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COMMUNICATION RESPONSES TO POSITIVE OR NEUTRAL FACIAL
EXPRESSIONS BETWEEN THE GENDERS

by
Kimberly R. Hollingsworth

A Thesis

Submitted in partial fulfillment of the requirements of the Master of Arts in School
Psychology Degree
of
The Graduate School
at
Rowan University
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Approved by

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ABSTRACT

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Communication Responses to Positive or Neutral Facial Expressions Between
the Genders
2004/05

Dr. John Klanderman and Dr. Roberta Dihoff
Master of Arts in School Psychology

The purpose of this thesis was to determine whether or not college students would respond with any communication to a stimulus of nonverbal communication of either eye contact alone or paired with smiling to the same or opposite gender. The characteristics of this study may have implications on how successful nonverbal communication can be.

One-hundred-sixty students, 8 groups within, were randomly stimulated by either a female or male with either a positive or neutral facial expression and their natural responses were recorded. The responses were coded on a likert scale and analyzed with a 3 way ANOVA.

The data presented in this study allows this researcher to reject the second null hypothesis and accept the alternate hypothesis that a particular gender providing the nonverbal communication stimuli will gain more responses from the participants. A significant difference was found among the female providing nonverbal communication stimuli.

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Chapter 1: The Problem

Need

The need for this study on nonverbal communication and gender differences was completed for a few reasons. First, the researcher was a Behavior Therapist who worked only with developmentally disabled adults. Often, the working environment was in a crisis situation and most of the researcher's clients were completely nonverbal. Due to this situation, the researcher chose to investigate this topic in order to better understand and be more effective as a Behavior Therapist working with a nonverbal population. Second, the researcher discovered many developmentally disabled adults did not learn sign language or otherwise developed their own form or improvisation of sign language through gestures and other forms of nonverbal communication. The origin, nature, history, and rhetoric of nonverbal communication became an interest much like attempting to learn a foreign language.

Purpose

The purpose of this study was to determine whether or not individuals would respond with any communication to a stimulus of nonverbal communication of either eye contact alone or paired with smiling to the same or opposite gender. The characteristics of this study may have implications on how successful nonverbal communication can be. This study may or may not show that a particular gender may tend to more often receive and/or respond to nonverbal communication or nonverbally

interact with a specific gender more often. This was an important factor to consider when working in an environment consisting of only communication that is nonverbal.

Research Questions

The main research question asked in this study regarding gender difference was: Do males or females respond more often to nonverbal communication? Another question posed by this study was whether either gender tends to respond to nonverbal communication more often when provided by a particular gender? The final question, involved what types of communication responses will occur, if any? The hypothesis was that females would tend to respond to nonverbal communication more often. The second hypothesis was that females will respond to a male's nonverbal communication stimulus more often or males would respond to a female's nonverbal communication stimulus more often. The final hypothesis was that nonverbal communication of eye contact alone would be the most common response for both stimuli of eye contact alone and eye contact when paired with smiling. The dependent variables were the observable human behavior of any response of communication that may have been elicited in reaction to the nonverbal communication stimulus.

Background

Throughout the twentieth century many psychologists, anthropologists, and other professional researchers have attempted to define nonverbal communication. Nonverbal communication has been a form of communication that occurs among all

species that communicate with each other, including the only verbal species, which are human beings. Humans are the only species that have a vocal tract able to produce fine modifications for vocal sounds. A human's brain is also unique because it allows for a human to have voluntary control of his or her own vocal chords, (Ploog, 1992).

MacKay described nonverbal communication as every interaction that occurs except those interactions with the use of words, (1972). Mehrabian defined nonverbal communication as implicit or subtle communication, (1981). Kendon tended to agree with MacKay when he referred to nonverbal communication as all of the ways people communicate other than with words such as bodily activity, gesture, facial expression, orientation of spatial positioning and posture, and touch and smell. Kendon also referred to nonverbal communication as that which could not be communicated in words, (1981).

Nonverbal communication contains three main characteristics. The first being: nonverbal communication cannot exist without two present participants. The second characteristic of nonverbal communication was that it could be the equality of how one said something through tone and when they choose to say it. The third characteristic of nonverbal communication was what can be inferred from another's behavior whether or not he or she has spoken, (Kendon, 1981).

Definitions

For the purpose of this study, the terms nonverbal communication and facial expressions were used interchangeably. The nonverbal communication used as stimuli

in this study was either eye contact alone or eye contact paired with smiling. The nonverbal communication received as responses were: 1) no response, 2) looked away immediately, 3) brief eye contact and looked away, 4) made eye contact, 5) made eye contact, smiled, and looked away, 6) made eye contact, smiled, and did not look away, 7) made eye contact, smiled, and gestured with head or nodded, and 8) made eye contact, smiled, and spoke to the individual providing the stimuli.

Assumptions

This research was based on the assumption that data collection and stimuli provided remained consistent and equal throughout the study. Those researchers collecting data will not be influenced by subjects they choose to provide a nonverbal stimulus to, but that the subjects will be randomly chosen within a controlled environment. It must also be assumed that attractiveness or and/or approachableness was perceived differently from participant to participant so these qualities of the individuals providing stimuli were not an influential factor to the participants.

Limitations

This research was limited by the population all being taken from the campus at Rowan University. The generalizability of this study may be limited to universities similar to Rowan University.

Overview

In Chapter 2, all research will be reviewed as it relates to nonverbal communication in the Literature Review. The design of the study will be explained including a description of the participants, and the variables in the study in Chapter 3. The analysis and interpretation of the results are reviewed in Chapter four. Finally, in Chapter 5, the relevance of the findings and implications for the future is discussed.

Chapter 2: Literature Review

Introduction

Over the past 40 years, numerous have been completed on nonverbal communication from adults, to children, to animals, within sexual relationships, between the genders, and even within art, therapy and medical care, music, and multiculturalism. The studies that apply specifically to this thesis will be reviewed first and those contributing more general information on nonverbal communication will follow.

Nonverbal Communication and Gender

In 2001, Aguinis and Henle produced a study reviewing nonverbal behavior on perceptions of a female employee's power bases. The hypotheses of this study were as follows: 1) Women employees who engaged in nonverbal behaviors of direct eye contact were perceived as negative when compared to women employees who engaged in nonverbal behaviors of indirect eye contact. 2) Female employees were perceived as more powerful when a relaxed facial expression was displayed when compared to a nervous facial expression. A research question was posed to address body posture which was: Were female employees perceived as more powerful when they sat back in a chair with their legs crossed or when they sat on the edge of their seats?

One hundred seventy four participants were recruited from an undergraduate course, assigned to read a description of an interaction, between a male and female co-

workers, and to answer questions about the description. Eight versions of the discussion existed describing the female employee with different combinations of these three characteristics: 1) looking directly at male employee or looking around the room, 2) having a relaxed facial expression or nervous facial expression, 3) sitting back in her chair with her legs crossed or on the edge of her seat. Other than the description of the female's various nonverbal behaviors the discussions were neutral in nature of the context of the interaction between the employees and did not vary in any other way. The participants were asked to rate the female's on 6 power bases (reward, coercive, legitimate, expert, referent, and credibility) a nine point likert scale. No differences were found regarding eye contact except increasing the rating of coercive power when the female employee displayed direct eye contact. Differences were found for all the power bases regarding facial expressions. The female employee's relaxed facial expression was associated with less power on all the power bases when compared to the female employee's facial expression as relaxed. In terms of the research question, the female employee was perceived as having more referent power when she sat back in her chair with her legs crossed rather than on the edge of her seat.

Lynda Nilges presented a study in 2000 that analyzed nonverbal communication through gymnastic sequences portrayed between the genders. Twelve male and 10 female participants were recruited from an undergraduate educational gymnastics methods course and were assigned to design and perform a gymnastics sequence. Throughout the course the participants were exposed to numerous gymnastics movements that favored both masculine and feminine styles based on weight

(strong/light), time (sudden/sustained), space (direct/indirect), and flow (bound/free), respectively. The sequences were videotaped and analyzed.

The movements within the sequences were coded according to the Laban Movement Analysis. Significant differences were found between the gender groups. In terms of weight, the male group used a higher percentage of strong actions than the female group and the female group used a higher percentage of light actions than the male group. In terms of time, no differences were found between the genders. Both the female and male groups used a high percentage of sudden movements, although the female group did use a higher percentage of neutrally coded movements than the male group. In terms of space, the male group used a higher percentage of direct movements than the female group and the female group used a higher percentage of indirect movements than the male group. In terms of flow, the male group used a higher percentage of bound actions than the female group and the female group used a higher percentage of free actions than the male group.

Garstecki and Erler presented a study in 1999 on gender differences within the communication profiles of hearing impaired older adults. Three hundred one seniors, 142 women and 159 men, 65 years of age and older were recruited as participants from the Chicago area senior organizations. Each participant completed the Communication Profile for the Hearing Impaired. Women reported more difficulty with communication regardless of hearing loss than men reported. Women reported it was important to communicate effectively more often than men reported this. Women reported using nonverbal behaviors to communicate effectively more than men reported. Women

more often reported anger, stress, and denial associated with their own hearing loss than men reported.

