, decode, and respond to behavior of other communicators by simultaneously sending and receiving messages. However, it is not just the spoken word that must be interpreted. In fact, correctly interpreting the nonverbal and emotional cues of others may be of greater importance.

It is well-known that nonverbal communication may make up anywhere from 65% (Birdwhistell, 1970) to 93% (Mehrabian, 1968) of the actual meaning in interpersonal communication. In other words, understanding and correctly interpreting the emotional meanings of nonverbal behaviors are crucial, especially for effective

communication (Andersen, 1999; Burgoon, 1994; Nowicki & Duke, 1992) and preserving interpersonal relationships (Hodgins & Zuckerman, 1990; Sternglanz & DePaulo, 2004). As previously noted, both effective communication and interpersonal relationships are important in the role and performance of resident advisors (Elleven et al., 2001; St. Onge et al., 2003; Shelton & Mathis, 1976; Twale & Muse, 1996). Given the importance of recognizing and interpreting nonverbal behavior and emotions in others, this study attempts to extend previous research that has not specifically examined the recognition of emotion in facial expressions and its relationship with resident advisor performance.

Among all the possible nonverbal cues, it is no surprise that in "face-to-face" interactions, one of the most important skills may be reading emotional cues in facial expressions (Friedman, 1978; Noller, 1985; Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979). From birth, people are more attentive to facial expressions than other stimuli (Fantz, 1961; Kagan & Lewis, 1965), suggesting a natural tendency to attend to facial information (Fridlund, 1997). Facial expressions provide people with the necessary information regarding the intentions of others (Brown & Moore, 2000). Reading the emotions in facial expression may be critical in communication and engaging in effective interpersonal relationships, which are important for resident advisors to maintain. Previous research also has suggested that accurately reading emotional cues of facial expressions was related to effective social functioning and social adjustment in ongoing relationships (Andersen, 1999; Burgoon, 1994; Nowicki & Duke, 1992), the workplace, and relationships with family and spouses (Nowicki & Duke, 2002; Rosenthal et al., 1979; Schmidt & Cohn, 2001). Adults who more accurately read nonverbal cues of emotion (including facial expressions) also were perceived to be less shy, less socially anxious, and more encouraging, warm, empathic, and interpersonally sensitive (Knapp & Hall, 2002).

In review, accurately reading the nonverbal behaviors of emotion in others is crucial to effective communication (Andersen, 1999; Burgoon, 1994; Nowicki & Duke, 1992), and subsequently, effective communication is an essential component of interpersonal relationships (DeVito, 2001; Knapp, 1999; Nowicki & Duke, 1994). According to previous research, residents believe that communication and interpersonal relationships between residents and resident advisors are an essential component of resident advisor effectiveness and performance (Aamodt et al., 1981; Elleven et al., 2001; St. Onge et al., Shelton & Mathis, 1976; 2003; Twale & Muse, 1996). As a result, resident advisors who correctly recognize nonverbal expressions of emotion should communicate more effectively with their residents and should have better interpersonal relationships with their residents, as evidenced in performance appraisal ratings. Because communication and interpersonal relationships are vital to resident advisor effectiveness, the present research attempts to identify the relationship between resident advisor performance and successful recognition of nonverbal behaviors of emotion, specifically facial expressions. Therefore, we hypothesize that resident advisors who are more effective in their job (as identified through performance ratings from their own residents) will more accurately read and recognize nonverbal behaviors of emotions in facial expressions than resident advisors who are less effective in their jobs.

METHOD

Participants

This study was conducted at a large Southeastern university, where only junior and senior students are allowed to serve as resident advisors. Of the 95 resident advisors employed at the university, 60 (42 female and 18 male) volunteered to participate in this study. Out of the 60 resident advisors who volunteered to participate, 47% were Caucasian, 25% were Asian, 18% were African-American, and 10% did not disclose or marked "other" for ethnicity.

Residents in university housing had the opportunity to voluntarily fill out a performance appraisal for their respective resident advisors and provided consent to use the data in the present study. As a result, the present research used performance appraisal ratings from 1,493 residents. This is approximately 60% of residents housed on campus. Residents were not instructed to give demographic data to ensure anonymity and confidentiality of their ratings. Therefore, demographic data of the sample were not available.

