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ABSTRACT

The purpose of this study was to explore female students' perceptions about research while enrolled in a graduate program. In the Husserlian phenomenological tradition (E. Husserl, 1859-1938), a theoretical framework was developed from extent literature a priori to inform the parameters of the study. The phenomenologist used a computer-mediated focus group method of inquiry to expand on previous studies and confirm the a priori theory. The computer-mediated focus groups, which involved about 15 graduate students, were conducted by means of the Internet via WebCT in an asynchronous discussion format. Following a 1-week pilot study, the researcher engaged the participants in a 4-weel electronic discussion about research. To analyze the data, the researcher coded data into predetermined coding categories based on the literature, merged the codes into themes with common attitude threads, and combined the themes into patterns representing the theoretical constructs. The resulting theoretical framework was divided into three sections labeled research barriers, supports, and solutions. Research barriers included the dissertation process, time management, family commitments, and ethics. Included as research support were mentoring,field research experience, and resources. Research solutions were described as restructuring the dissertation process, choosing dissertation committee members and chair wisely, and having mentors. (Contains 64 references.) (SLD)

Running head: MENTORING FEMALE GRADUATE STUDENTS

# An Exploration of Mentoring Female Graduate Students in Southern Metropolitan Universities

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(Paper presented at the 2002 annual meeting of the Mid-South Educational Research Association in Chattanooga Tennessee)

Abstract

The purpose of this study was to explore female students' perceptions about research while enrolled in a graduate program. In the Husserlian phenomenological tradition, a theoretical framework was developed from extant literature *a priori* to inform the parameters of the study. The phenomenologist used a computer-mediated focus group method of inquiry to expand on previous studies and confirm the *a priori* theory.

The computer-mediated focus groups were conducted by means of the Internet via *WebCT* in an asynchronous discussion format. Following a one-week pilot study, the researcher engaged the participants in a four-week electronic discussion about research. To analyze the data, the researcher (a) coded the data into pre-determined coding categories based on the literature, (b) merged the codes into themes with common attitude threads, and (c) combined the themes into patterns representing the theoretical constructs.

The resulting theoretical framework was divided into three sections labeled research barriers, supports, and solutions. Research barriers included (a) the dissertation process, (b) time management, (c) family commitments, and (d) ethics. Included in the research support were (a) mentoring, (b) field research experience, and (c) resources. Research solutions were described as (a) restructuring the dissertation process, (b) wisely choosing dissertation committee members and chair, and (c) mentors.

"And the day came when the risk it took to remain tight inside the bud was more painful than the risk it took to blossom" (Nin,2002, p. 1). In the milieu of academe, women are less likely to participate in research as compared with their male counterparts. According to extant literature, diminished scholarly productivity cuts across disciplines, professional rank, and institutional classification. Scholars attribute this difference in research activity to marginalizing work environments and limited motivation (Bain & Cummings, 2000). Furthermore, it is reasonable to deduce that limited motivation may be fueled by negative research experiences during graduate studies.

Females may be well represented as students, but under-represented in the professorate and are not always appointed to higher ranking positions at a rate one would expect (Bayles & Parks-Doyle, 1995; Witkin Stuart, 1997). "This lack of female mentors and role models can limit women's career development and achievement" (Witkin Stuart, 1997, p. 41) as research further revealed that individuals who have been mentored tend to join the administrative ranks in their professional careers (Young, 1997).

*Definition*

Researchers have defined mentoring in many ways over the years. The definitions vary "from simple to complex, from short to long, and from narrow to broad" (Griffin, 1999, p. 25). Although these definitions tend to be elusive in nature (Mencucci, 1997), there is one aspect of the mentoring idea that researchers tend to agree on which is that [mentoring] "is one of the most complex and developmentally important experiences a man can have in early adulthood" (Levinson, Darrow, Klein, Levinson & McKee, 1976) and has been shown to enhance academic pursuits, professional development, and careers (Pavan & Robinson, 1991; Prescott, 1994). Mencucci (1997) listed several synonyms for mentoring as being terms such as "teaching, coaching, advising, directing, protecting, sponsoring, guiding, and training" (p. 39). As for the participants of the mentoring relationship, they are often referred to as a "mentee, protege, apprentice, learner, novice, coach, guide, teacher, sponsor, and champion" (Mencucci, 1997, p. 39).

In Prescott's (1994) study, several characteristics of mentors are listed that contribute to the close and complex relationship between the two individuals. The characteristics listed are that

> mentors possess a willingness to share knowledge and understanding; they have a genuine generosity, compassion and concern for the protege; they do not feel threatened by the protege; mentors are willing to see others achieve success; they feel pride in their work and are willing to help others who share their ideals (p. 12).

In our society, researchers have placed emphasis on the fostering of human potential. This emphasis in turn has given rise to the concept of mentoring (Griffin, 1994; Jacobi, 1991). The concept of mentoring can be placed in two broad categories: career and psychosocial mentoring (Olson & Connelly, 1995). There is evidence that graduate students can benefit from both career and psychosocial mentoring (Griffin, 1999). These two broad categories can further be categorized as formal or informal.

To better understand mentoring, one must delve into the descriptions of these two dimensions. Kram (1985) described career mentoring as adjusting to and progressing in a career. Gilbert and Rossman (1992) further described the roles of career mentors as being sponsors, protectors and coaches. Career mentoring serves to facilitate in developing research skills and greater involvement in professional organizations. As a result, there is increased involvement in the number of publications and presentations conducted as well as the integration into the academic setting (Daloz, 1999; Griffin, 1994; and Heinrich, 1991).

Psychosocial mentoring roles are described by Summers-Ewing (1994) as role models, counselors, and friends. This type of mentoring depends on the quality of the interpersonal relationship and serves to foster self-esteem (Kram, 1985; Summers-Ewing, 1994; Griffin, 1999). Because mentoring is perceived to be a natural component of teaching, it is a relational phenomenon in which mentors perform a socializing role by role modeling (Vance & Olson, 1999). In his studies of undergraduate students, Tinto (1993) found that

"mentor programs can serve as an important regenerating force in the social and intellectual life of an institution" (pp. 252-253).

Formal mentoring programs have been initiated at colleges and universities. Formal programs provide training for mentors in their role responsibilities, structured time for meetings between mentoring pairs, and written evaluations by mentors and proteges reflecting the progress of the mentoring process (DePalma, 1991). It is further postulated that such formal programs could assist women in their career advancement by allowing more women to be mentored in larger organizations where women might be ignored or passed over (Prescott, 1994). There is a disadvantage to formalized mentoring programs in that they are difficult to monitor and administer (Murray & Owen, 1991). There is also argument by researchers that this formal process is "incompatible with the true spirit of mentoring (Prescott, 1994). It is the belief of some researchers that a "true mentoring relationship grows spontaneously" (Prescott, 1994, p. 15).

In an informal mentoring process, the choice of mentoring pairs is left to participants, thus allowing a relationship to naturally develop much like a friendship (Linney, 2000). This method provides the opportunity for both individuals to choose someone with similar values, ethics, and interests. Studies show that due to the informal approach, both parties "mutually benefit professionally and psychologically from the relationship" (Prescott, 1994, p. 16).