Carli, LaFleur, and Loeber produced a study in 1995, which reviewed how the affect of nonverbal behavior, gender, and influence of a speaker are reported by an audience. A videotape recording was presented and viewed by 80 males and 80 females who were told they were participating in a study on how first impressions may relate to group interactions. The participants were led to believe the speaker on the videotape would be working with them in the future in a group setting. Four videotapes existed of four different speakers presenting a speech on a topic to an individual whose gender was ambiguous. The topic was chosen according to a pretest administered to the participants that had no biased message or reception in terms of gender differences. Two of the videotapes included female speakers and the other two included males. Each speaker presented the exact same speech in one of four nonverbal communication styles, which included dominant, submissive, social, and task. The four nonverbal communication styles attempted to fulfill the expectation of their titles, which can all be self-explanatory, except for task. Task attempted to use a neutral nonverbal communication style that clearly conveyed the intent of the speaker's speech. In actuality, 16 speeches existed. Each participant only viewed one version of the speech. Once the participant viewed the speech they were asked to rate how well they could work with the speaker and rate the speaker on 16 different characteristics, estimate the speaker's GPA, and the gender of the individual listening to the speech in the videotape.

Three hypotheses existed within this study: 1) Women speakers with a task or dominant nonverbal communication style when paired with a male audience were expected to be less likeable and more threatening than a male speaker with each of the same nonverbal communication styles when paired with a male audience. 2) Audiences were expected to be more influenced by a task or social nonverbal communication style when compared to a dominant or submissive style. In addition a male audience was expected to be more influenced by a male speaker with a task or dominant nonverbal communication style than a woman speaker with the same nonverbal communication styles. Male audiences were also expected to be more influenced by women speakers who used a social style rather than a task style. 3) Likeableness and competence were expected to be significant predictors of influence, although a female speaker's reported likeableness was expected to be a greater predictor of their influence than a male speaker's reported likeableness.

The results of the hypotheses were as follows: 1) Male audiences preferred male task speakers to female task speakers. Male audiences preferred male and female dominant speakers to the same degree. Each gendered audience found the opposite gendered task speakers more threatening than their same gendered task speakers. In addition, each gender of audiences found the opposite gendered dominant speakers not to be more threatening than his or her same gendered dominant speakers. 2) Task and social speakers influenced more than submissive or dominant speakers. Male audiences perceived male task speakers to be more influential than female task speakers. Furthermore, male audiences found female task speakers to be even less

influential than female social speakers. Male audiences found no greater influence to exist between the different gendered dominant speakers. 3) Likeableness and competence were perceived to be significant predictors of influence by both genders of audiences. A female speaker's reported likeableness was a greater predictor of influence than a male speaker's reported likeableness as perceived by male audiences. Male audiences did not perceive competence to be more influential factor when comparing male and female speakers.

Hall, Irish, Roter, Ehrlich, and Miller completed a study in 1994 on the analysis of doctor and patient communication between the genders. These researchers studied verbal and nonverbal communication between a doctor and patient within 100 doctor visits. This study reviewed more nonverbal behavior than other research conducted within medical visits completed in the past. Twenty-five men and 25 women internist physicians were recruited from a teaching hospital to participate in the study. Fifty men and 50 women participated as patients in the study during their routine doctor visits consisting of primary complaints. Each physician conducted two appointments, one with a female patient and one with a male patient. Each appointment was videotaped and the lens cap was applied during any type of physical examination, but the camera was kept running to continue recording any audio track. Audio tracks of the videotapes were split for early and later sections of voice clips within the same appointment to code the communication occurring during the beginning and ending of the appointments separately. All patients were allowed to request the camera be turned off at any time, but no one requested this option. A questionnaire containing information

on health status, socio-demographic characteristics, education, income, doctor gender preference, amount of doctor appointment within the past 6 months, amount of sick days taken within the past 6 months, physical health, mental health, and overall rate of health was requested to be completed by the patient after the doctor appointment.

The rating of the different types of communication that occurred within the doctor visits is described. Undergraduates who were blind to the analyses of the study but trained to code specific behaviors rated the verbal behavior from the voice clips within the appointments. Technical language such as names of medications and other medical words were counted for frequency, but were not coded because they were not considered part of everyday English. The RIAS was applied to all verbal communication used by the doctors and the patients to categorize the different utterances or types of language used that occurred with the appointments. Nonverbal communication, such as tone and voice quality, paired with verbal communication content will determine the categorization of an utterance. Nine categories of utterances existed: 1) social conversation, 2) positive talk, 3) partnership talk, 4) emotionally concerned talk, 5) disagreements, 6) medical questions, 7) psychosocial questions, 8) medical information, and 9) psychosocial information. Back-channel remarks, such as mm-hmm and yeah, were counted from both doctors and patients and considered as sustained attention.

The evaluation of the different types of nonverbal communication that occurred within the doctor visits is described. Undergraduates who were blind to the analyses of the study rated the nonverbal behavior from the videotapes without the audio within the

appointments on four scales: angry or irritated to friendly or warm, interested or concerned to bored or uninvolved, anxious or uninvolved to calm or relaxed, and dominant or assertive to submissive or weak. The amount of smiles, nods, and touches provided by the doctor were counted for frequency. These nonverbal gestures could not be counted for the patient due to the positioning of the camera. The amount of time the doctor wrote or reading was recorded. Doctor directed gaze toward the patient could not be timed due to camera positioning. The inverse of the recorded time of the doctor spent reading or writing was counted as a surrogate for the doctor directed gaze toward the patient. These gestures were the nonverbal behaviors that existed to influence the ratings of communication.

These results found many differences within the communication between the genders to and from the doctors. It was found that female doctors spent more average time on appointments than male doctors did. Female doctors also made an average of more utterances than male doctors did. Patients made a higher average of utterances to female doctors than to male doctors. The female doctor paired with a female patient spent a longer average time on an appointment when compared to the other three types of gender dyads. Female patients also made an average of more utterances to female doctors when compared to the three other gender dyads. It was also found that the average frequency of utterances between female doctors and female patients were equal. The average frequency of utterances found to be ruled by the male doctor within the male doctor and male patient dyads. Female doctors exhibited a higher average of positive talk, partnership talk, biomedical questions, and psychosocial questions than

male doctors did. The highest average of positive talk from a doctor occurred within the female doctor and female patient dyad. No differences of average existed for information provided by the doctors according to gender. Female doctors averaged more technical language than male doctors did, but the least averaged amount of technical language used by a doctor was within the female doctor and male patient dyad when compared to the three other gender dyads. Female doctors used more back-channel responses than male doctors and both genders of doctors used them more often with female patients.

No differences of friendliness ratings of communication were found among the earlier voice clips between the genders. Male doctors were rated as having more friendly communication in the later voice clips. Same gendered dyads were also rated the communication as friendlier than opposite gendered dyads. The female voice in a female doctor and male patient dyad was rated the least friendly when compared to the other three possible gendered dyads. No differences were found among the early or late voice clips of the bored and calm ratings of communication. The male doctors' voices were found to be more boring than the females' voices. Female patients received more boring verbal communication than male patients did. The female doctor and male patient dyad was rated as containing the highest average of interested communication. Male doctors' communication was more often rated as calmer than the female doctors' communication was. Female patients received an average of more calmly rated communication than male patients did. The female doctor and male patient dyad contained the highest average of communication rated as anxious. Finally among the

voice clips, the female doctors were found to be rated as submissive more often than male doctors. Female doctors smiled and nodded on average more than male doctors did. Female doctors smiled on average more toward male patients when compared to any other gendered dyad and female doctors nodded more to female patients respectively.

These results found many differences within the communication between the genders to and from the patients. No difference of preference of doctor's gender existed between the genders of patients. Patients made an average of more partnership utterances to female doctors than to male doctors. The highest average of partnership utterances occurred from the male patient to the female doctor. A higher average of medical information based utterances occurred from patients to female doctors than to male doctors. The highest average of medical information based utterances occurred within the female patient and female doctor dyads. No differences were found among the friendly rated communications of patients between the genders in the voice clips. No differences were found among the earlier and later voice clips of communication rated as boring. Male patient communication was rated as more boring on average than female communication. The highest average of boredom rated communication from patients occurred with the female doctor and male patient dyad. Male patients received a higher average of calm rated communication on the voice clips than female patients did. Same gendered dyads received a higher average of calm rated communication when compared to the opposite gendered dyads. Female patients were rated on average more submissive than male patients, same gendered dyads were rated on average as

more submissive compared to opposite gendered dyads, and male patients paired with female doctors were rated on average the least submissive comparatively among the other dyads, on the voice clips regardless of earlier or later the voice clip.

In 1988, a study by Dovidio, Brown, Heltman, Ellyson, and Keating on the power displays within discussions of the different genders was published. Twenty-four males and 24 females were selected from a group of 50 males and 38 females. The original group was tested on their knowledge of traditional masculine, feminine, and neutral roles such as changing oil, sewing, and gardening, respectively. The final 48 participants were paired into opposite gendered dyads. They were asked to discuss materials, the logical order of steps, and unique problems within three different tasks. The dyads' discussions were videotaped and only given 3 minutes per discussion. The tasks discussed were oil changing (masculine), sewing (feminine), and gardening (neutral).

Experimenters coded and categorized the verbal and nonverbal behaviors for power displays. Verbal behaviors were the frequency of speech initiations made by a participant and time of interaction of speech between partners. Nonverbal behaviors were 1) looking while speaking, amount of time looking at partner while partner spoke, 2) looking while listening, amount of time while listen to partner speak, 3) rate of gesturing, frequency of hand gestures not touching the body, 4) frequency of chin thrusts, 5) frequency of smiling, 6) frequency of hand gestures touching the body, and 7) frequency of laughing.

Differences were found between the genders and between the different tasks discussed for the verbal behaviors collected. During the masculine and neutral topics men spoke and initiated speech more often than women. During the feminine topic women spoke and initiated speech more often. Differences were also found between the genders and between the different tasks discussed for the nonverbal behaviors collected, as well. During the masculine topic men looked more while speaking and less while listening, more often gestured, provided more chin thrusts, and smiled less than women. During the feminine topic women looked more while speaking and less while listening, gestured more, smiled more, and provided less chin thrusts. During the neutral topic men looked more while speaking, looked less while listening, gestured more, exhibited more chin thrusts, and smiled less than women. Women laughed more overall compared to men. No difference existed between the genders in terms of self-touching. Men showed more displays of power through verbal behavior during masculine and neutral topics, while women showed more displays of power through verbal behavior during the feminine topic.

