

STEREOTYPES AMONG PSYCHOLOGY GRADUATE STUDENTS TOWARD
PEERS WHO ARE PREGNANT/MOTHERS

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ABSTRACT

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Although a limited amount of research exists, negative stereotypes about women, and particularly about those who are pregnant and/or are mothers, have been documented in occupational and academic settings. The purpose of this study was to examine existing stereotypes among psychology graduate students toward peers who are pregnant and/or are mothers. It was hypothesized that negative stereotypes toward peers who are mothers and/or are pregnant would be found within psychology graduate programs. Additionally, it was predicted that gender differences would be found, whereby men would indicate more negative stereotypes than women. It was also believed that differences between psychology disciplines would be revealed. Moreover, it was expected that a relationship between parenting status and stereotypes would be found, whereby students who are not parents would possess more negative stereotypes than those who are parents. Although the data did not support the first three hypotheses, they did confirm the fourth hypothesis. Findings provided interesting implications for theory, research, and practice in the field of psychology.

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CHAPTER I

INTRODUCTION

In January 2005, Harvard President Lawrence Summers gave a speech to the National Bureau of Economic Research on the presence of women in science. In his speech, he made many contentious statements about the possible causes for the underrepresentation of women in science and engineering. In doing so, he fervently reminded people of the overt and covert biases that exist against women in the academic and professional sectors. Among his explanations for the lack of diversity in the sciences, Dr. Summers, a former secretary of the United States Treasury, contended that a significantly higher fraction of married men were willing to work 80 hours per week in order to attain high powered jobs. He suggested that a general clash exists between individuals' family desires and employers' demands for high intensity and workloads (Rimer & Healy, 2005; Summers, 2005). Perhaps most controversial were Dr. Summers' remarks that women's lack of innate aptitude in science and mathematics contributed to their low numbers in the science and engineering fields. The combination of the latter and former suggestions was, Dr. Summers theorized, reinforced by socialization and continuing discrimination.

In response to Dr. Summers' comments, the presidents of Stanford, Massachusetts Institute of Technology, and Princeton (Hennessy, Hockfield, & Tilghman, 2005) suggested that our nation will not reach its full potential until women can feel as comfortable in math, science, and engineering as men. They argued that the United States

will lack a large portion of the talent pool capable of making significant contributions. The three presidents' response to Summers reflects the acknowledgement of biases that appear to exist in the primary, secondary, and post-secondary educational levels where stereotypical beliefs affect both women and men's sense of competence and esteem. This, in turn, may likely discourage children, adolescents, and young adults from pursuing gender non-traditional interests, education, and professional fields.

The toxic gender-specific stereotypes in many academic sectors encourage the perpetuation of harmful belief systems that have damaging individual, familial, social, and cultural implications. Thus, Hennessy et al. (2005) asserted that the most effective and important actions we can take involve ensuring and encouraging women's accessibility to supportive teachers and positive mentors, both women and men, throughout the duration of their educational journey. Additionally, the university presidents proposed that colleges and universities develop policies and overall cultures that enable women and children to maintain a balance between home and the workplace. The goal, then, would be to consider an individual's long-term potential and foster harmony between the life and work cycles, so that women and men would be more likely to excel in their careers of choice.

While the prevalent gender-related biases in the post-secondary level of education have been studied in relative depth (e.g., Becker & Toutkoushian, 2003; Centra & Gaubatz, 2000; Hulley, 2001; Zittleman & Sadker, 2002), there is an aspect about many women's experiences that is significantly missing. To date, there has been no research that has examined biases and performance evaluation ratings of pregnant students and

students who are mothers. However, related research (e.g., Gueutal, Luciano, & Michaels, 1995; Gueutal & Taylor, 1991; Halpert, Wilson, & Hickman, 1993) provides evidence to support the existence of stereotypes of pregnant women and mothers, including the tendency for both coworkers and supervisors to hold more judgmental and negative attitudes toward pregnant women and mothers in their workplace as well as viewing these women as less valued and dependable employees.