While the overall value of mentoring is seen as being very positive, one must look at the criticisms that have been revealed regarding the mentoring process. Critics have identified some very important inadequacies of mentoring. These inadequacies are:

> that mentoring promotes competition; that mentoring focuses excessively on the individual and therefore may prompt aspects of elitism and exclusion; that there is a scarcity of senior level, appropriate mentors for women; that the socialization process of acculturation promotes the status quo; that there are failures of cross-gender mentor-mentee relationships due to personal and organizational barriers; and that

mentoring promotes an aspect of dependency and subordination of women in traditional mentor-mentee relationships, preventing the development of the peer/colleague role (Mencucci, 1997, p. 10).

Tobias (1992) cited a downfall of some mentoring programs as being too short-lived to verify substantial or beneficial outcomes. University policy is mentioned quite often in not providing support for mentoring especially in the role of gender equity. Mentoring of women and underrepresented groups are often not rewarded in reviews for promotion, tenure, salary, and even hiring (Mencucci, 1997).

*Mentoring of Graduate Students*

Mentoring of graduate students is considered by many researchers to be a complex process due to the fact that it deals with both psychological and career mentoring. Compounding this phenomenon is the fact that mentoring is taking place in a stressful environment (Griffin, 1999). However, the involvement theory based on undergraduate students developed by Kuh, Schuh, Whitt, and Andreas (1991) contends that "the deeper the involvement of students with faculty members and other adults on campus, the higher achievement and persistence to graduation" (Mencucci, 1997, p. 11). And even yet, further findings suggest that a greater graduate student satisfaction in their academic programs is linked to the importance as well as the benefits of having a primary mentor (Wilkinson, 1995). Other findings also suggest "where campus involvement is concerned, nothing is deeper than the mentor-mentee relationship in graduate study" (Mencucci, 1997, p. 11).

In the study of Aguilar-Gaciola (1984), there were four primary roles that mentors in graduate school portrayed: role modeling, professional socialization, advocacy and emotional support (Griffin, 1999). Due to this mixture of components, "mentoring relationships are often complex and delicate vessels" (Freedman & Baker, 1995, p. 7).

The literature reveals that there are career benefits associated with mentoring. Valadez and Duran (1991) reveal in their study that "mentoring relationships were providing a very effective method for developing students into research scholars' (Griffin, 1999, p. 37). This study substantiated the earlier study of Cronan-

Hillix, Gensheimer, Cronan-Hillix, and Davidson (1986) that found a "positive correlation between a positive mentoring relationship and the number of articles published" (Griffin, 1999, p. 37).

*Mentoring of Female Graduate Students*

Female graduate students are at a greater risk of encountering problems with their mentoring relationships than their male counterparts (Griffin, 1999; Mencucci, 1997). These problems may not stem from just their male colleagues, but in many instances from their professors (Mencucci, 1997). Female graduate students often do not receive as much encouragement as male graduate students. In fact, they may be discouraged in performing research skills that are taught in graduate school. These overt and covert forms of discrimination are just a small sample of the barriers women face not only in academe, but also in business and their careers. Women are often treated differently than men in the academic setting. Women are often asked to take on the stereotypical roles of secretary in committees or recorder when documenting research. In the review of literature of Stalker (1994)

> male faculty affirm male students more than female students; more frequently give both informal and formal encouragement to male students; treat male students as colleagues and select them above women for teaching and research assistants ( p. 366).

Other barriers include the lack of professional networks, lack of support and encouragement (Shakeshaft, 1989), and absence of female role models (Prescott, 1994). However, "mentoring has proven to be an important element in overcoming many of these barriers and has been determined to be a key factor in the education, professional development and career advancement for women" (Prescott, 1994, p. 3). More specifically, a key element to success in graduate school is mentoring. As Durnova (1988) reported in his study of female administrators, a doctorate and a mentor are the two most important factors influencing a woman's career.

The first comprehensive report on how women are often treated differently than men in the classroom was conducted in 1982. This was when the term, "chilly climate" was coined to describe the many inequities that existed in the classroom (Sandler, Silverberg, & Hall, 1996, p. 1). This cold-hearted classroom climate can undermine self-confidence, lessen career aspirations, discourage class participation from female graduate students, and lead to avoidance of classes (Mencucci, 1997).

In the 1980s businesses looked to hire those individuals that developed and tested their leadership abilities during college (Griffin, 1999). It was during this time that the term, "glass ceiling" when speaking of women moving up in leadership roles, was coined. There was also data to link this glass ceiling phenomenon with the lack of workplace support and mentoring (Freedman & Baker, 1995; Mencucci, 1999). The linkage between the glass ceiling phenomenon and the lack of workplace mentoring does not aid women of today that are struggling to define themselves in their many roles. Many of these female graduate students search for mentors that can assist them in balancing these multiple, complex roles. That is why some researchers state that women need same-sex mentors (Prescott, 1994; Shakeshaft, 1989) "The same-sex mentoring for females has been called womentoring" (Prescott, 1994, p. 21). Kram (1985) states that one of the most influential characteristics of mentoring is gender. Duff (1999) further states, "We [women] need women mentors because with other women we can act and feel and give as our true selves" (p. 4).

While mentoring is viewed by many researchers as a critical factor for graduate students (Lyons, Scroggins & Bonham Rule, 1990), mentoring has further been shown to be one of the most important aspects in the doctoral studies of women (Mencucci, 1996; Cusanovich & Gilliland, 1991; Daloz, 1986). Women mentors can provide emotional support in recognition of the uniqueness of the sensitive issues that females face (Witkin Stuart, 1997). However, "lower achievement of women faculty, even though qualified, sends signals of discouraging conditions" (Mencucci, 1997, p. 23). Even though mentoring is seen as important, there is some

disagreement between researchers as to which type of mentoring is the most beneficial. There is evidence that female graduate students are in a unique position to benefit from both types of mentoring (Griffin, 1999).

Psychosocial mentoring focuses on the enhancement of the protégé's personal identity, self-esteem, and competence (Griffin, 1999; Kram, 1985). This type of mentoring tends to emphasize the importance of role modeling, counseling, and interpersonal relationships. On the other hand, career mentoring is viewed as aiding the protégé in adjusting to and advancing in a career by coaching, advising and sponsoring (Duff, 1999; Griffin, 1999). Those individuals who have been mentored are shown to have "faster career advancement, higher pay, and greater commitment to and satisfaction with their professional careers" (Young, 1997, p. 1). It has been suggested that the "best" mentoring relationships combine both psychosocial and career mentoring (Summers-Ewing, 1994; Stalker, 1994; Lyons, Scroggins & Bonham Rule, 1990; Scott, 1992).

"While mentoring can lead to success in business and the professions, having a mentor is absolutely essential for success in graduate school" (Lyons, Scroggins, & Bonham Rule, p. 279). Other research not only endorses the significance of mentoring but further indicates the advantages of women being mentored by women (Franklin & Conners, 1999; Gilligan, 1982; Jacobi, 1991; Shakeshaft, Gilligan & Pierce, 1984; Prescott, 1994; Young, 1997) due to the psychosocial differences between the genders (Bayles & Parks-Doyle, 1995; Prescott, 1994; Witkin Stuart, 1997; Young, 1997). "Women mentees in these pairs, [women mentoring women] have a higher perceived sense of academic and professional success than women who are mentored by men" (Griffin, 1999, p. 9). Studies further support that women, due to their interpersonal skills, make better mentors for both men and women (Montagu, 1992 and Prescott, 1994).