In 1999, a study was completed on the impact of gender and immediacy on willingness to talk and perceived learning by Menzel and Carrell. Undergraduate students recruited 256 other undergraduate student participants, from most disciplines at a small university in the Midwest, as a requirement for a communications research class requirement. The participants completed a survey, referring to one of four student/professor gender dyads (male student/male professor, female student/male professor, male student/female professor, and female student/female professor). The

survey asked participants to rate how frequency they recently exhibited 20 verbal and 14 nonverbal immediacy behaviors. The perceived learning was measured by using a scale by Chrisophel, which asks students to rate how much they feel they are learning in the class on a scale, (1990). Willingness to talk in class was measured with a 19-question survey asking how often a student would be willing to participate in class under each of specific conditions. The results reported that willingness to talk positively correlated with perceived learning and varied significantly and positively across levels of instructor verbal immediacy, but not across levels of instructor nonverbal immediacy. Willingness to talk did not vary significantly between student genders or instructor genders. Perceived learning varied significantly and positively across levels of instructor verbal immediacy, but not across levels of instructor nonverbal immediacy. Perceived learning did not vary significantly between student genders. Male students perceived that they learned more from male professors and female student perceived that they learned more from female professors. Male perceptions of learning increased between low nonverbal immediacy and moderate nonverbal immediacy groups, but they did not increase between moderate nonverbal immediacy and high. Females perceived learning increased across all three levels of perceived instructor nonverbal immediacy, (1999).

Nonverbal Behavior and Sexual Relationships

In a study by Moore, in 1995, courtship signaling was observed by adolescents and compared to the courtship signaling of women. One hundred randomly selected

girls, between the ages of 13 and 16, were observed for 30 minutes each on nonverbal courtship behaviors (facial and head patterns, gestures, and posture patterns) and the approaches made to the participants by males. The observations were recorded and compared with the results of earlier studies of the courtship signaling of women. The first hypothesis was supported, that girls were similar to women in their exhibition of nonverbal behaviors in the presence of male peers and they used similar signals women used when signaling availability or interest. However, girls were much less attentive to boys and paid more attention to their female peers. The lower frequency of flirtations was associated with the lower frequency of approaches by boys. The courtship signals that girls used that were similar to those used of women were essentially the same, but exaggerated. Often, girls would imitate a dominant girl in the group. The dominant girl received the longest amount of eye gaze from the other girls. Girls also played or teased as a courtship signal more frequently than women. Even though the frequency of approaches by males was lower for girls than for women the number of approaches per signal was similar.

A study by Fichten, Tagalakis, Judd, Wright, and Amsel was completed in 1992 on verbal and nonverbal communication cues in daily conversations and dating. A 12-item structured interview was developed by the researchers used to determine the cues that people report using in daily conversations and dating. The structured interview assessed four dimensions: task (cues used by the respondent), messages (cues to indicate interest or lack of interest), contact (cues used face to face or over the telephone), and intimacy (cues during daily conversations with acquaintances or with

potential dating partners). Individual interviews were videotaped of the 84 Montreal residents that were recruited as participants. The results are based on the participants' beliefs of their reported answers. Participants were more knowledgeable about verbal than about nonverbal communication cues and they were better at specifying their own verbal productions and others' nonverbal behaviors and are consistent over intimate and casual situations. In a dating situation, more interest than lack-of-interest cues were reported, but during daily conversations respondents reported more boredom than interest. Participants seemed to be more aware of how others convey boredom, than interest in social conversation. In dating situations, subjects were more likely to be aware of interest than lack-of-interest cues and they were more likely to use behaviorally specific cues to indicate interest than lack of interest in pursuing a relationship.

A study by Grammer, Juetten, Schmitt, and Honda, on nonverbal courtship among Japan and Germany participants, was completed in 1999. Ninety-eight unacquainted participants were introduced to each other in dyads and casually left alone in a room together, while being secretly videotaped for ten minutes. Upon the experimenter's return, the pair was separated and asked to complete a questionnaire that collected information on personal data, and interest in the person they were waiting with. A computer analyzed the movements made by the participants and the results of the questionnaires were correlated with the movement data. The objective of this study was to show that communication could take place on levels other than those we can describe by discrete observable categories. When female interest was high, a

conversation could begin and mutual gazed would occur. Results also show that women are nonverbally more involved and more open in interactions than men and are more concerned with self-preservation. It was also demonstrated that women are more critical on men than men are on women. Touching only occurred once in this study, among a German pair. The analysis showed no consistent sex differences in behavior between the cultures. Among the German participants, no sex differences were found for speech, but among the Japan women more utterances were made and spoke longer than men. The sex differences found in the questionnaire held across cultures. The Japanese bodily behavior was different than that of Germans, like the fact that Japanese women never crossed or uncrossed their legs. The Japanese laughed and smiled less. The Japanese were more expressive than the Germans and showed a higher number of behavioral categories than the Germans. The Japanese speech structure is different than German because of the use of formalized affirmative markers used in speech. The Japanese gazed less often, but longer than Germans. However restrained it seemed, the Japanese nonverbal behavior was not found to be more restricted because the Japanese produced more movements. A sex difference was found for both cultures were that women were more expressive than men. Women tended to make more, shorter, smaller, slower, less complex movements when interested in men. Japanese women showed more pronounced changes than Germans in their nonverbal behavior.

Another study was done in 2002, by Koerner and Fitzpatrick, which review nonverbal communication and marital adjustment and satisfaction and the role of decoding relationship relevant and irrelevant affect. Sixty-four married couples were

recruited using newspaper advertisements and flyers inviting community members to participate in a research project on marital communication. The spouses were assessed on nonverbal affect in partner's message and the exchanges were videotaped and shown to judges to gain a more objective measure of encoding ability of spouses. Measures were obtained of how confident spouses were of their own encoding and decoding of messages to assess how aware spouses were of their own nonverbal communication skills. Couples were asked to complete a questionnaire of the Spanier's Dyadic Adjustment Scale and the Locke-Wallace Short Marital Adjustment Test and a demographic section. Then couples were led into a room and each took turns as a sender at a table, facing each other. The sender was videotaped and drew from a stack of 30 randomized cards that assigned a dialogue in a certain affect (affection, pleasure, neutral, depression, or anger) to communicate to their spouse. The sender also had to write what they were doing and how. Receivers were assigned to write their perception of the communication and check one of the three choices of affects offered on their side of the card and indicate their confidence of their response on a 6-point scale. The most significant finding was that the ability to encode and decode relational and nonrelational nonverbal affect correctly in a spouse's communication is especially true for husband's marital satisfaction and adjustment. For both spouses accurately decoding relational positive affect and nonrelational negative affect was associated with greater marital satisfaction. Being able to make positive attributions and to avoid making negative attributions about the relationship itself increases spouses' satisfaction with their relationships. The importance of correctly attributing affect was the most

vividly demonstrated in the case of husbands' decoding of nonrelational negative affect in their wives' messages. Both spouses were far superior in decoding each other's nonverbal affect than were the judges, which shows that familiarity is important for accurately decoding nonverbal affect. Husbands were better at decoding positive affect than wives and women were able to encode all five types of affect. Men were better at encoding relational negative affect and worse at encoding relational and nonrelational positive affect. The decoding accuracy of husbands had a greater influence on marital satisfaction, and wives' satisfaction depended less on the accuracy of their own ability to communicate nonverbally.

Juang completed a study in 1991, on the comparison of marital adjustment and interrelationships among Taiwanese and Caucasian- American couples. Sixty-two Caucasian-American and 60 Taiwanese couples, who attended the University of Florida in Gainesville, were contacted by telephone and recruited to participate in this study. They had a package delivered to them, which contained 2 small stamped self-addressed envelopes, one labeled "wife" and one labeled "husband:" two sets of assessments, the Locke-Wallace Marital Adjustment Inventory and the Primary Communication Inventory: and two copies of instructions for completing the assessments and returning them. The results showed that Taiwanese couples showed a significant model effect was found for verbal communication and no significant model effect was found for nonverbal communication or marital adjustment. Duncan multiple ranges tests showed that American women had significantly higher verbal communication scores than American men and American couples who had married more than once had lower

verbal communication than couples who had married once. Marital adjustment scores of couples that had married more than once were lower than those of couples married once. Significant positive relationships existed between verbal communication and marital adjustment for both Taiwanese and American couples. There was also a significant positive correlation between nonverbal communication and marital adjustment for Taiwanese couples, but not for American couples. The more children Taiwanese couples had, the more children they supported, the longer they were married, the lower were their verbal communication, nonverbal communication, and marital adjustment scores. The number of children American couples had and the more children they supported were negatively related to verbal communication and marital adjustment. The longer American couples were married the less marital adjustment they reported. Age, income, and education were not found to have any significant correlations with marital adjustment, verbal communication, or nonverbal communication for either Taiwanese or American couples.