Examining Stereotypes Toward Mothers in Graduate School

Although no previous research has examined the existing stereotypes toward graduate psychology students who are pregnant or are mothers, it is important to analyze this topic, not only for the field of psychology but also for society at large. One of the reasons such research is valuable is that, if stereotypic behavior makes it difficult for mothers to succeed, more of them will drop out of higher education. This, in turn, will leave fewer mothers and women in general in high status professional positions. Some of the implications for the lack of mothers' voices and status in professional positions include a loss of input and intelligence from a large portion of the world's population and the perpetuation of negative stereotypes toward mothers and pregnant women in academia and in the workforce (Gueutal & Taylor, 1991; Halpert et al., 1993; Pattison, Gross, & Cast, 1997; Skandera-Trombley, 2003)

According to the U.S. Department of Labor (2004), nearly three quarters of all mothers were in the labor force, including 60% of mothers with children under the age of 6. If fewer women and mothers are in higher status occupations, working women and female students will encounter an increasing lack of available mentors who are mothers.

Thus, they will miss an opportunity to develop professionally in a supportive and empathic environment within which to explore ways of balancing personal life and career. On a larger scale, organizations overlooking mothers for higher professional positions will experience an overall loss in quality and output as motherhood, and parenthood in general, increases many parents' ability to organize, multitask, and work in an efficient manner (Weiss, Kreider, & Mayer, 2005).

Another reason it is important to examine psychology graduate students' existing stereotypes toward peers who are pregnant and/or are mothers is that these same graduate students are future therapists, researchers, social and behavioral analysts, professors, and leaders. Thus, a large amount of their skills heavily rely on their capacity to show empathy, compassion, and tolerance, and their ability to demonstrate proficiency in these areas. Given that their work will have direct impact on individuals, families, groups, society, culture, relationships, and belief systems, graduate students' beliefs about their own peers could help determine growth edges and training areas that may benefit from modifications.

A third reason that stereotypes toward pregnant women and mothers is of interest is that stereotypes can lead to discriminatory behavior (Crosby, Williams, & Biernat, 2004) toward the affected graduate students and may impact their studies, sense of efficacy, and future professional pursuits. Previous research has demonstrated that mothers and pregnant women are presently discriminated against in the workforce (e.g., Corse, 1987; Franco, Evans, Best, Zrull, & Pizza, 1983; Gorman & Fritzsche, 2002; Gueutal et al., 1995; Gueutal & Taylor, 1991; Halpert et al., 1993; Pattison et al., 1997;

Shapiro, 1982), as evidenced by judgmental attitudes and negative performance ratings, as well as overall apprehension about working with these women. As a result, these discriminatory behaviors could potentially lead to mothers opting out of the workforce. This could negatively impact women's mental health (Lahelma, 1992), increase poverty rates, particularly among women-led households (Keigher, 1994), and overlook an influential voice in social policy decisions.

As relatively few mothers hold positions in the academic sector (Hensel, 1989; Williams, 2002), graduate student mothers may lack role models and mentors to provide them academic and personal support and advice. Thus, these mothers may seek and find comfort in the support of their peers with the hope of making changes toward an accepting and family-friendly academic environment. Therefore, a fourth reason to study stereotypes affecting mothers in graduate school is that suggestions could be devised in order to make the necessary transformations, via methods such as empathy training, a gender-culture-and family-sensitive curriculum, and support groups.

A final reason to examine psychology graduate students' stereotypes toward peers who are mothers or are pregnant is that the field of psychology is in a unique position to be a leader in this area. As psychologists are interested in the study of human behaviors, personal and interpersonal patterns and interactions, and individual, social, and cultural beliefs, they have the capability of interpreting research results in a global manner and providing suggestions for improvements and solutions. Therefore, psychology students who become aware of patterns and beliefs in their departments or across the broader academic community may be more likely to take the initiative to make personal and

organizational changes to ensure a harmonious academic environment that is conducive to individual and professional growth. Further, the field of psychology can have a deep impact on the public's perceptions and beliefs by raising the latter's awareness on such salient issues as stereotypes, discrimination, and imbalance, and by providing a model for a just and equitable society.