Studies also suggest that research mentoring should begin while women are still graduate students and should continue throughout their professional careers. While mentoring is viewed by many researchers as a critical factor for graduate students (Lyons, Scroggins & Bonham Rule, 1990; Young, 1995), mentoring has further been shown to be one of the most important aspects in the doctoral studies of women (Cusanovich &

Gilliland, 1991; Daloz, 1986; Mencucci, 1996). In the study of Durnova (1988) (as cited in Prescott, 1997), findings revealed that two important factors that influence a woman's career are a doctorate degree and a mentor.

The first purpose of this study was to develop an understanding about female graduate students' perception of research and mentoring. A second purpose of the study was to develop a potential model of research mentoring to be used in graduate studies in higher education universities. Using the theoretical framework of Franklin & Conners (1999), parameters of the study were identified.

The significance of this study was threefold. First, this study resulted in a theoretical framework and conceptual model to serve as an aid in gaining insight from concurrent female graduate students as to the ideal mentoring relationship. Second, the theoretical framework and conceptual model could also serve as a guide for structuring a mentoring program in higher education. Third, this qualitative study utilizing the focus group method of inquiry provides a template for a valid quantitative research study that could be instrumental in generating a hypothesis for future studies.

## Research Method

Based upon the replication of the study of Franklin & Conners (1999), the theory of this study was developed a priori in a true Husserlian phenomenological method. A qualitative research design with a focus group method of inquiry was used to explore the perceptions of female graduate students enrolled in three southern metropolitan universities as to their perception of research. This design and method were chosen due to the ability of the investigator to gather a deeper understanding of the perceptions of this group of individuals.

### *Sample*

The sampling criteria for the purposive sample included that the participants were (a) female graduate students, (b) enrolled in an educational doctorate program, (c) at a southern metropolitan university (d) currently taking or have taken a research methods course, and (e) have access to the Internet. Because the

individuals, or participants, possessed these common traits, it was a homogenous purposive sample (Miles & Huberman, 1994). This type of sample allowed the group to expound on their lived experiences and provided a higher volume and quality of information (Lucasey, 2000). The goal was to recruit 6-10 students to participate in a single focus group session. Individuals of this study were referred to as participants, which added the connotation of inclusion and consenting collaboration according to Merriam (1998). Group interaction was used to stimulate participants to share and provide insight into data that might be inaccessible without group discussion (McDaniel & Bach, 1996).

*Recruiting Participants*

Once the sampling criteria were established, the researcher recruited volunteers by first obtaining permission from the administration of the three southern metropolitan universities. The three universities were purposively chosen from a sampling frame of southern metropolitan universities provided by the Coalition of Urban and Metropolitan Universities. Because this study is a replication of the study conducted by Franklin & Conners (1999), the delimitation of southern metropolitan universities was used. It is also reasonable to assume that southern female graduate students have a uniqueness in their perception of research and mentoring. Therefore, the participants of the focus groups from the metropolitan universities were exclusively females.

The researcher explored these universities as to whether they provided doctoral studies in higher education. The researcher made contact with someone in the office of the Vice Provost, or equivalent, at each university. These staff members were very helpful in obtaining the proper contact person from whom the researcher was to obtain appropriate permission.

Having representation from all three universities and conducting three separate focus groups achieved triangulation. Triangulation aided in the internal validity of qualitative research (Maxwell, 1996). With the utilization of multiple sources at three southern metropolitan universities, confirmation of emerging reality was achieved. This emergence of reality gives increased internal validity due to its nature of "how research findings

match reality" (Merriam, 1998, p. 201). Lucasey (2000) suggests the need for at least two focus groups to provide checks and balances for the data. Krueger & Casey (2000) further endorses the need for at least three focus groups.

The Lone Star State University administrators were prompt in their reply and outlined the procedure to obtain (IRB) approval at their institution. Upon receipt of a copy of the approved IRB document from the University of Arkansas at Little Rock (UALR) along with the completed application form for their institution, accelerated approval was obtained in two days.

The Show Me State University administrators were quite helpful, yet the process of IRB approval was lengthier. A National Institutes of Health online course had to be completed and proof of successful completion was attached to their IRB application. A copy of the approved UALR IRB was included in order to answer the questions for their institution IRB approval. At this institution a researcher not affiliated with their campus must have a faculty sponsor. After contacting a faculty member in the Education Leadership program, sponsorship was obtained. This faculty member had provided the researcher with the information necessary to access the NIH online course. IRB approval was obtained.

The Sunshine State University provided a greater challenge in gaining written approval. The NIH online course was no longer the accepted course for this institution. The IRB approval application and process were obtained from the university website. After much exploration by the Vice Provost, the name of the Dean of Education was provided as the contact in which to gain permission. The person in the Office of Research was contacted to verify the application process. Once the application was submitted, the signature from the Dean was obtained and IRB approval was granted.

Faculty members at the three institutions were then approached for their assistance in the identification of prospective student volunteers. At Lone Star State University, a list of female graduate students and contact information was provided to the researcher. Thirty potential volunteers contacted the researcher.

The sponsoring faculty member at Show Me State University posted an ad on their list serve announcing the need for volunteers for the study and contact information. Twenty-four interested volunteers contacted the researcher.

Obtaining volunteers at the Sunshine State University was not so pleasant. The list of potential participants was emailed to the researcher, but it was never received. After much prompting, the list was faxed to the researcher. The list contained names of both male and female graduate students but did not contain any information in order for the researcher to contact the students. The researcher sent those females on the list an email through their university email system asking for their participation in the study. Many of these email messages were returned to the researcher labeled as a failed message. Therefore, upon the receipt of an email from one of the students on the list, the researcher saw the need for a snowball, purposive sample. So the responding female student was asked to contact other female graduate students from her school that would be eligible to participate in the study. Four additional students were contacted, but only one volunteered.

The student volunteers were contacted via email to qualify them for participation in a focus group session. Each qualified participant was sent a copy of the Informed Consent Form via email. The potential participants were instructed to read and sign the Consent Form and return to the researcher by fax. The participants were encouraged to keep a copy of the Consent Form for review as necessary. The Informed Consent Form included statements related to the project objectives, any known risks of participation, and confidentiality. Information regarding the purpose of the study, the timeline of the study, and the vehicle of communication of the study was also sent to participants by email.

From the Lone Star State University, nine signed Consent Forms were received. Of these nine volunteers, five actually participated in the study. There were nine signed Consent Forms received from the show Me State University. An additional volunteer contacted the researcher once the study had begun. Eight of

the nine volunteers participated in the study. Two students from the Sunshine University volunteered and participated in the study.

*Data Collection*

Once the three southern metropolitan universities were selected, permission was obtained by contacting administration at the universities. The prospective participants were contacted and consent was obtained. Once the Consent Forms were received, the participants were assigned a number from 1 to 20 by the researcher. The research team decided to employ a random table to place the participants in their respective focus group which according to Popham & Sirotnik (1992) is "a more efficient method" (p. 45). This strategy was employed to further squelch any researcher bias due to previous written encounters with the participants during recruitment for the study. The tables of random numbers consist of numbers arranged in rows and columns at random. To utilize the tables, the user can begin at any point and read in any direction (Popham & Sirotnik, 1992).