Materials

Facial expression recognition: The battery of non-verbal tests used to measure the ability to correctly identify emotions of nonverbal behaviors is Nowicki and Duke's (1994) Diagnostic Analysis of Nonverbal Accuracy Scale 2 (DANVA2). This study used one specific test, the DANVA2-Adult Faces or DANVA2-AF (Nowicki & Carton, 1993), which consists of 24 photographs with an equal number of "happy," "sad," "angry," and "fearful" facial expressions of 12 men and 12 women, in 12 high and 12 low intensities. To create facial expression stimuli for the DANVA2-AF (Nowicki, 2006; Nowicki & Carton, 1993; Nowicki & Duke, 1994), experimenters read vignettes that elicited a specific emotion to participants. The experimenters then photographed the participants displaying the particular emotion related to the vignette. Students in college, high school, and grade school viewed the stimuli, and rated the stimuli for accuracy and intensity of affect. Only photographs in which there was at least 80% of agreement on the emotion communicated were included in the final form of the test. In the development of the stimuli for the DANVA2, the experimenters asked participants not only to rate the type of emotion expressed, but also the intensity of the emotion on a 5-point scale. This is important since individuals are required to accurately read low-intensity emotions in much of their everyday social interactions. As a result, three high- and three low-intensity emotional expressions were selected for each of the four emotions. Nowicki and Carton (1993) reported internal consistency of items on the DANVA2-AF as .77 (N = 104 college students) and test-retest reliabilities over a two-month period as $r = .84, N = 45$, showing satisfactory consistency over time. The DANVA has been used in more than 300 studies (Nowicki, 2006).

Resident advisor effectiveness: The university conducted a performance evaluation on every resident advisor staffed at the university using ratings from their residents. The university developed the instrument used for this study. The assessment consisted of 25 questions that pertained to many facets of a resident advisor's roles and responsibilities that the university's residence life office believed to be important, including programming, enforcement of rules and policies, and the resident advisor's role as a friend and helper. Sample questions included "My resident advisor serves in the role as a listener" and "My resident advisor asks residents for input when planning programs and activities." Each question was answered based on a 5-point Likert scale from 1 = strongly disagree to 5 = strongly agree. Scores were averaged for each advisee and aggregated across the advisees of a resident advisor to obtain performance effectiveness ratings for each resident advisor, with higher scores indicating better performance as a resident advisor. Because the university's residence life office provided data to the researchers in aggregate form, no validity or reliability information could be estimated for this study's data, and no previous validity or reliability studies are available for the measure.

Procedure

Residents evaluated their resident advisors' performance with appraisal ratings late in the fall semester. During the spring orientation training session, held in a large room at the university, each resident advisor took the DANVA2-AF for a 5-10 minute period. The researchers projected each face of the DANVA2-AF onto a screen one at a time for 5 seconds, and a 5-second pause followed each face. During the pause, resident advisors selected which emotion best represented the particular facial expression.

To make the comparison between "more effective" and "less effective" resident advisors, the researchers divided the resident advisors into two groups based on performance appraisal ratings from their own residents such that the first group of resident advisors would be classified as "more effective" and the second group would be classified as "less effective." Subsequently, based on a median split procedure of resident advisor performance appraisal ratings (Median = 4.21; range 3.51 to 4.78), resident advisors with performance appraisal ratings higher than 4.21 were classified and grouped by the researchers into the "more effective" resident advisor group, while those resident advisors with performance appraisal ratings less than or equal to 4.21 were classified and grouped together by the researchers into the "less effective" resident advisor group. These two groups were compared on the errors they made for each specific emotion (happy, sad, angry, and fearful), high- and low-intensity emotions, and total score of the DANVA2-AF. Scores on the DANVA2-AF pertain to errors in identification such that lower scores on the DANVA2-AF subtests indicate a higher number of faces that are correctly identified.

Otherwise stated, lower scores indicate a higher level of accuracy.

Results

As a result of having a directional hypothesis, the researchers conducted one-tailed t-tests with an alpha-level set at 0.05. More effective resident advisors were hypothesized to have fewer errors in identifying emotion in facial expressions than less effective resident advisors.