Purpose of Study

The purpose of this study is to identify any existing stereotyped beliefs by graduate students toward peers who are pregnant and/or are mothers within psychology graduate programs. As mentioned previously, this field was chosen due to its scope of interest in attitudes, behaviors, and relationships, and because of psychologists' ability to raise the awareness of individuals and of society and to dispense helpful information and suggestions. If indeed negative stereotypes are found within this specific population, measures will be taken towards providing research-supported proposals for modifications, improvements, and consciousness-raising.

As noted previously, no research to date has evaluated graduate students' biases towards peers who are pregnant and/or are mothers. The present study will focus specifically on attitudes within different psychology graduate programs, including counseling, clinical, school, industrial/organizational, sports, developmental, social, and health psychology. As psychology is such a broad field and individual subfields likely hold differing beliefs, it is necessary to explore the multiple disciplines in order to determine whether differences in stereotypes do exist between students based on discipline. Additionally, as no studies have examined the relationship between parenting

status and stereotypes toward motherhood and pregnancy, this study seeks to make a contribution to that area.

Research Questions

Research Question 1: Are there negative stereotypes toward peers who are mothers and/or are pregnant within psychology graduate programs?

Research Question 2: Are there gender differences in stereotypes toward pregnant and mother graduate students?

Research Question 3: Are there differences in stereotypes toward pregnant and mother graduate students between psychology disciplines?

Research Question 4: Is there a relationship between parenting status and stereotypes toward pregnant and mother graduate students?

Significance of Study

Although limited research exploring stereotypes toward mothers and pregnant women does exist, most of it is either very general in nature (e.g., Fiske, Cuddy, Glick, & Xu, 2002; Hare-Mustin & Broderick, 1979; Hare-Mustin & Lamb, 1983; Williams, 2002) or investigates these attitudes in professional settings, such as business corporations (e.g., Corse, 1987; Gorman & Fritzsche, 2002; Gueutal et al., 1995; Gueutal & Taylor, 1991; Halpert et al., 1993; Pattison et al., 1997). The most closely related literature to the present study is the examination of medical student residents' attitudes toward the pregnancy and motherhood status of their school peers (e.g., Franco, Evans, Best, Zrull, & Pizza, 1983; Shapiro, 1982). Given that no research to date has examined stereotypes among graduate students, this is an area worthy of increased exploration, and this study

will attempt to look at those attitudes among the specific population of psychology graduate students.

The past research that has been done in this area has looked at gender differences, but no studies thus far have examined the relationship between parenting status and attitudes toward mothers and pregnant women. This study will investigate both variables. The results of this study are intended to help uncover stereotypes toward peers who are pregnant and/or are mothers within different disciplines of psychology graduate programs. It is believed that studying stereotypes about mothers and pregnant women who are graduate students is significant not only to students and various graduate programs, but also to society at large. Given the considerable contributions mothers offer in the workforce (U.S. Department of Labor, 2004), it is important to examine stereotypes that impact them across a range of environments and throughout the child bearing and rearing years, the most challenging years for those attempting to balance family and career. Although this research will focus on a specific setting and population, results could help in clarifying existing patterns and in formulating suggestions for improvement.

While the current topic's relevance to academic, professional, and social spheres has been noted, it is also important to emphasize the study's significance to women's sense of acceptance and fulfillment. Pregnant women who feel satisfied in their areas of interest and professional status are likely to experience less work-related stress and anxiety, which can help moderate other areas of discomfort in their lives, and help ease their pregnancies (Kalil, 1987; Pattison & Gross, 1996). The implications for mothers

who experience academic and professional acceptance and fulfillment include a higher probability for raising functional families and healthy children (Clark, 2001; Schultz & Henderson, 1985). As for women in general, if they feel a sense of satisfaction and comfort in the role of students and workers, they are likely to experience better emotional and physical health (Bond, Punnett, & Pyle, 2004; Pugliesi, 1988), while young women interested in pursuing academic or professional careers will receive overall positive feedback about their choices and will potentially have more women mentors who are willing to assist them.