Upon the second attempt of using the tables of random numbers, the representation from the universities were distributed evenly except for the Sunshine State University that had only two participants. Focus groups A and B were composed of three participants from the Lone Star State University, three participants from the Show Me State University, and one participant from the Sunshine State University. Focus group C was composed of three participants from the Lone Star State University, three participants from the Show Me State University, and no participant from the Sunshine State University.

Having representation from all three universities and conducting three separate focus groups achieved triangulation. Triangulation aided in the internal validity of qualitative research (Maxwell, 1996). With the utilization of multiple sources at three southern metropolitan universities, confirmation of emerging reality was achieved. This emergence of reality gives increased internal validity due to its nature of "how research findings match reality" (Merriam, 1998, p. 201). Lucasey (2000) suggests the need for at least two focus groups to

provide checks and balances for the data. Krueger (2000) further endorses the need for at least three focus groups.

After assignment of the participants to focus groups, the participants were then assigned fictitious names. It was the consensus of the research team that the names assigned would be female Disney, Fairy Tale, and Cartoon character names. Names of female villains (i.e., Wicked Stepmother) would not be appropriate and were not used. The participants were given instructions concerning the computer-mediated focus group session protocol. A proposed timeline was included in the information. The timeline was imperative in order to perform the asynchronous focus group session. Enough time was given for the participants to respond to each question from the focus group guide. Therefore, the timeline was set for a maximum of four weeks of interactive communication beginning March 4, 2002.

The culminating session was conducted on March 25, 2002 with the summary message posted by the moderator for participant feedback. Feedback from the participants in the study was utilized to verify, clarify and amplify the intent of the data presented. Feedback is considered "one of the most important of all the credibility measures and one which also occurs throughout the inquiry, involves reporting back the findings, interpretations, and conclusions with the study participants" (Witkin Stuart, 1997, p. 64).

The three focus group sessions ran concurrently but independent of each other. In each session, the investigator served as the moderator of the computer-mediated focus group. It was the responsibility of the moderator to facilitate the discussion of the group. Each questions from the focus group guide was posed to the participants in each of the focus groups. The moderator further used probing questions to clarify answers and gain additional information. When using probing questions, the moderator kept the research questions of the study as the focus and to "stay close to the experience as lived" (Van Manen, 1990, p. 67). The participants responding to the questions and each other suggested that interaction mirrored the dynamics of a real-time, traditional focus group.

The medium used for the virtual focus group was the Internet using an established web site. In the mid-1980s, the use of computers to aid in the data analysis of qualitative researchers became more prevalent. This led to a wider range of usage both data analysis and data collection (Franklin & Lowery, 2001; Libutti, 1999). By the 1990s, the expanded use of the Internet left an open window to provide access to a global society that further broke the restraints of time, distance, and cultural walls. This added freedom provided means by which qualitative researchers could amplify their studies with ease and convenience. However, this also brought forth a whole new set of ethical considerations (Franklin & Lowery, 2001).

One such ethical issue is that of the biases of the investigator while conducting computer-mediated focus groups. In computer-mediated focus groups the nonverbal cues of the moderator are not evident to the participants and cannot be used as a means to skew the data. Furthermore, this electronic format allows fewer interactions between the moderator and the participants. Franklin and Lowery (2001), found that electronic format provided a mechanism that "focused more on the process and less on the skills of the rapporteurs [moderator]" (p. 177). Therefore, it was suggested that this format "did improve the objectivity of the focus group method" (Franklin & Lowery, 2001, p. 178).

Topic sensitivity has also been identified as an ethical issue. Franklin and Lowery (2001) found the electronic format "provided a cloak of anonymity that encouraged faculty [participants] to share their true opinions and attitudes" (p. 178) thus neutralizing the topic sensitivity issue. This is further substantiated by the study of Walston & Lissitz (2000), who revealed that participation was more equitable for computer-mediated focus groups as compared to the face-to-face focus groups.

While the moderator's ability to guide the discussion effectively in focus groups is vital, the electronic format allows group interaction through written word only. Therefore the electronic format facilitates "a concise discussion of the topic" (Franklin & Lowery, 2001, p. 178).

The computer-mediated focus group format was the method the investigator chose for this study. One advantage to this method included the ability of the investigator to obtain the transcripts immediately for easier validation by the participants with feedback. Other benefits were that the moderating skills and opinions of the investigator that might be considered biased were less influential or intimidating to the participants The anonymity afforded the participants due to the electronic format encouraged a greater depth of meaning to the data.

The web site utilized a web-based software package entitled *WebCT v3.7.2.2.* "WebCT.com supports excellence in online teaching and learning with mentoring programs, resources, and access to experts and colleagues in many fields" (WebCT Company, 2001a, p. 2). *WebCT v3.7.2.2* can be used in many different ways. Its use goes far beyond facilitating distance learning. "It is a flexible, integrated environment where students can integrate course experiences into the real world communities of work and play" (WebCT Company, 2001b, p. 1). Thus, this method was used with these concepts in mind: (1) ease in contacting the participants, (2) ease of accessing the web site, and (3) maintenance of anonymity of the participants.

*Focus Group Guide*

Prior to conducting the focus group sessions, the investigator developed a focus group guide to assist indirectly with exploring the attitude patterns of female graduate students toward mentoring. The focus group guide was designed based on the Franklin & Conners (1999) study. The guide reflects the research questions being explored. The initial question asked during the focus group session was for each participant to describe her experiences and feelings about conducting research. From this initial question, further exploration of the barriers related to female graduate students' attitudes toward research and the possible mentoring solutions that might be incorporated to aid in overcoming these barriers, especially during their graduate research studies, was conducted.

*Data Analysis*

This study was designed to explore the perceptions and attitudes of female graduate students toward research. The primary research question was: What are female graduate students' attitudes about research mentoring? Related to this primary question were three secondary questions that guided the study and are listed below:

1. What are female graduate students' perceptions about research barriers?
2. What are female graduate students' perceptions about research support?
3. What solutions do these female graduate students feel could be incorporated to aid in overcoming these barriers and enhance the research support?

The research questions for this study were utilized to drive the analysis of the data presented. In this chapter a description of the attitude patterns that emerged related to each of the research questions in this study are presented. Direct quotations from the participants of the study are offered to aid in accurately reporting their responses.

"Qualitative data analysis is a complex, ongoing process that can be difficult at times" (Griffin, 1999, p. 68). Due to the subjective nature of qualitative data analysis, some researchers recommend that auditors be used to minimize the researcher's bias during the data analysis process (Griffin, 1999). Therefore, to aid in this endeavor, the investigator employed assistance from two individuals that were familiar with the qualitative data analysis process, the topic being studied, and with the phenomenological research process. These members of the research team had previously participated in the audit process employed in qualitative research. The research team functioned to discuss, confirm, and validate the findings of the investigator. The investigator was primarily responsible for the data analysis and organization of the study.