Table 1 indicates means and standard deviations of errors on facial expressions and t-test results identifying the differences between "more effective" and "less effective" resident advisors. Of the 24 total faces in the DANVA2-AF test, "more effective" resident advisors made fewer errors in identifying facial expressions of emotion than "less effective" resident advisors, but the difference is not significant at the 0.05 level. Examining specific subtests, there were two significant findings. Of the six fearful faces, "more effective" resident advisors made significantly fewer errors in the identification of fearful facial expressions than "less effective" resident advisors, t (58) = 2.17, $p < .05$. In addition, of the 12 high-intensity faces, "more effective" resident advisors made significantly fewer errors in the identification of high-intensity facial expressions than "less effective" resident advisors, t (58) = 2.06, $p < .05$. As predicted, "more effective" resident advisors made fewer errors at recognizing the facial expressions of emotion than "less effec-

tive" resident advisors, specifically in recognizing fearful and high-intensity emotions in facial expression.

DISCUSSION

Highly effective resident advisors were more accurate than their less effective peers in identifying emotions in facial expressions. While cause and effect cannot be determined within the present methodological design, the fact that the ability to read emotion in facial expressions is associated with more effective advising suggests that it may be an important part of the relationship process. Assuming that students look to their resident advisors for social and emotional support as well as counseling advice (Blimling, 1998; Elleven et al., 2001; Twale & Muse, 1996), these interactions may be potentially hampered if advisors are deficient in accurately reading emotions in faces. For example, a resident may feel sad and consequently visit the resident advisor for help and counseling. Should a resident advisor misinterpret sadness as anger, an error that could be suggested by the present results, rather than approaching to help, the resident advisor could feel threatened and may pull away and avoid subsequent interactions. Over time, such mistakes could interfere with the development of the resident advisor-advisee relationship.

An important differentiator between more effective resident advisors and less effective resident advisors was the ability to identify fear in

TABLE 1
MEANS, STANDARD DEVIATIONS, AND T-TEST RESULTS OF ERRORS IN FACIAL EXPRESSION RECOGNITION BETWEEN RESIDENT ADVISOR GROUPS

| Variable | More-Effective Resident Advisors | | Less-Effective Resident Advisors | | |
	Mean	SD	Mean	SD	t
AF – TOTAL	5.10	2.11	6.17	2.91	1.63
AF – HAPPY	0.73	0.78	0.40	0.62	-1.82
AF – SAD	1.57	1.04	1.90	1.12	1.19
AF – ANGRY	1.23	1.01	1.50	1.22	0.92
AF – FEARFUL	1.50	1.20	2.20	1.30	2.17*
AF – HIGH Intensity	1.87	1.14	2.63	1.69	2.06*
AF – LOW Intensity	3.17	1.60	3.37	1.40	0.52

Note. ME-RAs = More-Effective Resident Advisors; LE-RAs = Least-Effective Resident Advisors; AF = DANVA2-Adult Faces.

*$p < .05$

facial expressions. There are a multitude of reasons why residents may be afraid (e.g., impending exams or papers, being away from home for the first time, relationships or health problems). Hence, effective resident advisors who are attuned to the fearful facial expressions of their residents have a better idea of when to come forward to help. At the very least, being aware of a resident's tension and fear could alert resident advisors to ask what may be troubling the resident. Not only were effective resident advisors better at identifying fearful expressions, but they also were better at recognizing high-intensity emotions. Recognizing, or perhaps more importantly, *not* missing the intense signs of happiness, sadness, anger, or fear is critical in helping resident advisors reach their goals of cultivating interpersonal relationships and becoming more effective in their jobs. Not accurately identifying intense facial expressions of residents may be detrimental to the effectiveness of a resident advisor.

LIMITATIONS AND FUTURE RESEARCH

Although this study suggests that the ability to accurately identify emotions in facial expressions is important in the relationship between resident advisors and advisees, there are limitations to the results. For instance, those who apply for and attain such jobs as resident advisors may be better nonverbal communicators than the general population. Therefore this sample may have been restricted due to our sample selection process, thus creating range restriction (Sackett & Yang, 2000). Also, 63% of the resident advisors (60 of the 95) in the university agreed to volunteer and participate in the study; however, we cannot generalize the results of the resident advisors who agreed to participate in the study to those that chose not to participate. In addition, the proportion of female to male resident advisors precluded analyses of gender differences and it is not known if there is differential impact of the ability to identify emotions in facial expressions in same or mixed gender dyads. In the future, it may be of interest to examine the interaction of resident advisor gender with advisee gender, to see whether females are more "intune" with female facial expressions and vice versa. This information may be important for working with and training resident advisors in single-sex residence halls and for single-sex universities.