Definition of Terms

Stereotype. A stereotype is a set of attributes ascribed to a group and associated with individual members merely because they belong to a specific group (Taylor, Fiske, Etcoff, & Ruderman, 1978.). Stereotypes may lead to feelings of prejudice and discriminatory behavior, potentially hindering the development of the individuals and groups whom the stereotypes affect (Bodenhausen & Wyer, 1985).

CHAPTER II

LITERATURE REVIEW

Women in Higher Education

Over the last century and a half, a considerable shift has occurred in post-secondary school attendance. During the late 19th century, women constituted a small pool of students, but since the late 20th century, are now the majority of attendants (National Center for Education Statistics [NCES], 2003). This influx of female students is true for the graduate level of education as well, especially within the field of psychology. Women in graduate psychology programs presently comprise the greater part of the student population as well as the larger portion of graduate degree recipients in the field (Kohout, 2001; Pate, 2001). However, while women's presence in higher education is widespread and growing, there are indications that female students are experiencing more stress in graduate school than their male peers (Hudson & O'Regan, 1994; Mallinckrodt, Leong, & Kralj, 1989; Nelson, Dell'Oliver, Koch, & Buckler, 2001). Researchers have hypothesized that this higher level of stress is due to the multiple demands and stressors that women encounter.

An early history. In order to understand current prevalent issues and patterns for women graduate students, it is important to briefly explore historical trends for women in higher education. Diehl (1986) explored the paradox of G. Stanley Hall as both the educator of women graduate students and the foe of coeducation. The author noted that

Hall was aware that the 19th century battle against education was lost, so he instead focused on the need to separate the sexes during adolescence. This was a time during which he felt women were susceptible to reproductive organ damage, particularly if they were exposed to too much mental activity.

According to Diehl (1986), Hall believed that women should devote themselves to the role of motherhood, a natural function that is brought on by the process of puberty. Hall claimed that the reduced number of marriages among female college graduates and the decreased number of children produced were the truest measures of the effects of education on the development of the reproductive organs. G. Stanley Hall believed that appropriate training for women included education about motherhood and education leading to professions that enhance and highlight women's nurturing qualities (e.g., social work, home economics, elementary school teaching), so long as these professions did not replace motherhood (Diehl). During the period of time in which Hall had influence (e.g., late 19th century), total enrollment in higher education was 156,756, with women constituting 36% of those students, and men being 64% of the student population (NCES, 2003).

Diehl (1986) noted that the decade beginning the 20th century could be perceived as a period representing a freeing up of anti-educational policies in both undergraduate and graduate programs. To illustrate, in the fall of 1909, total enrollment in post-secondary education was 355,213, with women comprising 40% of the student population and men comprising 60% of the student body. In a similar trend, women constituted 47% of the 597,880 total student population during the fall of 1919, while

53% men were enrolled that same year (NCES, 2003). However, women Ph.D.s were plagued with two matters. First, serious educational policy questions remained about the appropriate education for women, and second, professional women found few opportunities in which to use their newly obtained degrees (Diehl). This information suggests that, despite the growing trend of women enrolled in higher education, stereotypes still existed which prevented women from gaining respect and status, an issue that may bear similarities to present conditions.

Current presence of women in psychology. In comparison to the late 19th and early 20th centuries, women have begun to dominate in several areas within higher education. In the fall of 2001, for example, 56% women were enrolled in post-secondary education out of a 15,927,987 total student population, whereas 44% men were enrolled at the same time (NCES, 2003). Within graduate disciplines, psychology continues to be one of the science and engineering fields with the highest representation of women among new PhDs (Kohout, 2001). In 1990, 58% of new psychology PhDs went to women (Kohout), while during the 1999-2000 academic year women represented 70% and 75% of first-year full-time enrollees in graduate programs in doctoral and master's psychology departments, respectively. Moreover, women represented 72% of doctoral students and 77% of master's level students enrolled part time during the 1999-2000 academic year (Pate, 2001).