The auditor assessed the criteria of the study to ensure the objectivity of the process that ultimately protects the validity and reliability of the theory (Franklin, 1999; Merriam, 1998). This 'internal' auditor who is

knowledgeable in the research topic reviewed the responses of each focus group session and developed a second, independent set of codes. A second, "external auditor" ensured the validity and reliability of the entire study. The external auditor reviewed the entire study from data collection through the development of the theoretical framework (Franklin, 1999; Merriam, 1998).

The investigator for this study also served as the moderator for the focus group sessions. The focus group guide served as a guide in keeping the study on track. The guide incorporated an open-ended format that allowed the moderator to explore all possibilities and themes as they emerged. As to the characteristics of qualitative research, the data analyses and collection were done virtually simultaneously (Swenson, 1995).

The first step in the analysis of the focus group data was to read through the transcripts in their entirety in order to obtain a sense of the content. The next step was coding of the data. "A code is a single word that best summarizes themes, concepts, or ideas which formulate an attitude" (Franklin, Boggs, Conners, Crum, Nawarat, Ramirez & Trawick, 1997). "Coding serves as an important bridge between the data collected and the validity and reliability of the theory developed" (Franklin, 1999, p. 9). The coding categories were pre-determined according to Husserlian tradition based on the Franklin & Conners (1999) study. However, as the researcher coded the transcripts additional coding categories emerged that different from the Franklin & Conners (1999) study.

The computer-mediated focus group interaction was printed just as written by the participants and allowed the transcription of the sessions so that the content may be entered into the computer program, *Ethnograph.* The *Ethnograph* v5.0 Qualitative Data Analysis Software was used for an "easier, more efficient, and more effective" analysis of data (Qualis Research Associates, 1998). The investigator as well as the internal auditor read the responses and coded data into categories using the Ethnograph v5.0 software. In this way, the coding categories of the auditor were compared with the categories of the moderator to identify any

differences in the coding categories. The differences were then negotiated until an agreement was made on the proper coding categories.

Once the coding categories were developed, a codebook was developed within the *Ethnograph* v5.0 to define and track each code category. The coding categories were combined, based on a common theme, into attitude patterns. The codebook definitions were used to merge codes together to form attitude themes and patterns (Franklin, 1999). The investigator then wrote an informal memo of each emerging pattern. "Memoing is a summary of each attitude pattern" (Franklin, Boggs, Conners, Crum, Nawarat, Ramirez, & Trawick, 1997, p. 11). The attitude patterns were then combined into attitude trends.

The moderator wrote proposition statements based on the memos of each attitude pattern. "Proposition statements are the formal summary statements of the overall attitude trends based on the memo of each attitude pattern" (Franklin, Boggs, Conners, Crum, Nawarat, Ramirez, & Trawick, 1997, p. 11). This step of the analysis process assisted the investigator to formulate, refine, and link concepts to create a clear description of the emerging attitude trends. The proposition statements were converted into the criteria female graduate students used to describe research.

*Results*

The data was reduced into four attitude patterns: research barriers, (2) research support systems, (3) research solutions, and (4) research attitudes. The research barriers were defined and reported. The four barriers were (1) the dissertation process, (2) time management, (3) family commitments, and (4) ethics.

The research support systems were identified as (1) mentors, (2) field research experience, and (3) resources. Mentors consisted of faculty, advisors, dissertation committee chairs and peers. Most mentoring was perceived to be informal. Peer mentoring was reported by all participants. Field research experience, or conducting 'real life' research projects, was seen as an excellent way to overcome the intimidation of conducting research in the doctoral program. The resources mentioned were university department staff and

money. University staff were helpful in tracking necessary paperwork and deadlines. Money support came in the way of grants and fellowships. Research solutions were extracted from the study and described as (1) restructuring the dissertation process, (2) wisely choosing dissertation committee members and chair, and (3) mentors.

When asked about their feelings regarding research, graduate students in this study commented that research meant many things to many different people. The participants in the study described research as a broad subject, which conjured a love/hate relationship. Research was perceived as a game in which one must jump through hoops.

### *Research Attitudes*

The research attitudes of the participants painted a descriptive picture of their views of research. Initially, research terrified most participants. As time passed, research became a love/hate relationship. There were aspects of research that were more tolerable than others.

#### *Research Feelings*

Mary Poppins best described the participants' feelings toward research when she stated, **"I think that research is a very broad topic and can include in it a lot of different things."** Individual feelings about research are mentioned.

> **My feelings on research are metaphorically like a Christmas tree with presents spread all around. When I received a bundle of data, it is the most exciting thing to open that 'present' and see what is inside.**
>
> **Road Runner**
>
> **I was immediately amazed at all the information that was available, and I got hooked on research right away!**
>
> **Minnie Mouse**

**I feel that I will gain a lot from conducting research in my chosen field, however, I do have anxiety about the statistics part of the research. I also have some anxiety about the length of the dissertation.**

**Charlotte Web**

**I think research is like mathematics. We make it seem much more difficult than it really is. It's part of the myth.**

**Cinder Ella**

**Research hits the tip of the iceberg, but we need to remember what is under the iceberg.**

**Bambie Deer**

**We were basically just required to know it [research principles]. It was hit and miss for a while. I really felt like the child who is thrown into a pond to learn how to swim. I guess I still only loosely embrace research. I understand it, but I do not enjoy it. I see it as a means to an end.**

**Ana Stasia**

Then there are the extreme negative feelings ventilated.

**Research in education lands somewhere in purgatory – a gray area – because of the 'what ifs'.**

**Bambie Deer**

*Game*

Research is seen as a political game with all its bureaucratic idiosyncrasies. Research can be described as an obstacle course or maze where one is in constant search for the right path while having to butt your head against many walls and pick yourself up out of hidden holes.

**I am battling the system. Research is jumping through hoops, playing a game in some part of getting appropriate signatures, approval, etc...I've found that a lot of the research hoops are bureaucratic.**

**Bambie Deer**

**All of the ideas you all have about how to maneuver around all the unforeseen obstacles I will find are welcome!**

**Red Ridinghood**

*Quantitative versus Qualitative*

There were aspects of research that were viewed as a positive experience while others were perceived as negative.

**The stats courses were very distressing...I freeze at the thought of interpreting numbers.**

**Miss Muffett**

**Stats classes are hard classes. I really like the stats part, which I guess makes me weird**

**Olive Oyl**

Several participants voiced their growing fondness for qualitative research. Qualitative research is becoming more accepted as true research. More doctoral students are considering a qualitative research study for their dissertation topic.

**Quantitative research was once viewed as the ONLY research with merit. Some do not dismiss this view, especially those in the older guard. The newer faculty enjoy and promote qualitative. I like qualitative studies because of the triangulation and member check procedure.**

**Road Runner**

**I'm taking my second semester of Qualitative research and it's opening a whole new window for me. Very exciting.**

**Mary Poppins**

**I appreciate Mary Poppins response that after being introduced to qualitative research she doesn't find quantitative challenging enough.**

**Cinder Ella**

*Research Barriers*

In response to the first secondary research question, "What are female graduate students' perceptions about research barriers?" There are four major themes that emerged. One participant, Bambie Deer, described this question as "**a pandora's box**."