Other limitations and future research possibilities exist. For instance, though a resident's perspective of resident advisor performance is highly regarded, the resident advisor interacts with resident advisor peers, a residence hall director, and residence hall staff on a regular basis. Researchers should take into account the view of these observers, along with residents, in examining resident advisor effectiveness to acquire a more "global" perspective of performance or effectiveness (London & Smither, 1995; Tornow, 1993).

Although there appears to be an association between effective resident advising and the ability to identify facial emotion in the present study, this finding needs to be replicated and extended to other nonverbal cues and to resident advisors at other colleges and universities. Even if the association proves to be reliable and valid, it is probably only one of a number of possible contributors to resident advisor effectiveness (or ineffectiveness) such as personality, leadership, attitudes, or environmental factors (Cotterell, Eisenberger, & Speicher 1992; Deluga & Masson, 2000; Paladino, Murray, Newgent, & Gohn, 2005; Posner & Brodsky, 1993; Shelton & Mathis, 1976). Determining the incremental validity of recognizing nonverbal emotion beyond other predictors of resident advisor effectiveness may be a logical next step.

IMPLICATIONS

Research has shown that resident advisors must maintain and cultivate interpersonal relationships with their residents and therefore the ability to recognize emotions is paramount. One way to bring awareness of and apply this research to improve resident advisor performance is through resident advisor training. Training resident advisors is necessary to better serve the residents (Murphy & Eddy, 1997). If accuracy in identifying emotion does play a role in establishing more effective interpersonal functioning, there are positive implications for tactics and strategies used in resident advisor training, especially when the focus of the training is on developing interpersonal relationships, improving communication skills, and focusing on one-on-one interactions that may necessitate counseling and conflict management for increasingly diverse student populations (e.g., Anguiano & Harrison, 2002; Morrow, Burris-Kitchen, & Der-Karabetian, 2000; Wilgoren, 2000).

The four emotions of the DANVA2-AF (happiness, sadness, anger, and fear) are cross-culturally recognizable (Ekman, 1999; Ekman, Sorenson, & Friesen, 1969); however, culture may influence the ability to correctly recognize and interpret nonverbal behaviors and emotions (Matsumoto & Yoo, 2005). For instance, people can more accurately identify the emotions of others within their own culture as opposed to other cultures, and cultural variation exists in terms of nonverbal recognition accuracy (Elfenbein & Ambady, 2002a, 2002b; Izard, 1971; Marsh, Elfenbein, & Ambady, 2003). Therefore individuals communicating cross-culturally must not only understand and speak another language, but also be adept in the nonverbal cues specific to that culture. Wickline (2006) found that students foreign to the United States, who were not adept at reading the emotions in the faces and voices presented on the DANVA2, had more difficulty adjusting to their stay in the United States. As colleges and universities concentrate on diversity and multiculturalism in their enrollment, cultural differences in communication and specifically nonverbal communication, becomes relevant between resident advisors and their advisees. Resident advisors must foster and cultivate an environment for personal and community development for their residents, and must become culturally competent (Howard-Hamilton, Richardson, & Shuford, 1998; Pope & Reynolds, 1997; Watt, Howard-Hamilton, & Fairchild, 2004). Therefore, more attention is needed in terms of developing cross-cultural communication and understanding culture specific nonverbal cues for resident advisor training and for future research.

Nonverbal communication should be taken into account during fall training sessions, during periodic in-service training, or in academic classes designed for resident advisors. Training specifically designed for interpreting nonverbal behavior increases a person's confidence and self-efficacy in identifying behaviors and significantly improves the ability to correctly identify nonverbal behaviors (Costanzo, 1992). Subsequently, awareness of nonverbal cues helps resident advisors accurately identify emotion in nonverbal behaviors, since knowledge of nonverbal cues significantly predicts accurate recognition of nonverbal behavior (Rosip & Hall, 2004).