The growing proportion of women among new PhDs recipients is particularly evident in clinical psychology (71%) but gains are also observable in other subfields, including developmental, experimental and industrial-organizational psychology

(Kohout, 2001). As the number of women who are doctorate recipients or are in higher levels of psychology education grows, it becomes important to examine the existing stereotypes that they may encounter during their graduate studies. This is particularly cogent as many of those women are of childbearing ages and may be confronted with reproductive and child rearing issues.

Graduate school stress and women. Women in graduate school who face stereotypes and discriminatory behaviors are likely to experience negative consequences, including stress-related emotional and physical difficulties (Mallinckrodt et al., 1989). Therefore, exploring pressures associated with graduate studies is valuable in understanding the multiple stressors that impact women graduate students. In general, graduate school is perceived as a period filled with high levels of stress due to the demands and expectations set forth by graduate programs. The few studies that examined stress related to graduate school found that, overall, women experienced more psychological distress than men (Hudson & O'Regan, 1994; Mallinckrodt et al.; Nelson et al., 2001). Researchers theorized that this distress was due to the multiple role demands of employment, academics, and family often experienced by women graduate students. However, one of these studies (Nelson et al.) indicated that women, particularly mothers, appeared to utilize more effective methods to handle stress, such as venting emotions, seeking social support, and relying on religion and spirituality. Thus, they tend to have an overall higher level of awareness about their stress levels and seek medical care when needed.

In a survey of graduate students, Mallinckrodt et al. (1989) compared female and male graduate students' psychological stress symptoms and physical health complaints associated with life-changing events (i.e., events related to personal relationships, academic programs, or career concerns). Results indicated that women and men were similar in the most common life changes they experienced during graduate school. Three of the top four most frequently reported life changes for women (i.e., meeting deadlines for papers, conflict balancing academic/social time, and struggling with decisions about professional future) were also those most often reported by men (Mallinckrodt et al.). However, more women than men acknowledged stresses in interpersonal relationships and job related concerns. Additionally, women were twice as likely as men to report a negative encounter with a professor and/or advisor. Concerns about debts and economic difficulties ranked relatively higher by men than women although the absolute number of women who reported these concerns was proportionately greater. There did not seem to be a difference in stress based on marital status as single students and married students reported equivalent stress levels and symptoms.

Other findings from this study suggested a number of important differences in both frequency and potential impact of life-change stress for women and men (Mallinckrodt et al., 1989). Compared to men, women reported significantly more psychological symptoms of stress and significantly more negative life changes. The authors noted that the multiple role demands of employment, academics, and family, might have explained the increased stress for female graduate students. In addition, they suggested that women might be more affected than men because the burden of

maintaining the household and caretaking still falls more heavily on women (Baxter, 2000).

A more recent study supported the finding that women tend to suffer more stress, especially if they have children. Hudson and O'Regan (1994) investigated stress levels in graduate students in psychology. Results found no significant differences between the life situation variables and the amount of stress that students reported. Interestingly, results indicated that students who had two or more children and who were not in a committed relationship reported the lowest stress levels, while those students with one child and who were not in a committed relationship had highest stress levels. It was also revealed that female students without children who worked full-time and were not in a committed relationship had significantly higher stress levels than all other graduate students investigated. Hudson and O'Regan proposed that the latter findings may have been attributable to work stresses and lack of support from a significant other.

A third study substantiated the finding that mothers experience more stress than other students. In a study evaluating the effects of stress on psychology graduate students, Nelson et al. (2001) found that graduate students with higher GPAs were more likely to use positive coping styles but were also more likely to report more illnesses and trips to the doctor over a period of two years as well as more stress regarding scholastic coursework. Additionally, successful students were likely to be women who reported greater support from close friends and family. Women graduate students were also likely to have more children living at home and reported greater stress about time management and availability. The authors (Nelson et al.) proposed that women student's stress,

particularly regarding time management and availability, and increased use of coping strategies such as venting and planning may have been accounted for by the greater number of children living with them at home.