*Dissertation Process*

The dissertation process was at the forefront of the female graduate students' minds. Some of the participants had very little research background. Other participants had positive experiences in their Master's program. Still others had performed research in their jobs. No matter the degree of exposure to research, it was the consensus of the participants that research in the doctoral programs held a much different position. The participants felt they had little guidance in the intricacies of the dissertation process. Many of the students felt they were alone in this process.

> **We were basically just required to know it. It was hit and miss for a while. I really felt like the child who is thrown into a pond to learn how to swim.**
>
> **Ana Stasia**

> **It seems that getting this [doctorate] done is like osmosis. It's something you kind of soak up all along the way.**
>
> **Bo Peep**

> **Writing the dissertation is an exercise in frustration and perseverance.**
>
> **Olive Oyl**

The IRB posed quite a problem and was intimidating with its rigid standards.

> **Human subjects approval had to be obtained, but there is a very rigid committee seated this year.**
>
> **Bambie Deer**

**The IRB is a problem—as indicated by someone else. The human subject approval process can preclude you from finding out information that is valuable.**

**Daisy Duck**

One student described the dissertation process as a prison sentence.

**My hope is to walk this summer (sound like a prison release!)**

**Bambie Deer**

*Doctoral committee.* The participants that were assigned a dissertation chair and dissertation committee members verbalized their unhappiness with this policy.

**As someone else mentioned, the committee poses some barriers.....have their own agenda and sometimes I feel like a puppet.**

**Bambie Deer**

**If I can't choose my own committee members, just think how this process is going to go! The dissertation is NOT for the doctoral student, but a notch on faculty belts.**

**Road Runner**

Graduate students in most universities choose the members of the dissertation committee. However, obstacles can still barricade progression in the doctoral process.

**My previous advisor retired...unfortunately, my entire committee retired or left the university, so I had to replace my entire committee.**

**Bambie Deer**

**I sort of joked about "firing" him [statistics mentor], which surprisingly, hurt his feelings. This whole process is too grand an undertaking to saddle yourself with difficult people.**

**Bo Peep**

*Mentor.* Mentors are perceived as a positive relationship when working toward a goal. However, a mentor, or mentoring relationship, that is not nourishing for both parties can be an albatross in the pursuit of the doctoral degree.

**There was really no one here who was directly a part of the program to mentor me. This is also a very small program, which also limits mentoring opportunities.**

**Tinker Bell**

**I don't feel as if I was mentored. I felt as though perhaps individuals might have mentored me, or we might have entered into the beginning of a mentoring relationship, but time was always a factor.**

**Goldi Locks**

**A poor mentor, like a poor advisor is just a millstone around your neck.**

**Olive Oyl**

**Students have unique issues; sometimes the faculty can't remember being at this stage, even though they are as supportive as they can be at this time in their lives.**

**Bambie Deer**

*Advisor.* The advisor posed a barrier in several ways. Either they did not have the time and were not available to the students or they would give misinformation regarding important steps in the process.

**My biggest problem currently is the lack of advising I receive and the misinformation I receive. The information is contradictory and slows me down.**

**Daisy Duck**

**There aren't enough doctorate level faculty advisors to serve on the committees--my university has had a shortage of stats professors for over a year and a half.**

**Bambie Deer**

*Time Management*

Time management took into consideration both the mentor and the mentee. It entailed not only school commitments but commitments to work and family. It was reported that the mentor often did not have time or make time for meetings with mentees. Several participants stated their advisors were busy and they did not want to bother them.

**...but time was always a factor(often not enough time on the side of the mentor).**

**Goldi Locks**

**[Qualitative research is] time consuming...but all doctoral courses are.**

**Miss Muffett**

**The material is difficult and students really need to invest time and effort to learn the material.**

**Olive Oyl**

The participants felt as though they had to balance the multitasks of their busy lives. The various roles of women in this day and time are quite different than before. It was also pointed out that doctoral students of today, male or female, are not your traditional college student.

**Also, my body is really weary during the day after pulling a long night at the computer. There are people out there who actually expect me to work during the day! So I'm pretty maxed out. Perhaps women of today are more challenged by balancing.**

**Bo Peep**

**So...even though my busy life (it sounds like all of us have very busy lives) didn't necessarily make the work convenient, the work still needed to be done.**

**Goldi Locks**

**I feel I should be visiting the library more, but because of time, I have used the Electronic Databases that are available.**

**Charlotte Web**

*Family Commitments*

Family commitments were often mentioned in the same context as not having enough time for all the various roles that the participants played.

**In my doctoral program, as many are, I am balancing a large family, and 2 part-time jobs.**

**Miss Muffett**

**Balancing family demands, work demands, and anything else that happen to come along (like a dissertation) can be quite daunting but also just part of life's continued lessons. I do think that I have more day to day responsibilities at home with my children, plus the demands of working full-time than would be expected of what might once have been considered a "typical" doctoral student. I am still expecting myself to do all the things that I think I should with parenting and work, and have just added another layer onto those responsibilities with my advanced studies.**

**Goldi Locks**

*Ethics*

Unlike the Franklin & Conners (1999) study, the participants in this study talked about ethics being a barrier to research mentoring. Only one focus group spoke about the ethical issues involved with research. However, it was an extensive dialogue that surfaced a definite concern.

**...when reading research journal articles, many times the investigator can manipulate the data, questions, hypotheses, to get what he/she needs...remember the old adage, statistics don't lie, statisticians do.**

**Bambie Deer**

**If anyone confronts the unethical issues, I see scared people. Senior faculty can stomp you and ruin one's career. Plus, you never know who will be on your tenure committee. The motto of**

**University faculty is 'Don't make waves. Ride them.' I was horrified that these two incidents are allowed to happen, and the three Monkeys surface: 'see no evil, hear no evil, and speak no evil,'**

**Road Runner**

**I have read SO many examples of published research that was SO poorly written and says absolutely nothing.**

**Mary Poppins**

*Research Support*

In response to the second secondary research question, "What are female graduate students' perceptions about research support?" there were three support trends identified and described as the key [to success].

**But finding good support is CRITICAL to getting finished.**

**Olive Oyl**

*Mentor*

Mentors were identified as dissertation committee chairs, advisors, faculty and peers. Mentoring was more informal than formal. Mentors were both male and female.

**I feel I was mentored by my first supervisor, who also was the Dean of Students. She was the first dean of the college and overcame many obstacles to become the woman she is today.**

**Red Ridinghood**

Peer mentors were what most of the participants felt were the most supportive and critical to possess.

**I disagree that "for women" mentoring is the way to go. I think this holds true for anyone in any area.**

**Miss Muffett**

**Not only does it [peer group] encourage us, it helps us realize that others are as frustrated, filled with doubt, and triumphant all at the same time.**

**Bo Peep**

**As a result [of reading everyone's responses] I am not feeling quite so alone in this process. I also feel a little more motivated to just dive into my dissertation work rather than to just continue thinking about when and how I will get the time to dive in. My big toe isn't even wet yet☺**

**Goldi Locks**

Even if they did not think they were mentored, all the participants mentioned having some type of peer support. This peer support system was seen as a great benefit.