Nowicki and Duke (2002) outlined several methods used to improve a person's ability to correctly identify emotion in nonverbal behaviors. These same methods can be used during resident advisor training sessions to improve a resident advisor's ability to also correctly identify emotion in nonverbal behaviors. For instance, perspective taking, observation, and role-playing may be accomplished during resident advisor training sessions. Nowicki and Duke (2002) also suggested remediation techniques including interpreting the emotions from paintings and photographs, observing people at the mall, and turning down the sound of a television show or movie to decipher the emotions of the actors on screen. Finally, people who are strong at forging and maintaining interpersonal relationships could act as "coaches" for resident advisors. These coaches could identify difficulties or gaps in the resident advisor's ability to recognize nonverbal behaviors, observe the resident advisor's behaviors, and help the resident advisor become more adept at cultivating interpersonal relationships.

The findings also may impact professionals such as those in college and university student affairs, housing department staff, hall directors, and others who directly work with resident advisors. The importance of communication in developing interpersonal relationships may not be in the conscious minds of professionals who work with resident advisors, but given the findings, professionals who work with resident advisors may need to emphasize the importance of communication and establishing interpersonal relationships in resident advisor performance. In addition, these professionals should share the finding of the present study and stress that not only communication but also correctly recognizing and identifying nonverbal behaviors of emotion is a skill that may be of importance in performance and subsequent training and development of a resident advisor.

CONCLUSION

Resident advisors play an important role in the lives of college students through counseling, educating, and fostering relationships including individualized interpersonal relationships between advisor and advisee. Resident advisors need to be highly competent in establishing interpersonal relationships with their advisees to be effective in the resident advisor role. Historically, the ability to correctly identify, interpret, and understand the emotions of others is crucial for developing the competency of communication, which is essential for creating and maintaining interpersonal relationships. Based on the results of this study, resi-

dent advisors rated as highly effective by their own residents were more capable of correctly identifying emotive facial expressions than less effective resident advisors. As a result, successfully recognizing facial expressions related to emotion is one important skill resident advisors need to ensure their success on the job. University residence life offices and staff must be educated on the importance of nonverbal communication and the subsequent recognition of emotions as essential to the effectiveness of resident advisors. This study attempts to broaden research focusing on resident advisors by proposing that adeptness in recognizing emotions in facial expression is paramount to a resident advisor's performance.

REFERENCES

Aamodt, M. G., Keller, R. J., Crawford, K. J., & Kimbrough, W. W. (1981). A critical-incident job analysis of the university housing resident assistant position. *Psychological Reports, 49,* 983-986.

Adler, R. B., & Rodman, G. (1997). *Understanding human communication* (6th ed.). Fort Worth, TX: Harcourt Brace College Publishers.

Andersen, P. A. (1999). Creating close relationships through nonverbal communication: A cognitive valence approach. In L. K. Guerrero, J. A. DeVito, & M. L. Hecht (Eds.). (1999). *The nonverbal communication reader* (2nd ed.) (pp. 453-461). Prospect Heights, IL: Waveland Press, Inc.

Anguiano, R. P. V., & Harrison, S. M. (2002). Teaching cultural diversity to college students majoring in helping professions: The use of an eco-strengths perspectives. *College Student Journal, 36,* 152-156.

Birdwhistell, R. L. (1970). *Kinesics and context: Essays on body motion communication.* Philadelphia: University of Pennsylvania Press.

Blimling, G. (1998). *The resident assistant: Applications and strategies for working with college students in residence halls* (5th ed.). Dubuque, IA: Kendall/Hunt Publishing Company.

Brown, W. M., & Moore, C. (2000). Is prospective altruistic-detection an evolved solution to the adaptive problem of subtle cheating in cooperative ventures? Supportive evidence using the Wason selection task. *Evolutionary Human Behavior, 21,* 25-37.

Burgoon, J. K. (1994). Nonverbal signals. In M. L. Knapp & G. R. Miller (Eds.). *Handbook of interpersonal communication* (pp. 229-285). Thousand Oaks, CA: Sage.

Costanzo, M. (1992). Training students to decode verbal and nonverbal cues: Effects on confidence and performance. *Journal of Educational Psychology, 84,* 308-313.