A study by Hickman and Muehlenhard was completed, in 1999, on how young women and men communicate sexual consent in heterosexual situations. Three-hundred-seventy-eight undergraduate students from the University of Kansas were recruited to participate in this study. The participants were asked to complete a questionnaire that asked if they had ever had sexual intercourse, if they had not they were asked to answer as if they had, their sexual orientation, the number of partners with whom they had engaged in sexual intercourse, and a series of open ended questions were asked regarding how they and their sexual partner communicated

consent for sexual intercourse and how they communicated consent to their partner verbally and nonverbally. Within the questionnaire scenarios were given and the participants were asked how they would respond or imagine how they would respond. Participants who had engaged in sexual intercourse reported they used numerous signals to communicate sexual consent (direct verbal signals, direct nonverbal signals, indirect verbal signals, and indirect nonverbal signals). They reported that they almost never used comments about their level of intoxication or direct refusals to signal their sexual consent, but frequently communicate consent by not resisting. The participants reported that consent signals were related to ratings of sexual consent in specific scenarios. Women were more likely to use indirect verbal signals and men were more likely to use indirect nonverbal signals, no response, or comments about their level of intoxication to indicate sexual consent. Both women and men reported using no response more frequently than other signals. They were equally likely to use direct verbal and direct nonverbal signals, and equally unlikely to use direct refusals to signal consent. More similarities than differences existed in women and men's self-reported use of consent signals. Men rated direct verbal signals, direct nonverbal signals, indirect verbal signals, statements about intoxication, and no response as more indicative of their own sexual consent than did women. Women and men rated a direct refusal as being equally unindicative of their sexual consent. More men than women were able to imagine themselves initiating sexual intercourse both verbally and nonverbally.

Nicholas completed a study or ethnography, in 2004, on eye-gaze as identity recognition among gay men and lesbians. Thirty-five formal and informal interviews were collected and tape-recorded, while the researcher acted as participant-observer. The ethnography took place in two main locations, Oklahoma City, Oklahoma and Chicago, Illinois. One of the main behavior types that was reported during Gaydar occurrences was direct and prolonged eye-contact between the person, whose Gaydar was activated and the person who triggered the recognition. At least one of the people involved in the gaze interaction is aware that he or she is performing the function. The measure of length observed can be translated as a measure of “directness” or intention. The gay stare is a refined language of engagement. The direct stare holds a person’s attention, signaling that there is a reason the stare was employed. The stare creates a situation in which the subjects are forced into a paired involvement. The receiver may cast out for an appropriate response or if none comes the receiver’s state may rise and remain high until he or she is released from the gaze. If the subject assumes that the stare should have a response and reduce levels of stimulation than a response may be given. The gaze does not provoke flight, but solicits approach, which is situation specific. The Gaydar is experienced at varying levels of awareness and is heavily reliant on measures of cultural competency. The presence of other verbal and nonverbal cues along with utilization of the Gaydar gives way to better regulation and illustration of Gaydar occurrences.

Murphy, Driscoll, and Kelly completed a study on differences of nonverbal behavior of men who vary in the likelihood to sexually harass, in 1999. Thirty-five

students, who had completed a pretest, were recruited as participants via telephone contact. The participants were asked to complete a questionnaire, (the Likelihood to Sexually Harass scale) and the participants were asked to ignore any negative consequences for purposes of answering the questionnaire. Next, the participants were asked to answer another questionnaire on evaluating sexuality and dominance.

Participants were greeted by a male experimenter and instructed them to receive an interview. The interviewer was an attractive female confederate posing as a high school student. The interview was videotaped through a one-way mirror to record nonverbal behavior. At the end of the interview the female confederate handed the participant an envelope containing assessment form, which collected the participants' opinion of the female interviewer's performance as an interviewer. After completing the assessment form the participants were debriefed and consent was requested. The results of this experiment showed that high LSH participants showed more dominant nonverbal behaviors, but not more sexual interest nonverbal behaviors, than low LSH participants. High LSH participants leaned forward less, made more direct eye contact with the female interviewer, and oriented their bodies toward the interviewer less than the low LSH participants. High LSH participants spent less time in the interviews and wrote less detailed comments about the interviewer than low LSH participants.

Nonverbal behaviors indicating sexual interest did not discriminate between men varying in sexual harassment inclination when interacting with a subordinate female.

Nonverbal Behavior and Children

Moore and Porter completed a study in 1988 on leadership and nonverbal behaviors of Hispanic females across equal environments. The students were randomly assigned to gender-homogeneous groups made up of 3 Hispanic and 3 Anglo children and then videotaped them during a game interaction. Teachers rated students and students rated one another on perception of leadership and trained staff coded, counted, and timed their nonverbal behavior. The Hispanic females in this study were found to move significantly less in upward, verbally interrupt, or use horizontal space than Anglo females. Hispanic females were also voted significantly less often as having leadership skills than Anglo females. Hispanic males were found to use significantly more physical intrusions, and horizontal space. Hispanic males were voted as having average leadership skills, while Anglo males were voted as having lower leadership skills. This study also found that pre-game status was the most influential factor on perceived leadership among teacher and student ratings than any other factor. Female students consistently rated Hispanic females as having the lowest leadership skills. Among the coded nonverbal behavior, speaking time was found to be the most influential factor on leadership skills.

Quay and Blaney's study, in 1990, reviewed verbal communication, nonverbal communication, and private speech in lower and middle socioeconomic status preschool children. The sample consisted of 225 Head Start preschool students, who were 4 or 5 years old, having an IQ of at least 87, of an ethnically diverse group from only middle and lower socioeconomic groups. The Slossen Intelligence Test was

administered to all the participants and then they were each observed during free play over one month's time to collect the three types of communication of this study.

Private speech decreased from age 4 to age 5 among middle socioeconomic students, but remained the same for the lower socioeconomic students. Nonverbal and verbal communication increased for lower socioeconomic students, but among the middle socioeconomic students both the nonverbal communication decreased and the verbal communication increased with peers.

Twenty-two children, 6 to 8 years; 20 preadolescents, 10 to 12 years; and 20 adolescents aged 14 to 16 years participated in a study by DeArth-Pendley and Cummings, on children's emotional reactivity to interadult nonverbal conflict, in 2002. The children were asked to individually watch a video of 12 1-minute scenarios of a male and female having 5 nonverbal expressions, 1 nonverbal expression of sadness, 1 nonverbal expression of fear, 2 nonverbal friendly interactions, 1 verbal friendly interaction, 1 verbal expression of anger without a resolution, and 1 verbal expression of anger with a verbal resolution. The participants were asked to imagine the scenarios were about their parents and the videotape was paused after every scenario and their emotions were assessed and given a questionnaire that assessed the participant's perceptions of the actors' emotions, the participant's perceptions of their own emotions in response to the scenarios, the participants' problem solving strategies, personal interventions, and confidence levels in terms of the interventions. The research assistants asked the participants what each parent could have done to feel

better, what they would do if they saw their parents behave this way, and how confident they were about their intervention resolving a conflict like this with their own parents.

The findings of this study present that child are aware of the nonverbal communication of conflict within parental conflicts and that children do react similarly and negatively to nonverbal communication as verbal communication concerning parental conflict. Adults' displays of fear produced greater feelings of negativity than any other nonverbal ending except for sadness. Younger children were more likely to avoid intervening in the parental conflict than older children, but when the younger children did report intervention they were more likely to approach both parents than show a preference to either parent than older children. The younger children also showed higher confidence levels in their ability to resolve a nonverbal parental conflict than older children. In terms of gender the only significant difference found was that girls tended to provide more complex solutions for the mothers than boys did. According to this study, nonverbal conflict expressions produced negative emotional responding within children. Parental conflict communicated as verbal or nonverbal communication does affect children's emotional security negatively.

Kelly and Church completed a study on children's ability to detect conceptual information through other children's nonverbal behavior in 1997. Eighteen second-grade and third-grade Caucasian students from a Chicago parochial elementary school were recruited to participate in the study. First, students were pre-tested on their knowledge of conversation and shown 2 videotapes of scenarios of other children explaining their responses to a conversation problem. Then the participants were told

the children's answers to the problems on the videotapes were incorrect and to pay close attention to the next tapes of other children explaining their answers to conversation problems. The participants were later asked to recall in their own words how a stimulus child explained his or her incorrect explanation (recollection task), to check off responses that a child gave on the videotape on a questionnaire (questionnaire task), and to indicate whether the children on the videotape were almost ready to understand the problems they had just solved ready to understand assessment). All the participants had some understanding of conversation. This study reported that the recollection and questionnaire tasks computed that children are good at conveying specific information through other children's speech and nonverbal communication does not influence the reception of this information. Children can also receive specific information through nonverbal communication when verbal information is different than the gesture cues. The ready to understand assessment reported that certain gesture-speech patterns might send out information about the stimulus child's overall understand of what they are explaining.

A different study by Nowicki and Duke was completed in 1991 on the association of children's nonverbal decoding abilities with their popularity, locus of control, and academic achievement. Participants were 456 first through fifth-graders attending private Catholic schools in a large, southern city in the United States. First, 20 slides of facial expressions of the Diagnostic Analysis of Nonverbal Accuracy test from the Children's Affect Test were shown to the participants and they were asked to identify which ones were happy, sad, anger, and fear. Then, they were asked to listen

to 16 tape-recordings of a child saying, "I am going to leave the room now, and I will be back later," and identify the emotion of the message by the tone of the voice when given the choices of happy, sad, anger, and fear. In the middle of the facial expression and voice tone tests, the participants were given a list of their classmates' names and asked to circle the 3 they liked best and cross out the 3 they liked least. They were also given the 13-item Norwicki-Strickland Internal-External Locus of Control Scale for preschool and primary students before the facial expression and voice tone test was completed. Academic achievement and intelligence scores were obtained from school records. The hypothesis that less accurate processing of information regarding facial expressions and tones of voice would be related to greater popularity was supported and there were no differences for age or grade. Less accurate processing of facial expressions was related to receiving fewer votes for liked responses. The second hypothesis, that less accurate processing of the meanings of facial expressions and tones of voice was related to higher scores for external locus of control, was supported, and there were no differences for age or grade. The third hypothesis, that less accurate processing of nonverbal information would be related to lower academic achievement, was also supported, and again there were no differences for age or gender. This study suggests that children who do not interpret nonverbal social information accurately are more likely than children who interpret nonverbal information accurately to be unpopular and externally controlled and to perform less well academically.