Taken together, these three studies suggest that, although women graduate students experience a greater degree of stress related to school and family conflict, they utilize more effective stress-reduction strategies than men via social support, verbalizing their emotional state, and/or developing efficient time-management skills. Social support in particular, seemed important to the achievement of these students. Consequently, it seems as though having understanding peer and faculty relationships may be one of the keys to a successful graduate school experience, a discovery which is of interest to the author of the present study. Given that peer support and encouragement were found to be particularly conducive to overall positive feelings towards graduate school, it may be that the existence of negative stereotypes about peers who are pregnant and/or are married, and the accompanying lack of support, could prevent the women from experiencing graduate school as a positive experience.

The Importance of Peer Relationships

Positive peer affiliations have the potential to enhance the graduate school experience, particularly when they exist in the form of mentoring and guidance relationships (Bowman & Bowman, 1990). Though most of the research on mentoring has been conducted in occupational settings, findings on the advantages of mentoring relationships are not only similar to those discovered in the academic arena, but are also relevant, as academia may be conceptualized as a workplace in itself. Overall, mentoring

relationships have been found to benefit protégés both in academia and in the workplace (Chandler, 1996; Clark, Harden, & Johnson, 2000; Nielson, Carlson, & Lankau, 2001; Tennenbaum, Crosby, & Gliner, 2001). Research in professional settings has demonstrated that mentoring relationships appear to benefit the careers of protégés, as well as reduce their work-family conflict (Nielson et al.). At the same time, Chandler has argued that a new mentoring model that considers professional women's experiences, such as child-care responsibilities and career interruptions, should be established as existing models do not fairly reflect women's personal and professional realities and needs. The latter suggestion seems particularly important and relevant since nearly three quarters of all mothers were in the labor force at the turn of the century (U.S. Department of Labor, 2000).

While researchers exploring mentoring in academia (Clark et al., 2000; Tennenbaum et al., 2001) have found that the help provided by the mentors helped increase students' productivity and satisfaction, they have also discovered a considerable absence of women faculty members and an ensuing deficiency in the availability of women mentors. Consequently, many more graduate students had men mentors than women mentors, a finding which may potentially result in women graduate students not being mentored by individuals who can relate to the struggles associated with balancing professional and personal responsibilities. It would therefore seem important and adaptive that graduate students, and women students in particular, who are not being mentored by people in authority who know how to guide them, would seek out peer relationships for mentoring, support, and guidance.

Bowman and Bowman (1990) illustrated the success of peer mentoring at Purdue University, where, in 1987, a student-to-student mentoring program was created in which current and incoming students were matched to ease the new student's involvement and transition into graduate school. An evaluation of the program found that 21% of the students who met with their mentor once or twice and 100% of the students who met with their mentors three or more times reported that the mentor and the mentoring relationship positively influenced the stress of the transition into graduate school (Bowman & Bowman). Overall, the program evaluation revealed that mentored students were more involved and that the program was perceived to be very valuable to students, particularly to those who faced numerous or severe transitions. Thus, having peer mentors was shown to be advantageous in lowering and/or managing student stress.

Attitudes Toward Women

Attitudes toward women are directly related to how pregnant women and mothers are socially perceived. A review of the U.S. literature reveals that, on the whole, a negative bias towards women, and particularly working mothers, is present and can be seen in many places, including among psychology researchers and textbook writers, university students, medical residents, professional individuals, and healthcare providers (Angelique & Culley, 2000; Corse, 1987; Franco et al., 1983; Gorman & Fritzsche, 2002; Gueutal et al., 1995; Gueutal & Taylor, 1991; Halpert et al., 1993; Hare-Mustin & Broderick, 1979; Hare-Mustin & Lamb, 1983; Pattison et al., 1997; Peterson & Kroner, 1992; Shapiro, 1982). Women in general are depicted in a negative manner and employed mothers and/or pregnant women in particular are viewed as a liability to both their

employers and coworkers. Disparaging beliefs about women in these settings not only have the potential for harming women and their families but also the university departments where they receive an education, the organizations where they work, as well as society in general. These findings are of interest in the present study, in that they have established that stereotypes of the target population occur in many segments of society, thus providing a foundation for exploring stereotypes toward mothers and pregnant women in psychology graduate school settings.