Cotterell, N., Eisenberger, R., & Speicher H. (1992). Inhibiting effects of reciprocation wariness on interpersonal relationships. *Journal of Personality and Social Psychology, 62,* 658-668.

Deluga, R. J., & Masson, S. (2000). Relationship of resident assistant conscientiousness, extraversion, and positive affect with rated performance. *Journal of Research in Personality, 34,* 225-235.

DeVito, J. A. (1993). *Essentials of human communication.* New York: HarperCollins College Publishers.

DeVito, J. A. (2001). *The interpersonal communication handbook.* (9th ed.). New York: Addison Wesley Longman, Inc.

Ekman, P. (1999). Facial expression. In T. Dalgleish & T. Power (Eds.), *The handbook of cognition and emotion* (pp. 301-320). Sussex, U.K.: John Wiley & Sons, Ltd.

Ekman, P., Sorenson, E. R., & Friesen, W. V. (1969). Pan cultural elements in facial displays of emotion. *Science, 164,* 86-88.

Elfenbein, H. A., & Ambady, N. (2002a). Is there an in-group advantage in emotion recognition? *Psychological Bulletin, 128,* 243-249.

Elfenbein, H. A., & Ambady, N. (2002b). On the universality and cultural specificity of emotion recognition: A metaanalysis. *Psychological Bulletin, 128,* 203-235.

Elleven, R. K., Allen, J., & Wircenski, M. (2001). Resident assistant training: A southwestern perspective. *College Student Journal, 35,* 609-615.

Fantz, R. L., (1961). The origins of form perception. *Scientific American, 204,* 66-72.

Fridlund, A. J. (1997). The new ethology of human facial expression. In J. A. Russell & J. M. Fernandez-Dols (Eds.). *The psychology of facial expression.* (pp. 103-129). Paris: Cambridge University Press.

Friedman, H. S. (1978). The relative strength of verbal versus nonverbal cues. *Personality and Social Psychology Bulletin, 4,* 147-150.

Giles, H., & Street, R. L., Jr. (1994). Communicator characteristics and behavior. In M. L. Knapp & G. R. Miller (Eds.). *Handbook of interpersonal communication* (pp. 103-161). Thousand Oaks, CA: Sage.

Hodgins, H. S., & Zuckerman, M. (1990). The effect of nonverbal sensitivity on social interaction. *Journal of nonverbal behavior, 14*, 155-170.

Howard-Hamilton, M., Richardson, S., & Shuford, B. (1998). Promoting multicultural education: A holistic approach. *College Student Affairs Journal, 18*, 5-17.

Izard, C. E. (1971). *The face of emotion*. New York: Appleton-Century-Crofts.

Kagan, J., & Lewis, M. (1965). Studies of attention in the human infant. *Merrill-Palmer Quarterly, 11*, 95-127.

Knapp, M. L. (1999). Nonverbal communication in developing and deteriorating relations: A conceptual framework. In L. K. Guerrero, J. A. DeVito, & M. L. Hecht (Eds.), *The nonverbal communication reader* (2nd ed.) (pp. 305-313). Prospect Heights, IL: Waveland Press, Inc.

Knapp, M. L., & Hall, J. A. (2002). *Nonverbal communication in human interaction* (5th ed.). Australia: Wadsworth Thomas Learning.

London, M., & Smither, J. W. (1995). Can multi-source feedback change self-evaluations, skill development, and performance? Theory-based applications and directions for research. *Personnel Psychology, 48*, 375-390.

Marsh, A. A., Elfenbein, H. A., & Ambady, N. (2003). Nonverbal 'accents': Cultural differences in facial expressions of emotion. *Psychological Science, 14*, 373-376.

Matsumoto, D., & Yoo, S. H. (2005). Culture and applied nonverbal communication. In R. E. Riggio & R. S. Feldman (Eds.), *Applications of nonverbal communication* (pp. 255-277). Mahwah, NJ: Lawrence Erlbaum Associates.

Mehrabian, A. (1968). Communication without words. *Psychology Today, 2*, 52-55.

Morrow, G. P., Burris-Kitchen, D., & Der-Karabetian, A. (2000). Assessing campus climate of cultural diversity: A focus on focus groups. *College Student Journal, 34*, 589-602.