A study by Holmes, in 1992, was completed on children's conceptions of social distance as expressed through their artwork. Thirty-two middle-class children, 16 five-

year-olds and 16 eleven-year-olds, participated in the study. All the participants could define the words “stranger” and “friend.” Two days later, the participants were asked to draw a picture of themselves with a friend and a picture of themselves with a stranger. Once collected, each of the drawings was measured from each of the figures’ midpoints of the eyes and the distance between the figures. Younger children drew strangers further apart from themselves than older children. The mean differences between strangers and friends were greater for younger children than for older children. Younger children drew strangers about the same distance apart, but girls drew themselves closer to their friends. Younger girls drew greater distances between themselves and strangers. All the children drew themselves further apart from the stranger than their friend and younger children were more likely to draw a stranger larger than themselves and portray the stranger as a man. Younger children were also more likely to remark about the drawing as they drew, but older children were more likely to draw the stranger to a comparable size of himself or herself and did not comment on the gender of the stranger. Older children also drew the picture of themselves and a friend engaged in an activity. No significant differences were found for gender. The hypothesis that familiarity and age were factors that would affect children’s artistic renderings of social distance was supported. This study suggests social distance decreased as the familiarity of a person increased and children’s cognitive abilities are linked to developmental changes.

A study by Mundy, Sigman, and Kasari, completed in 1988, reviewed the nonverbal communication skills in Downs syndrome children when compared with

non-Downs syndrome cognitively impaired and records of non-cognitively impaired children. Thirty Downs syndrome children and 17 non-Downs syndrome cognitively impaired children were recruited through state and local agencies to participate in this study. Each participant's developmental levels, language skills, nonverbal communication skills, and play skills were assessed with the Cattell or Stanford Binet Scales, Reynell Scales of Language Development, and the revised Early Social Communication Scales. The Downs syndrome participants displayed fewer nonverbal requests for objects than records of normal children and the non-Downs syndrome cognitively impaired participants, but the Downs syndrome participants showed a significant strength in nonverbal social interactions. The non-Downs syndrome cognitively impaired participants showed no deficit in nonverbal requesting or a significant ability with social interaction skills.

A study by Feldman and Allen, in 2001, was completed on student success and tutor verbal and nonverbal behavior. The participants were 56 students recruited from a suburban public school who served as tutors in the study. Two third grade students served as confederates, who would be tutored by the participants. In the first session, students were instructed and tested on tutoring on trapezoids. They were given specific material that instructed them exactly what to say for different outcomes of their tutees performance. On the second session, the participants tutored their tutee and were videotaped without their knowledge. After the session they were informed they were being videotaped and not informed that the tutee was a confederate. The data was collected by assessing the verbal and nonverbal behavior on the videotaped session of

the second session. The results showed that verbal and nonverbal behaviors of a tutor are affected by the performance of the tutee. During a successful tutee performance, tutees tended to make more positive statements. When a tutee's performance was unsuccessful the tutor tended to make more negative statements.

Dynamics of Nonverbal Communication

Mottett, Beebe, Raffeld, and Medlock produced a study in 2004, on the effects of student verbal and nonverbal responsiveness on teacher self-efficacy and job satisfaction. The participants were 112 instructors recruited from a university in the southwest of the United States. The teacher self-efficacy and job satisfaction perceptions were the dependent variables for this study. The participants were exposed to one of four treatment conditions. Four separate 10-minute videos were produced of an instructor teaching 7 students how to conduct library research and how to critically evaluate library resources. The high nonverbal treatment condition showed students in upright postures with forward body leans, positive facial expressions, head nods, eye contact, smiling, taking notes, vocal assurances, and positive vocal inflections. The low nonverbal treatment condition showed students in moderately slouched postures, neutral facial expressions, moderate to low eye contact, no note taking, and no vocal assurances. The high verbal treatment conditions showed students asking questions of the instructor, responding to the instructor, positive vocal inflections, positive facial expressions, eye contact, and smiling. The low verbal treatment condition showed students asking and answering questions slowly, neutral vocal inflections, non-

expressive facial expressions, and the students did not initiate questions and did not respond to the instructors' questions. A 7-point bipolar scale measured self-efficacy and participants' were asked how effective they would be getting the students to learn for their particular treatment condition. A 7-point bipolar scale measured job satisfaction and the participants were asked how satisfied they would be teaching the students on the videotapes. The data collected from the scales was analyzed and suggested that verbal and nonverbal responsiveness do not interact to affect teacher self-efficacy, but student verbal and nonverbal responsiveness affect teacher self-efficacy because participants who were exposed to high verbally and nonverbally responsive students perceived themselves to be more self-efficacious than teacher participants who were exposed to low verbally and nonverbally responsive students. Student nonverbal responsiveness has a larger impact on teacher self-efficacy than student verbal responsiveness. Student verbal and nonverbal responsiveness do not interact to affect teacher job satisfaction. Student verbal and nonverbal responsiveness affect teacher job satisfaction similarly, meaning that participants who were exposed to high verbally and nonverbally responsive students perceived themselves to have more job satisfaction than participants. Student nonverbal responsiveness has a larger impact on teacher job satisfaction than student verbal responsiveness.

Levine and Feldman completed a study in 1997, on self-presentational goals, self-monitoring, and nonverbal behavior. Seventy-three pairs of unacquainted same-sex undergraduates completed a self-monitoring scale and participated in a 10-minute conversation that was videotaped. The pairs were randomly assigned to one of three

conditions (self-promotions, ingratiation, or control). One of the participants of each pair was randomly selected as the self-presenter and was either told to get their partner to think they were competent, get their partner to like them, or they were given no specific goal for the conversation. After the conversation, both partners rated each other on several scales including competence, likeability, happiness, and a number of negative emotions. Judges blind to the conditions were shown the videotapes and made ratings on similar scales. This study showed examination of judges' rating of participants' displays of emotion suggested that although ingratiators and self-promoters did not differ significantly in their displays of positive emotion, ingratiators did display lower levels of negative emotion than self-promoters. Women showed little variability in their expressions of positive and negative emotion across self-presentational goals, men in the ingratiation condition tended to show less negative emotion and more positive emotion as compared to men in the control and self-promotional conditions. Men did adjust their emotional displays in accordance to their interpersonal goals or choose to express similar levels of negative and positive emotion regardless of their particular interpersonal goal. Women were rated as more likable than men by both judges and their self-presentational partners regardless of their interpersonal goals. Women showed more positive emotion than men, whereas men showed more negative emotion than women. High self-monitors expressed less negative emotion and more happiness, and were rated as more competent and more likable by judges, than low self-monitors.

A study by Costanzo was completed in 1992, on training students to decode verbal and nonverbal cues and the effects of confidence and performance on. This study recruited 105 university students as participants and showed them 14 randomly ordered scenes from the Interpersonal Perception Task and answered the interpretive questions with each scene. The participants were randomly assigned to one of three groups (no-training, training, and practice groups). The no-training group received an unrelated lecture. The training group received instruction on behavior indicators of status, kinship, intimacy, competition, and deception. The practice group received the same instruction as the training group and they were taught how to attend to and correctly interpret critical cues and this process was repeated. Each group received a posttest to evaluate the effects of training. Before any instruction was given, women scored higher than men in accuracy. Men believed they scored better than they actually scored and women believed they scored worse than they actually scored. Training receivers to attend to relevant verbal and nonverbal cues did improve performance. The training group did not perform significantly better than the no-training group and the practice group performed significantly better than both, the no-training group and the training group. The practice group believed they outperformed the average by greater than the no-training group.

A study by Ambady, Hallahan, and Rosenthal produced a study in 1995, on judging and being judged in zero-acquaintance situations. Seventy-nine summer school university students were recruited and assigned to groups with other unacquainted participants. The participants completed self-report measures (expressiveness =

Affective Communication Test, self-monitoring = Self-Monitoring Scale, sociability and shyness = Shyness and Sociability Scale, sensitivity to nonverbal and verbal cues = PONS, self-esteem = State Self-Esteem, sensitivity to nonverbal and verbal cues = Interpersonal Perception Task) and took 2 audiovisual tests to evaluate decoding ability. Then the participants took a peer-rating task to evaluate target accuracy and rater accuracy. Then the participants rated themselves on a set of 15 descriptive adjectives (anxious, attractive, cheerful, confident, conscientious, depressed, dominant, expressive, likable, observant, outgoing, shy, sociable, tense, and thoughtful) and then rated every other person in their group on the same set of adjectives. Participants who were more expressive, more sociable, higher in self-esteem, and less shy tended to be more accurately judged by other people. Women and men did not differ in how accurately they were judged by others. Personality variables related to extraversion, expressivity, and social confidence were the strongest predictors of legibility. Judgment accuracy was related to gender, skill in decoding nonverbal behavior, and self-monitoring. High self-monitors were more accurate at judging the dimension of Emotional Stability. Female participants were more accurate judges of others than were male participants. More sociable individuals and those higher in self-esteem tended to be less accurate at judging others on most dimensions. Individuals, of both genders, lower in social skills such as sociability, expressiveness, and self-esteem are more accurate judges of others than individuals who are high in these skills.