Attitudes toward women in the psychology literature. Stereotypical attitudes towards women have been evident in psychology literature (Peterson & Kroner, 1992). Peterson and Kroner conducted an extensive content analysis of introductory psychology and human development textbooks. They based their analysis on the 1975 American Psychological Association (APA) Task Force recommendations for changes in the type of language that would be more gender appropriate when reporting psychological studies and research findings (APA Task Force, 1975). These recommendations also applied to psychology textbooks. The authors concluded that the representation of the theory, work, and behavior of men significantly continued to exceed women's theory, work, and behavior even after the recommendations were made. In addition, they found that women continued to be portrayed in negative and gender-biased ways.

Similarly, Angelique and Culley (2000) performed a content analysis for women's issues in both the *American Journal of Community Psychology* and the *Journal of Community Psychology* from their inception in 1973 through 1997. Of the 2,178 articles reviewed, 9.8% were considered to be relevant to women's issues, 4% recognized

diversity among women, and 3% were considered to be feminist. The analysis revealed an average yearly increase in both women-relevant and feminist articles from pre-1990 to the present. The authors (Angelique & Culley) reported that, despite the promising increase in feminist publications in both journals, stereotypes of women and other oppressed groups continue to be perpetuated. Although results from the two studies described above cannot be generalized to all sectors within psychology, the author of the current research feels that it is disconcerting that the sample of articles reviewed yielded such a paltry amount of scholarship in women's issues, especially in consideration of psychologists' influence both in the discipline and in society more generally speaking.

Attitudes toward motherhood. Although few researchers have examined the intersection of stereotypes and mothering, the small number of studies conducted in the area found that gender role stereotypes toward pregnant women and mothers did exist (Fiske et al., 2002; Hare-Mustin & Broderick, 1979; Hare-Mustin & Lamb, 1983; Williams, 2002). These included such beliefs as women's life mission should be the welfare of children and men, women should become better mothers if they wanted to be respected, and working mothers were unable to raise their children as well as mothers who did not work. Such attitudes towards mothers and the motherhood role have potentially devastating social and individual effects on women's decisions and status. Women's choices regarding education, career, and family are circumscribed to accommodate male-based norms, and women's importance declines even further if they decide to begin a family.

In order to gain a general impression of individuals' perceptions of mothers and mothering issues, Hare-Mustin and Broderick (1979) developed a 40-item questionnaire designed to examine attitudes toward motherhood and the motherhood myth. The Motherhood Inventory (MI) included items related to such issues as control of reproduction, abortion, adoption, single motherhood, male-female relationships, and idealized as well as punitive attitudes towards mothers. Results indicated that more women than men were likely to reject the stereotype of the full-time housewife as a completely fulfilling role. Surprisingly, older participants held a significantly more liberal view than younger subjects. The investigators (Hare-Mustin & Broderick) suggested that the experience of marriage and/or motherhood may offer a more realistic view of motherhood and parenting.

In a related study, Hare-Mustin and Lamb (1983) examined mental health professionals' orientation toward women's roles and life-styles. They found a significant difference between family and non-family counselors in attitude scores towards women, whereby family counselors and women responded more liberally. Family counselors were also more liberal in their attitudes toward controversial topics, including those concerning abortion, breastfeeding, and childbearing abilities of working mothers, as well as toward relationships between women and men. Results from this research implied that family counselors were more liberal in their attitudes toward women and motherhood than non-family counselors. Taken together, the studies noted above suggested that either peoples' own experiences of motherhood or their proximity to mothers, via a personal or professional relationship, were correlated with more liberal views toward them.

Conversely, lack of either personal and/or professional closeness to mothers revealed more conservative and traditional attitudes and stereotypes.