**In place of having a true mentor I found that being a part of a cohort group was a great benefit.**

**Tinker Bell**

**I have certainly felt supported by my fellow students. We progressed through the coursework as a cohort; this provided a high level of support. We also maintained daily communication through our e-group. Now in our third year, it's like a good marriage – we've had our ups and downs, but we know we'll always be there for each other.**

**Cinder Ella**

*Field Research Experience*

Field research experience is defined as real life research experience. Even those participants who perform research in their jobs felt they had a better understanding of the expectations of the doctoral research after having completed assigned research projects in the doctoral program.

**I feel much more confident about reading and interpreting research. I attribute this to course exposure...and to the opportunities I've had to work with university professors on various research and evaluation projects. I was actually applying what I was learning in class. If I had**

**not had those valuable field experience, I know I would be very nervous about the dissertation thing!**

**Minnie Mouse**

*Resources*

One focus group spoke more about resources than the other two groups. They identified the university staff and money as the two biggest resource supports.

**Also, this person's office staff is so supportive...they keep all students frequently updated on our progress, what forms we need to send in, if everything is OK, etc.**

**Bambie Deer**

**A big support for me is MONEY! I received a fellowship from my university this semester which is a cash stipend; also received grant approval.**

**Bambie Deer**

*Research Solutions*

The third research question was "What solutions do these female graduate students feel could be incorporated to aid in overcoming these barriers and enhance the research support?" When answering the questions during the focus group sessions, the participants expressed their wishes as to how and what would improve the research process. In voicing their requests, two key areas were identified as possible solutions to the perceived research barriers.

*Restructuring the Dissertation Process*

In the dissertation process, participants of this study saw a positive solution was to be able to choose their dissertation committee, dissertation chair, and dissertation topic. The participants felt that research courses should be introduced early in the doctoral program and should include real life research projects.

**Most of my research courses came at the end of my doctoral program, which was a mistake.**

**Goldi Locks**

**I will make a recommendation to our dean, my advisor, that there needs to be some way to get research in early in the program.**

**Miss Muffett**

*Choosing the Dissertation Committee*

Choosing dissertation committee members and chair was perceived as being critical to the dissertation process. The need for adequate faculty in number and experience in which to choose is also helpful.

**I specifically asked to have the associate dean on the committee. The answer was a flat no! I did as I was told, just to jump through the hoops with less conflict.**

**Road Runner**

**My feeling is the study should be what the investigator wants, not the committee's ideas/ideals...I don't have the testicular fortitude, or, since we are all female, the ovaries to say no.**

**Bambie Deer**

**I think the best thing you can do is pick your committee to be that kind of support and people you can work well with.**

**Olive Oyl**

**I guess the moral of this story is not to put all your doctoral chickens in one basket.**

**Minnie Mouse**

**I have learned that it is critical to have a strong methodologist on your team! But you look for people that share your concerns for ethics!**

**Road Runner**

*Mentors*

Peer mentoring was seen as the most prevalent type of mentoring being practiced. Peer mentoring can be further divided into formal and informal types. The term "cohort" was continuously used to describe a type of formal peer mentor group.

**Mentoring: we all need it, we all need a support group or cohort group. I have found that this format serves as that, it's nice to hear from other people going thru similar events.**

**Bambie Deer**

**One key is a group to network with...**

**Miss Muffett**

Faculty, advisors, dissertation committee chairs and dissertation committee members also serve as mentors and are viewed as solutions to the barriers. However, these mentors should possess certain attributes.

**I would like someone to shepherd me through the process, by first getting to know me, my challenges, and my strengths. By shepherding, I mean someone to guide me safely along the dissertation journey that I have committed myself to take, someone to warn me of the hills and valleys, someone to cheer me on (especially when I am feeling very alone and hopeless), someone to be objective, and to share their healthy sense of perspective.**

**Goldi Locks**

**Another [key] would be professors willing to go the extra distance.**

**Miss Muffett**

**You have to have a strong stats professor.**

**Bambie Deer**

**I think a person who encourages, builds confidence and is just there to listen and if appropriate provide some feedback is all that can be expected from a mentor.** **Charlotte Web**

**As for the ideal mentor, I think it would be someone who models the kind of professional characteristics that you want for your own. That person would give you emotional support and concrete advice to help you to grow and expand your knowledge base, who can accept your limitations but build on your strengths.**

**Bo Peep**

*Discussion*

When comparing the findings of this study with those of the study of Franklin & Conners (1999), one will see that the findings were similar. The theoretical framework of Franklin & Conners (1999) was utilized as a basis in which to frame this study. The constructs they identified were 1) female cultural barriers to research, 2) barriers created by perceived gender differences, 3) barriers due to family commitments, and 4) barriers due to time management skills. The findings of this study authenticate that family commitment and time management skills are barriers to research. However, there was no discussion as to any type of obstacle connected with female cultural barriers or gender differences.

During the clarification of the findings, participants were asked whether they perceived a difference in the treatment of graduate students according to gender. Further inquiry was conducted to explore the importance of gender in choosing a mentor. On both counts the participants did not identify any difference in their treatment or preference due to gender.

**I felt the professors maintained the same expectations and maintained the same expectations and gave the same level of respect to male and female students.**

**Cinder Ella**

**I don't think I felt that gender was a big factor in working on my doctoral program.**

**Goldi Locks**

*Research Attitudes*

The research process has been described in the literature as a 'love/hate relationship'. Woodbury (1993) graphically depicts graduate students embarking on a quest that "catapults them into their own personal academic Inferno" (p. 3).

When asked about their feelings regarding research, graduate students in this study commented that research meant many things to many different people. Some of the participants viewed research as being in prison and/or purgatory. Other participants in this study associate research with Christmas presents and the joy of opening them to find out what is inside. One description that was repeatedly mentioned was the concept of research being a game in which one must jump through hoops in order to cross the finish line.

*Research Barriers*

Research barriers identified by the female graduate students were (1) the dissertation process, (2) time management, (3) family commitments, and (4) ethics.

The study of Huguley (1988) investigated the obstacles to completion of the dissertation phase of the doctoral studies. The findings revealed two obstacles that were considered to be the greatest block to completing the dissertation. These two obstacles were (1) full-time employment and (2) lack of structure in the dissertation phase. Attributes that may contribute to a successful dissertation are identified as (1) obtaining scholarship, coursework, and training experiences; (2) perseverance; (3) communication; and (4) dissertation committee selection.

The findings from the surveys and interviews of graduate students completing their dissertation in the study of Tluczek (1995), substantiated the findings of Huguley (1988). Tluczek (1995) affirmed the communication obstacle when exploring about the relationship between student and the dissertation chairperson. The dissertation committee selection was once again seen as a significant obstacle. Also revealed in the study of Tluczek (1995) was the obstacle of selecting and narrowing the dissertation topic. In the study

of Andersen (1986) the findings revealed that the position of dissertation chairperson was quite powerful and influential. This empowerment proved to be the most significant figure and the primary socializing agent for doctoral nursing candidates.

In this study the dissertation process was viewed as a barrier to research mentoring. Olive Oyl stated, **"Writing a dissertation is an exercise in frustration and perserverance."** This statement mirrors the concept of the dissertation process as a barrier.