A study by LaFrance, Heisel, and Beatty was completed in 2004, on the empirical evidence of nonverbal profiles of extraversion within literature. A broad

electronic search was done to collect literature on nonverbal communication and refined to only include studies that contained data, contained only necessary data, personality studies that contained extraversion or introversion, studies not addressing stereotypes or personality attributions of speakers, and those that did not lack observational data and did not rely on self-reports of behavior alone. The literature was reviewed and analyzed for patterns of extraversion in the data and correlations among nonverbal variables were consistent with the views of several nonverbal communication scholars who have suggested patterns of nonverbal behavior that form expressive types, nonverbal styles, and profiles.

Richards, Rollerson, and Phillips produced a study in 1990, on the perceptions of submissiveness and implications for victimization. The California Psychological Inventory was administered to American female college students and 4 who scored high on the Dominance scale and 4 who scored low served as encoders in this study. Thirty-two unacquainted American male college students served as decoders or participants and were secretly videotaped and individually interviewed by a male confederate. The topics of conversation were initiated by the confederate and of current social debate. The confederate would argue whatever position the participant took in the conversation to induce excitement. The participants then viewed videotapes of one of the submissive and one of the dominant females and then rated the woman unbeknownst to him on evaluation, calmness, and submissiveness). Which woman he would prefer to approach, in an attempt to get her to do something she did not want to do and his confidence in completing this successfully, was also indicated as part of the

evaluation. On the calmness factor, the submissive woman was seen as calmer than the dominant woman in all pairs viewed. A preference for approaching the submissive member of the female pairs was indicated for exploitation.

A study by DeGroot, and Motowidlo was completed in 1999, on why visual and vocal interview cues can affect interviewers' judgment and predict job performance. Videotapes of interviewing potential managers were sent to 26 participants holding similar positions at the same employer along with a scale to rate the interviewee on leadership, concern for others, effective problem solving, professional integrity, customer service, promoting diversity, and oral communication. Performance ratings were collected from the participants' immediate supervisors and others who were familiar with their job performance. This study revealed that certain visual and vocal cues displayed in the employment interview could affect interviewers' judgments and predict managerial job performance.

A study by Floyd and Erbert was completed in 2003, on relational message interpretations of nonverbal matching behavior and the application of the social meaning model. Ninety-six unacquainted participants were randomly assigned to gender-homogeneous triads and each assigned a specific role. Participants A and B would have a conversation and participant C would observe it through a one-way mirror and later each would indicate their perceptions of the conversation. Pre-measures of familiarity with group members were assessed. The assigned topics of conversation was one of four moral dilemmas, (a sibling's theft of a friend's valuables, one's Catholic friend's contemplation of an abortion, the infidelity of a best friend's

fiancée, and the impending visit of a cohabitating couple's unsuspecting parents to their home. Afterward, assigning the participants to take the Relational Communication Scale assessed relational messages. Participants A also rated their own performance positively or negatively. Participants A reported low familiarity with Participants B as did Participants B with Participants A. Participants C reported they were unfamiliar with Participants A and B. Participants A in the positive condition saw themselves as having communicated significantly more positively. Participants C rated the success of Persons A in enacting their designated manipulation and according to Participants C, Participants A, in the positive condition, communicated significantly more positively than did those in the negative condition.

A study was completed by Gallaher in 1992, on individual differences in nonverbal behavior. Participants took personality self report tests and rated someone in their everyday lives twice, six weeks apart on expressiveness, animation, expansiveness, and coordination. Sex differences in style were similar and the pattern of correlations between the dimensions of style and content personality traits were also similar, with the exception of anger. Men were higher on vigor and displacement than were women. Expansiveness depends on gender, for example women who are relatively low on this dimension will be regarded more favorably, whereas men gain more favor by being relatively high on the dimension. Individuals high in expressiveness are perceived to be more likable.

A study was produced by Krauss, Morrel-Samuels, and Colasante in 1991, on the idea of conversational hand gesturing communicating. This study reported that

after seeing a hand gesture participants could more easily decipher the meaning in the context of speech than other accompanying gestures, but both could be understood.

A study was completed by Frank and Ekman in 2004, on how appearing truthful generalizes across different deception situations. The researchers predicted that participants' behaviors would be consistent across different lie situations and this was supported. Facially, participants showed the same number of expressions across situations and they showed or failed to show the same emotions across situations. Bodily, participants showed a correlation in their head movements, leg movements, manipulators, and illustrators across situations. Language was found to be the only cue that did not show consistency across situations.

Nonverbal Behavior, Therapy, and Medical Care

A study by Davis and Hadiks was produced in 1990, on nonverbal behavior and client state changes during psychotherapy. Videotapes of 62 sessions of one complete outpatient psychotherapy were used as the data for this study. The client was a woman in her mid-twenties who sought therapy for anxiety attacks. Participants were raters who used the Certified Movement Analysis and the Davis Nonverbal State Scales to assess nonverbal and state changes. Nonverbal ratings were completed separately for the position and gesture variables and verbal ratings were made from audiotapes using the Experiencing Scale. The client shifted from superficial discussion to actively exploring her internal reactions, her bodily positions became more accessible, open, and oriented toward the therapist.

A study was completed by Roten, Darwish, Stern, Fivaz-Depeursinge, and Corboz-Warnery in 1999, on nonverbal communication or body coding and alliance in therapy. Fourteen triads, one therapist and a married couple, had their counseling sessions videotaped for the data of this study. The Lausanne Triadic Discussion, The Dyadic Adjustment Scale, The Couple Therapist Alliance Scale, were used as instruments in this study. Specific seating arrangements were used to instigate body formations. Stable engagement triads showed a significant difference from others. The couples' and the therapist's perception of the triadic alliance showed a significant difference on therapist alliance, as well.

A study by Hill and Stephany was completed in 1990, on the relation of nonverbal behavior to client reactions. Sixteen therapists saw 2 different clients, whose sessions were audio and videotaped, and rated how much they believed in and adhered to major theoretical orientations (humanism, psychoanalysis, and behaviorism). Thirteen judges were recruited to decode and the presence of nonverbal behaviors. There were more horizontal head movements when clients reported feeling supported and when clients reported therapeutic work. Clients had more vertical head movements when feeling supported rather than challenged. Clients had more speech hesitations when therapists perceived therapeutic work than when they perceived support. Clients had more horizontal head movements when therapists perceived therapeutic work than when they perceived negative reactions.

Jones and Guerrero completed a study in 2001, on the effects of nonverbal immediacy and verbal person centeredness in the emotional support process. Four

confederates were paired with three female participants and three male participants, with a total of 267 students from a southwestern university in the United States as participants. The participants were informed they were examining how people talk about personal events and were assigned to sign up for a class. Confederates were told to pose as participants and to sign up for a class different than the participants in their group. Then the participants were assigned to be talkers and confederates to be listeners. The participants thought the roles were randomly assigned. A questionnaire was completed to assess an emotionally distressing event. A conversation of the emotionally stressing event was prompted after the experimenter left the room and these conversations were videotaped. Final questionnaires were completed by the participants on the confederates' or partners' high nonverbal immediacy, low nonverbal immediacy, high in person centeredness, moderately person-centered messages, and low person-centered condition qualities, and on expectedness, appropriateness, effectiveness, sensitivity, and helpfulness. People who used highly person centered messages were not perceived as providing the best support unless they also use high levels of nonverbal immediacy and vice versa. The combination of nonverbal immediacy and verbal person centeredness was perceived as lower in comforting quality. The ideal comforting message included high levels of both nonverbal immediacy and verbal person centeredness. If behaviors did not meet or exceed normative expectations, they were perceived as low in comforting quality.

A study by Kim, Liang, and Li was completed in 2003, on counselor ethnicity, nonverbal behavior, and session outcome among Asian American clients. Fifteen

sessions involving Asian American counselors and 15 European American counselors were videotaped and used as the data for this study. Judges rated the sessions for 8 behaviors were assessed (adaptors, arm movements, horizontal head movements, illustrators, leg movements, postural shifts, vertical head movements, and session positivity using the Session Evaluation Questionnaire. European American counselors displayed greater frequency of smiles than Asian American counselors. Asian American female counselors displayed less adaptors, postural shifts, and smiles than European American female counselors. Asian American counselors tended to smile less often than did European American counselors and the frequency of the smiles were associated with client ratings of session positivity. Session arousal and was related to higher scores of positivity and arousal. Postural shifts were associated with higher scores of arousal.

A study was produced by Griffith, Wilson, Langer, and Haist in 2003, on house staff nonverbal communication skills and standardized patient satisfaction. Sixty-one participants were recruited from internal medicine and medicine-pediatric residents. They were assigned to three treatment conditions of treating a straight forward “chest pain” medical problem, counseling on HIV education, and counseling an adult sexual victim. The patients were confederates and completed a checklist after the condition was completed on the participants’ nonverbal and verbal skills and their patient satisfaction. Patient satisfaction was associated with better nonverbal and verbal communication across all three conditions. Verbal communication skills were predictors of patient satisfaction to a modest degree for the HIV and sexual abuse

conditions. Greater resident experience was associated with greater patient satisfaction especially the “chest pain” condition.

Nonverbal Communication and Multiculturalism.

A study by Singh, McKay, and Singh completed in 1998, on culture, mental health, and nonverbal communications of greetings, affection, shrugs, eyes, sitting and standing, and silences, stated, “that nonverbal communication methods are inherited and passed on across generations of people, however, all members of a major culture seldom practice everything in exactly the same way, because they also belong to other cultural groups at the same time.

A study by Archer was produced in 1997, on cultural differences in gestures stated that, “Verbal and substantive content diffuses across boundaries with relative ease.”