Murphy, S. D., & Eddy, J. P. (1997). College residence halls research study: Student perceptions of resident assistants, fellow residents, and residence hall living. *College Student Journal, 31*, 110-114.

Noller, P. (1985). Video primacy – A further look. *Journal of Nonverbal Behavior, 9*, 28-47.

Nowicki, S. (2006) *A manual and reference list for the Diagnostic Analysis of Nonverbal Accuracy*. Unpublished manuscript, Department of Psychology, Emory University Atlanta..

Nowicki, S., Jr., & Carton, J. (1993). The measurement of emotional intensity from facial expressions: The DANVA FACES 2. *Journal of Social Psychology, 133*, 749-750.

Nowicki, S., Jr., & Duke, M. P (1992). *Helping the child who doesn't fit in*. Atlanta: Peachtree Publishers.

Nowicki, S., Jr., & Duke, M. P. (1994). Individual differences in the nonverbal communication of affect: The diagnostic analysis of nonverbal accuracy scale. *Journal of Nonverbal Behavior, 18*, 9-35.

Nowicki, S., Jr., & Duke, M. P (2002). *Will I ever fit in?: The breakthrough program for conquering adult dyssemia*. New York: The Free Press.

Paladino, D. A., Murray Jr., T. L., Newgent, R. A., & Gohn, L. A. (2005). Resident assistant burnout: factors impacting depersonalization, emotional exhaustion, and personal accomplishment. *Journal of College and University Student Housing, 33*, 18-27.

Pope, R. L., & Reynolds, A. L. (1997). Student affairs core competencies: Integrating multicultural awareness, knowledge, and skills. *Journal of College Student Development, 38*, 267-277.

Posner, B., & Brodsky, B. (1993). The leadership practices of effective RAs. *Journal of College Student Development, 34*, 300-304.

Rosenthal, R., Hall, J. A., DiMatteo, M. R., Rogers, P. L., & Archer, D. (1979). *Sensitivity to nonverbal communications: The PONS test*. Baltimore, MD: The Johns Hopkins University Press.

Rosip, J. C., & Hall, J. A. (2004). Knowledge of nonverbal cues, gender, and nonverbal decoding accuracy. *Journal of Nonverbal Behavior, 28*, 267-286.

Sackett, P.R. & Yang, H. (2000). Correction for range restriction: An expanded typology. *Journal of Applied Psychology, 85*, 112-118.

St. Onge, S., Nestor, E., Peter, P., & Robertson, T. (2003). Modifying RA training in support of a custom programming model. *Journal of College and University Student Housing, 32* 45-48.

Schmidt, K. L., & Cohn, J. F. (2001). Human facial expressions as adaptations: Evolutionary questions in facial expression research. *Yearbook of Physical Anthropology, 44*, 3-24.

Shelton, J. L., & Mathis, H. V. (1976). Assertiveness as a predictor of resident assistant effectiveness. *Journal of College Student Personnel, 17* (5), 368-370.

Sternglanz, R. W., & DePaulo, B. M. (2004). Reading nonverbal cues to emotions: The advantages and liabilities of relationship closeness. *Journal of Nonverbal Behavior, 28*, 245-266.

Tornow, W. (1993). Perceptions or reality: Is multi-perspective measurement a means or an end? *Human Resource Management, 32*, 246-264.

Twale, D.J., & Muse, V. (1996). Resident assistant training programs at liberal arts colleges: Pre-service and in-service option and RA perceptions of training. *College Student Journal, 30*, 404-410.

Watt, S. K., Howard-Hamilton, M. F., & Fairchild, E. (2004). An assessment of multicultural competence among residence advisors. *Journal of College & University Student Housing, 33*, 32-37.

Wickline, V. B. (2006). *Predicting cultural adjustment outcomes from nonverbal communication skill, cultural variables, and acculturative stress.* Unpublished doctoral dissertation, Department of Psychology, Emory University, Atlanta.

Wilgoren, J. (2000, May 24). Swell of minority students is predicted at colleges. *New York Times,* p. A16.

Wright, D. E. (1999). *Personal relationships: An interdisciplinary approach.* Mountain View, CA: Mayfield Publishing Company.