As previously discussed in the literature review and discussion of the findings, time management is considered a research barrier for female graduate students. The barrier of family commitments closely relates to the time management barrier upon analysis of the data collected from the female graduate students. The multiple roles of today's female graduate students mandates the need for time management skills to assist with the balancing of responsibilities.

In conducting and reporting research, ethics is a very important concept and consideration that is often taken for granted and proves to be a research barrier. In 1981 scientific misconduct became a federal issue in the United States upon the disclosure of its presence in 1980. Further probing unveiled twelve cases of scientific misconduct from 1974-1981. This prompted Congressional intervention in 1985. At this time Congress passed the Health Research Extension Act. The Public Health Services (PHS) Act issued a regulation requiring institutions to establish a process to review reports of scientific fraud and report any alleged substantial scientific fraud (U.S. Department of Health & Human Services, 2002). As a result, institutions established Institutional Review Boards (IRB) to aid in the policing of ethical guidelines by reviewing and approving proposed research studies conducted in their institution. Research misconduct is considered to be "a serious professional deviation which is subject to sanctions imposed both by the University and also in some cases by a sponsoring federal agency" (University of Pittsburgh, 2002, p.1).

Research integrity entails reporting conclusions based on accurately recorded data and all relevant observations. A breach of research integrity includes the failure to report data that does not support or even contradicts the conclusions. If some data should be disregarded for a reason, this must be stated in the published findings (University of Pittsburgh, 2002).

*Research Support Systems*

In the study of Wilkinson (1995), results revealed that peers indeed fulfilled a mentoring role in the lives of graduate students. A new initiative at many institutions of higher education is taking place to promote peer mentoring. This initiative is termed 'learning communities' (Weber, 2000). The term community gives the students, and faculty for that matter, a sense of belonging and family. Weber (2000) further identified the learning community as being structured so that courses from distinct areas of study are clustered together in order to organize students and faculty into smaller groups.

Another term for similar types of support systems is 'cohort' groups. The implementation of cohort groups is different for each program in order to meet their unique needs. One example of a cohort group is students taking one year and a half of courses together. Another example of a cohort group might be a monthly study group or an e-mail group (Dorn, 1995).

In the final session when asked for clarification of the initial findings, the researcher asked just exactly how they would define cohort. It was explained that the university structured the cohort at one university.

> **Basically, it is the group of students who entered the program at the same time. We are expected to take our classes together and keep each other on track.**
>
> **Tinker Bell**

One participant who was not a member of a cohort described what she thought a cohort was and what attributes members of a cohort would possess. She even considered the participants of this study to be a cohort.

**My cohort of choice would be my ninth grade girlfriends, my tennis buddies from the 1980s, and now my doctoral support system. I guess the main thing is that they have to have some defined characteristics in common, whether professional, social, taste-wise, spiritually, etc. This group of female doctoral students who agreed to the study would certainly meet many of these criteria.**

**Bo Peep**

A member of a cohort stated that the formal cohort structured support system ended after the last course before the dissertation phase.

**It [exit seminar course] gives the student a springboard to dive into a (empty pool) trek to the dissertation phase.**

**Bambie Deer**

Whether the groups are called learning communities or cohorts, they are examples of formal peer mentoring. These peer support groups help meet the psychological needs of graduate students (Gabrilowitz, 2001). In the study of Horn (2000), students contributed their participation in learning communities with aiding them in adjusting to college. Some literature endorses the concept that dissertation support groups can aid graduate students in remaining mentally focused and physically on task while at the same time assisting in their professional development (Bruce, 1995; Evans, 1996). In the study of Haggis (1997), the findings show that both males and females reported more psychosocial support from their peers than those that were not mentored.

Nothing takes the place of real life experiences. It is a proven fact that everyone has a different style of learning. Textbooks further endorse repetition and the incorporation of various teaching techniques for the instruction of adult learners. To that end, field research experience is shown to be an excellent medium by which research concepts and principles are taught. This study is a result of a real life experience of this researcher during a graduate qualitative research course.

Resources identified as playing a support role in research mentoring dealt with money, technology, and personnel. These resources did not show prevalence in all the focus groups. However, resources were felt to be a coveted and beneficial commodity that was often neglected.

**I must say, there were but a handful of students who applied for the fellowships/grants. . .there is assistance out there, but people need to find out about these resources.**

**Bambie Deer**

*Research Solutions*

Research solutions extracted from this study to overcome the identified obstacles were described as (1) restructuring the dissertation process, (2) wisely choosing dissertation committee members and chair, and (3) developing a mentor relationship.

Solutions to research barriers identified in the literature further suggests that the graduate student (1) develop timelines with progress reports and stick to them; (2) select a dissertation topic you like, can be proud of, and has personal meaning; (3) select a dissertation chairperson wisely; (4) define a small research problem; (5) select the dissertation topic early in the doctoral program; and (6) select dissertation committee members wisely (Huguley, 1988; Tluczek, 1995).

## *Conclusion*

The researcher replicated the study of Franklin & Conners (1999) in an effort to gain further insight from female graduate students in other southern metropolitan universities as to their perception of research mentoring. Nin (2002) could have been referring to the basis for qualitative research when she said, "We don't see things as they are, we see them as we are" (p.1).

The study provided validation for the research barriers of time management and family commitments. The participants did not perceive gender as being a barrier in their choice of mentors. The female graduate

students also did not perceive any inequality in the treatment received from the faculty. However, the participants viewed the dissertation process and ethics as additional barriers.

The overall feelings toward research in this study were described as playing a game in which you must jump through hoops. The barriers identified by the graduate students detoured them from reaching their dissertation goal. This description conjures the image of an obstacle course or maze. A quote from Inspiration Peak (2002) describes an obstacle as "those frightful things you see when you take your eyes off your goals" (p. 3).

From the findings of this study, solutions to research barriers were identified that should be incorporated in doctoral programs at institutions of higher education. The first solution identified was the restructuring of the dissertation process. The dissertation process should possess a curriculum that begins with an orientation course to explain the dissertation process, policies and procedures of the institution, availability of resources, and time management skills that emphasizes adherence to timelines. Research courses should be scheduled early in the program incorporating real life research projects. In the words of Lucasey (2000), "it is only through sharing research that knowledge is accumulated and practice has a chance of being improved" (p. 55). The research courses need to prefaced by a Research Ethics course. By providing this schedule, the imposed legal restrictions for human subjects can be adequately dissected. Institutional guidelines for completion of the dissertation process are shared and the early selection of a dissertation topic is emphasized A faculty forum or get-to-know your faculty forum would afford an avenue by which the graduate student could make an informed decision as to their dissertation chair and dissertation committee members. This selection should be the choice of the graduate student. The student knows their needs better than anyone. Avenues for the formation of cohort groups, whether formal or informal, should be provided. The importance of such groups should be stressed and actively pursued.

Once again in the words of Nin (2002), "And the day came when the risk to remain tight in a bud was more painful than the risk it took to blossom" (p.1). One might think this refers to the new graduate student or novice. That inference is indeed true; however, upon conducting this study, one could clearly envision this statement describing the mentor who grows right along beside the 'bud' (Samuelson, 1999). When describing mentorship, Catherine Futch profoundly stated, "and who will walk with the newest of us?" (Samuelson, 1999, p.1).

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