Nonverbal Communication, Art, and Music

Tyler completed a case study in 1998, on nonverbal communication and art. Tyler recalls the incident of a patient who was very ill and would not allow anyone to touch him and would only growl at others. Tyler began to sit with him daily and eventually began to paint in his room. One day he reached out for her as she was painting and she touched him. Another very ill patient was also exposed to Tyler painting in his room and Tyler began to ask him how the painting should be painted. He responded and eventually become more positively social with others in the hospital.

VanWeelden completed a study in 2002, on relationships between perceptions of conducting effectiveness and ensemble performance. Participants were 163 undergraduate music majors from a university. The participants watched videotapes of conductors performing and rated their eye contact, facial expression, posture, and effectiveness. Moderate to moderately strong relationships between the performance scores and conductor facial expression, conductor posture, evaluator confidence in the conductor, and the effectiveness of the conductor were found.

Nonverbal Communication and Animals

A study by Herman, Abichandani, Elhaji, Herman, Sanchez, and Pack was produced in 1999, on dolphins and the human pointing gesture. This study reported that pointing for the dolphin had broader application than it did for the apes or the human infants because it was understood as referring to objects relatively far and near.

Nonverbal Communication and Television

A study by Coats and Feldman was produced in 1995, on the role of television in the socialization of nonverbal behavioral skills. This study reported that television viewing is associated with children's ability to communicate nonverbally and it provides influential models of nonverbal emotional behavior. Television viewing was also associated with increased encoding of happiness and sadness, but with decreased encoding success of fear, surprise, and disgust.

Summary

The literature reviewed in Chapter 4 related to nonverbal communication from adults, to children, to animals, within sexual relationships, between the genders, and even within art, therapy and medical care, music, and multiculturalism. Conflicting results were revealed throughout this literature review on nonverbal communication. Nonverbal communication is essential situation specific across the board. Further research, which continues to specify the dynamics of the influences and motivations of nonverbal communication, should be conducted.

Chapter 3: Design of Study

Sample

The subjects observed in this study were 160 students at a university in Southern New Jersey. All participants were randomly chosen and assigned stimuli by the researcher using a randomization table as they exited the library. The participants were divided into eight different groups, twenty participants per group, according to gender and type of stimulus provided, eye contact alone or eye contact paired with smiling.

After the participants were provided with a stimuli and their response was recorded, they were informed of the study and asked to provide their age and ethnicity. Once the data was collected, exact numbers of participants, their gender, age, and ethnicity were reported. A likert scale was developed to provide a qualitative value to each type of response to the nonverbal stimulus.

Measures & Procedures

The method of data collection within this study was through observational data. As students exited the library the confederate presented the subject with the nonverbal communication stimulus of eye contact alone or eye contact paired with smiling. The subjects' natural responses to the stimulus were recorded. The likert scale valued the responses as so: no response = 1, looked away immediately = 2, brief eye contact and then looked away = 3, made eye contact = 4, made eye contact and smiled and then

looked away = 5, made eye contact and smiled and did not look away = 6, made eye contact and smiled and gestured with head = 7, and made eye contact and smiled and spoke to the individual providing stimuli. At this time the subject was briefed on the study and asked to provide age, and ethnicity.

The independent variables within this study were the genders of the experimenter and of the respondents. The dependent variable within this study was the response to the nonverbal communication stimulus from the subject.

Hypothesis

Null hypotheses: 1) There will be no difference between the frequency of males and females' responses to either form of nonverbal communication provided as stimuli. 2) Neither gender providing the nonverbal communication stimuli will gain more responses from a particular gender of the participants. 3) The nonverbal communication of eye contact alone will not be the most common response to all groups of stimuli.

Alternate hypothesis: 1) Female participants will respond to the either form of nonverbal communication stimuli more often than male participants. 2) Females will respond to a male's nonverbal communication stimulus more often or males will respond to a female's nonverbal communication stimulus more often. 3) Nonverbal communication of eye contact alone will be the most common response to all the groups of stimuli.

Design

This study was experimental and used a 2 x 2 x 2 Analysis of Variance.

Analysis

An ANOVA was used to compare the mean responses of the eight different groups.

Summary

The present study consisted of 160 individuals at a southern New Jersey university whose natural behavior was observed after being provided with a stimulus of nonverbal communication. Data was collected through empirical data and coded into a likert scale by presenting participants with one of two types of nonverbal communication stimuli and comparing the responses between the genders. An ANOVA was used to compare the statistical comparison of the gender differences. In Chapter 4, the interpretation of the data and analysis of the results are presented.

Chapter 4: Analysis of Results

In Chapter 1, the researcher hypothesized: 1) Female participants would respond to the either form of nonverbal communication stimuli more often than male participants, 2) Females would respond to a male's nonverbal communication stimulus more often or males would respond to a female's nonverbal communication stimulus more often, 3) Nonverbal communication of eye contact alone would be the most common response to all the groups of stimuli.

Restatement of Testable Hypothesis

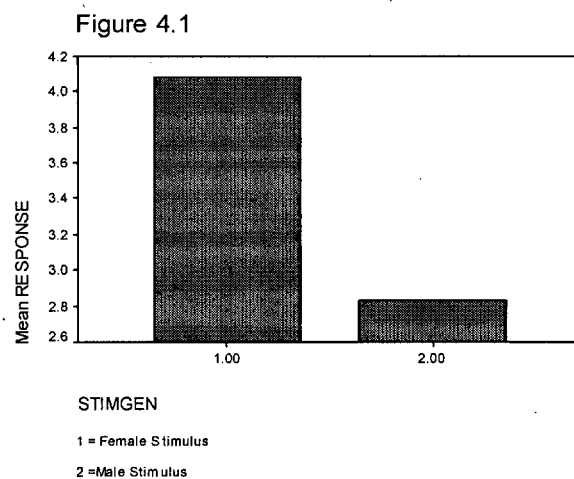
Null hypothesis: 1) There will be no difference between the frequency females' and males' responses to nonverbal communication. 2) Neither gender will respond more often to the stimulus of nonverbal communication more often when provided by either gender. 3) The nonverbal communication of eye contact alone will not be the most common response to all groups of stimuli.

Alternate hypothesis: 1) Females will respond to the nonverbal communication stimuli more often than males. 2) Females will respond to a male's nonverbal communication stimulus more often and males will respond to a female's nonverbal communication stimulus more often. 3) Nonverbal communication of eye contact alone will be the most common response to all the groups of stimuli.

Interpretation of Results

A three-way ANOVA test was performed to compare responses to the nonverbal communication between the variables of genders of stimuli, genders of participants, and the nonverbal communication of eye contact alone or eye contact paired with smiling. The data collection showed that female participants in this study did respond to nonverbal communication more often than males, however it was not found to be a significant difference. The data also showed that male participants responded to the female stimuli's nonverbal communication more often than any other group, $F=14.92 (1,152), p \leq 0.0001$, (see figure 4.1).

Mean Responses To a Female Stimulus



Finally, the data collection showed that no type of response to either of the nonverbal communication stimuli was found to be significant. Unfortunately, not enough participants responded with the other groups of variables, of age and ethnicity, for the data to be analyzed.

In conclusion, the data allowed this researcher to accept the null hypothesis that there would be no difference between the frequency of males and females' responses to nonverbal communication, accept the alternate hypothesis that males responded to a female's nonverbal communication stimulus more often, and accept the null hypothesis that the nonverbal communication of eye contact alone was not the most common response to all groups of stimuli.

Summary

Within Chapter 4, the analyses of the results were reported and the first and third null hypotheses were accepted and the second null hypothesis was accepted. Overall, the only significant factor was that male participants of this study responded more often to nonverbal communication when presented by females.

Chapter 5: Summary and Conclusion

Summary

The purpose of this study was to determine whether or not individuals would respond with any communication to a stimulus of nonverbal communication of either eye contact alone or paired with smiling to the same or opposite gender. One-hundred-sixty students were randomly stimulated by either a female or male with either a positive or neutral facial expression and their natural, observable responses were recorded and analyzed.

Conclusions

The researcher hypothesized that females would respond to the nonverbal communication stimuli more often than males, a particular gender providing the nonverbal communication stimuli would gain more responses from the participants, and nonverbal communication of eye contact alone would be the most common response to all the groups of stimuli. The responses were coded on a likert scale and analyzed with a 2 x 2 x 2 way ANOVA. Only one of the hypotheses was found to be significant because not enough responses were given for the different variables. The second alternate hypothesis, males would respond to a female's nonverbal communication stimulus more often, was supported. The first and third null hypotheses were rejected. The literature reviewed on nonverbal communication and gender were various like the results of this study. Some of the current research reviewed supports the results of this study. In Koerner and Fizpaticks' study, it is suggested that men are better at assessing

positive affect in their spouses than women, which is consistent with the results of this study, (2002). Moore's study also suggests that women tend to be aware of the male presence and respond nonverbally to them as a courtship signal, (1995).

Discussion

Previous research supports these findings and also suggests that further more detailed research be conducted. Males may have responded to the nonverbal communication provided by the females more often because of high confidence levels, opportunity, or interest in her. The females may have responded to the male providing the nonverbal communication less because of low confidence levels, they may have the opportunity to respond to male provocations often and chose not to respond, and even lack of interest. Women also tend to be less direct than males in their nonverbal communication according to studies by Hickman and Muehlenhard, (1999), and Grammer, Juette, Schmitt, and Honda, (1999).

Implications of Future Research

The characteristics of this study that may have implications for future research were the influence of gender on nonverbal communication responses. The male participants of this study were influenced to respond to the female providing the stimulus significantly more often, regardless of their age or ethnicity, when compared

to the male providing the stimulus or the any of the female participant's trends of responses to either gender.

More detailed information may be able to be analyzed with a larger sample size in order to gain more responses to find significance among other variables. What motivates male participants' to have a greater significant difference to communicate to a female's stimulus of nonverbal communication? Do females anticipate male nonverbal responses? Why do females not respond to a male's nonverbal communication as often as the opposite gendered-pair? These are all other areas of interest that could be given closer attention.

References

- Ambady, N., Hallahan, M., & Rosenthal, R. (1995). On judging and being judged accurately in zero-acquaintance situations. *Journal of Personality and Social Psychology, 69*(3), 518-529.
- Archer, D. (1997). Unspoken diversity: Cultural differences in gestures. *Qualitative Sociology, 20*(1), 79-105.
- Aguinis, H. & Henle, C. (2001). Effects of nonverbal behavior on perceptions of a female employee's power bases. *The Journal of Social Psychology, 14*(4), 537-549.
- Carli, C., LaFluer, S., & Loeber, C. (1995). Nonverbal behavior, gender, and influence. *Journal of Personality and Social Psychology, 68*(6), 1030-1041.
- Christophel, D. (1990). The relationships among teacher immediacy behaviors, student motivation, and learning. *Communication Education, 39*, 323-340.
- Coats, E. & Feldman, R. (1995). The role of television in the socialization of nonverbal behavioral skills. *Basic and Applied Social Psychology, 17*(3), 327-341.
- Costanzo, M. (1992). Training students to decode verbal and nonverbal cues: Effects on confidence and performance. *Journal of Educational Psychology, 84*(3), 308-313.
- Davis, M. & Hadiks, D. (1990). Nonverbal behavior and client state

- changes during psychotherapy. *Journal of Clinical Psychology*, 46(3), 340-351.
- DeArth-Pendley, G. & Cummings, E. (2002). Children's emotional reactivity to interadult nonverbal conflict expressions. *The Journal of Genetic Psychology*, 163(1), 97-111.
- DeGroot, T. & Motowidlo, J. (1999). Why visual and vocal interview cues can affect interviewers' judgments and predict job performance. *The Journal of Applied Psychology*, 84(6), 986-993.
- Dovidio, J., Brown, C., Heltman, K., Ellyson, S., & Keating, C. (1988). Power displays between women and men in discussions of gender-linked tasks: A multichannel study. *Journal of Personality and Social Psychology*, 55(4), 580-587.
- Feldman, R & Allen, V. (2001). Student success and tutor verbal and nonverbal behavior. *The Journal of Educational Research*, 142-148.
- Fichten, C., Judd, V., Wright, J., & Amsel, R. (1992). Verbal and nonverbal communication cues in daily conversations and dating. *The Journal of Social Psychology*, 132(6), 751-769.
- Floyd, K. & Erbert, L. (2003). Relational message interpretations of nonverbal matching behavior: An application of the social meaning model. *The Journal of Social Psychology*, 143(5), 581-597.

- Frank, M. & Ekman, P. (2004). Appearing truthful generalizes across different deception situations. *Journal of Personality and Social Psychology, 86(3)*, 486-495.
- Gallagher, P. (1992). Individual differences in nonverbal behavior: Dimensions of style. *Journal of Personality and Social Psychology, 63(1)*, 133-145.
- Garstecki, D., & Erler, S. (1999). Older adult performance on the communication profile for the hearing impaired: Gender Differences. *Journal of Speech, Language, and Hearing Research, 42*, 785-796.
- Grammer, K., Juette, A., Schmitt, A. & Honda, M. (1999). Fuzziness of nonverbal courtship unblurred by motion energy. *Journal of Personality and Social Psychology, 77(3)*, 487-508.
- Griffith, C., Wilson, J., Langer, S., & Haist, S. (2003). *House staff nonverbal communication skills and standardized patient satisfaction: Nonverbal Communication and Patient Satisfaction*. Lexington: University of Kentucky.
- Hall, J., Irish, J., Roter, D., Ehrlich, C., & Miller, L. (1994). Gender in medical encounters: An analysis of physician and patient communication in a primary care setting. *Health Psychology, 13(5)*, 384-392.
- Herman, L., Abichandani, S., Elhadj, A., Herman, E., Sanchez, J., & Pack,

- A. (1999). Dolphins (*tursiops truncatus*) comprehend the referential character of the human pointing gesture. *Journal of Comparative Psychology, 113*(4), 1-26.
- Hickman, S. & Muehlenhard, C. (1999). "By the semi-mystical appearance of a condom": How young women and men communicate sexual consent in heterosexual situations. *The Journal of Sex Research, 36*(3), 258-272.
- Hill, C. & Stephany, A. (1990). Relation of nonverbal behavior to client reactions. *Journal of Counseling Psychology, 37*(1), 22-26.
- Holmes, R. (1992). Children's artwork and nonverbal communication. *Child Study Journal, 22*(3), 157-166.
- Jones, S. & Guerrero, L. (2001). The effects of nonverbal immediacy and verbal person centeredness in the emotional support process. *Human Communication Research, 27*(4), 567-596.
- Juang, S. & Tucker, C. (1991). Factors in marital adjustment and their interrelationships: A comparison of Taiwanese couples in America and Caucasian American couples. *Journal of Multicultural Counseling & Development, 19*(1), 22-32.
- Kendon, A. (1981). Introduction: Current Issues In the Study of "Nonverbal Communication". In T. A. Sebeok & J. Umiker-Sebeok. *Nonverbal Communication, Interaction, and*

Gesture. New York: Mouton Publishers.

Kelly, S. & Church, R. (1997). Can children detect conceptual information through other children's nonverbal behaviors? *Cognition and Instruction, 15*(1), 107-134.

Kim, B., Liang, C., Li, L. (2003). Counselor ethnicity, counselor nonverbal behavior, and session outcome with asian American clients: Initial findings. *Journal of Counseling & Development, 81*, 202-207.

Koerner, A. & Fitzpatrick, M. (2002). Nonverbal communication and marital adjustment and satisfaction: The role of decoding relationship relevant and relationship irrelevant affect. *Communication Monographs, 69*(1), 33-51.

Krauss, R., Morrel-Samuels, P., & Colasante, C. (1991). Do conversational hand gestures communicate? *Journal of Personality and Social Psychology, 61*(5), 743-754.

La France, B., Heisel, A., & Beatty, M. (2004). Is there empirical evidence for a nonverbal profile of extraversion?: A meta-analysis and critique of the literature. *Communication Monographs, 71*(1), 28-48.

Levine, S. & Feldman, R. (1997). Self-presentational goals, self-monitoring, and nonverbal behavior. *Basic and Applied Social Psychology, 19*(4), 505-518.

- MacKay, D. M. (1972). *Formal Analysis of the Communicative Process*.
New York: Cambridge University Press.
- Mehrabian, A. (1981). *Silent Messages*. Belmont: Wadsworth Publishing
Co.
- Menzel, K. & Carrell, L. (1999). The impact of gender and immediacy on
willingness to talk and perceived learning. *Communication
Education, 48*, 31-40.
- Mottet, T., Beebe, S., Raffeld, P., & Medlock, A. (2004). The effects of
student verbal and nonverbal responsiveness on teacher self-
efficacy and job satisfaction. *Communication Education, 53*(2),
150-163.
- Murphy, J., Driscoll, D., & Kelly, J. (1999). Differences in the nonverbal
behavior of men who vary in the likelihood to sexually harass.
Journal of Social Behavior & Personality, 14(1), 113-129.
- Moore, H. & Porter, K. (1988). Leadership and nonverbal behaviors of
Hispanic females across school equity environments. *Psychology
of Women Quarterly, 12*, 147-163.
- Moore, M. (1995). Courtship signaling and adolescents: "Girls just wanna
have fun"? *The Journal of Sex Research, 32*(4), 319-328.
- Mundy, P., Sigman, M., Kasari, C., & Yirmiya, N. (1988). Nonverbal
communication skills in down syndrome children. *Child*

Development, 59, 235-249.

Nicholas, C. (2004). Gaydar: Eye-gaze as identity recognition among gay men and lesbians. *Sexuality & Culture, 8(1), 60-86.*

Nilges, L. (2000). A nonverbal discourse analysis of gender in undergraduate educational gymnastics sequences using laban effort analysis. *Journal of Teaching In Physical Education, 19, 287-310.*

Nowicki, S. & Duke, M. (1991). The association of children's nonverbal decoding abilities with their popularity, locus of control, and academic achievement. *The Journal of Genetic Psychology, 153(4), 385-393.*

Ploog, D. (1992). *Ethological foundations of biological psychiatry, Integrated biological psychiatry.* Berlin: Springer Verlag.

Quay, L., & Blaney, R. (1990). Verbal communication, nonverbal communication, and private speech in lower and middle socioeconomic status preschool children. *The Journal of Genetic Psychology, 153(2), 129-138.*

Richards, L., Rollerson, B., & Phillips, J. (1990). Perceptions of Submissiveness: Implications for Victimization. *The Journal of Psychology, 125(4), 104-411.*

Roten, Y., Darwish, J., Stern, D., Fivaz-Depeursinge, E., & Corboz-Warnery, A. (1999). Nonverbal communication and alliance in therapy: The body formation coding system. *Journal of Clinical*

Psychology, 55(4), 425-438.

Singh, N., McKay, J., & Singh, A. (1998). Culture and mental health: Nonverbal communication. *Journal of Child and Family Studies*, 7(4), 403-409.

Tyler, J. (1998). Nonverbal communication and the use of art in the care of the dying. *Palliative Medicine*, 12, 123-126.

VanWeelden, K. (2002). Relationships between perceptions of conducting effectiveness and ensemble performance. *Journal of Research in Music Education*, 50(2).