Investigators have also found that attitudes toward women in the domestic sphere were generally negative. An ongoing survey by the Program on Gender, Work & Family found that negative stereotypes are more frequently applied to mothers than other women (Williams, 2002). Similarly, another study that was interested in tapping into perceived cultural stereotypes, consisted of 74 undergraduate students and 50 non-students who completed a questionnaire in which they were asked to rate different groups of people (i.e., “Blacks,” “Hispanics,” “Asians,” “rich people,” “poor people,” “gay people,” “elderly people,” “Jews,” “professional women,” “retarded people,” “disabled people”) on scales reflecting warmth, competence, perceived status, and perceived competition (Fiske et al., 2002). Participants were invited to provide rating on the basis of how they thought the groups were viewed by American society. The study found that while “business women” were regarded as comparable in competence to “business men,” “housewives” were rated as analogous in competence to “retarded,” and “disabled” people, whereby this cluster was perceived as more warm than competent (Fiske et al.). Although the literature is scarce, the existing studies done in this field of interest provided evidence for gender role stereotypes toward pregnant women potentially increasing the risk for individual and social negative implications.

Attitudes toward working mothers and pregnant women. Despite the large number of pregnant women and mothers in the workforce, studies investigating attitudes towards them are scarce. However, the limited literature that exists revealed that employees,

coworkers, and supervisors alike tended to be more judgmental and negative towards pregnant women and mothers, and men appeared to be more critical than women (Corse, 1987; Franco et al., 1983; Gorman & Fritzsche, 2002; Gueutal et al., 1995; Gueutal & Taylor, 1991; Halpert et al., 1993; Pattison et al., 1997; Shapiro, 1982). The results of these studies have direct implications on the generating of hypotheses in the present study, as work and graduate environments are closely related in several ways. Both the workforce and graduate school settings have an overall male dominance in higher positions. Moreover, gender-role stereotypes based on biased beliefs about gender appropriate interests and inherent abilities are present in each. Similarly, both settings require a higher level of professional conduct, a detail that may explain why stereotypes might remain undetected or why an avoidance to reveal biases may exist.

In a study conducted within a professional setting, Gorman and Fritzsche (2002) examined the influence that mothers' role satisfaction with their employment status had on others' perceptions of them. The researchers found that mothers who delayed their careers until their children were in school were not perceived as less committed to motherhood or less selfless than mothers who chose to stay at home with their children. Instead, participants perceived the dissatisfied, continuously employed mother as more committed to her maternal responsibilities and more selfless than the satisfied, employed mothers. In other words, society dictates that a good mother stays at home or wishes she did because doing so would allow her to be perceived as a loving and committed mother. The authors (Gorman & Fritzsche) noted that subscribing to the good-mother stereotype and similar perceptions could have direct implications for participants' own careers and

parenting experiences and beliefs. These findings make it plausible that mothers and pregnant women who are graduate students face similar biases, and therefore are prone to feeling as less-than-adequate mothers for not fulfilling society's mothering ideals, especially if they enjoy studying within their areas of interest.

In a similar but more detailed study, Shapiro (1982) assessed attitudes toward pregnant medical residents where information was gathered about resident and faculty attitudes toward pregnancy during residency. Attitudes about departmental policies toward the pregnant resident were also examined. Results indicated that men, both faculty members and residents, had significantly more negative attitudes toward pregnancy than women, but the specific attitudes were not discussed in the study. Although possible explanations were not offered, the men viewed the medical environment as more hostile and unsupportive toward pregnant residents than did women. Finally, men's views of balancing family and career were more negative than those of women in both groups, findings that may tie in with the previous results, whereby a hostile and unfriendly working environment would make it more difficult to negotiate professional and personal demands.

Along similar lines, Franco et al. (1983) examined perceived stress related to working with a pregnant colleague through a survey of clinical faculty and residents in a medical school. Results indicated that having a pregnant colleague was perceived by most physicians as inconvenient for themselves and their departments and men were found to be less accepting of pregnant colleagues than were women. Overall, most faculty members and residents were stressed by pregnant colleagues. The authors noted

that it was surprising and paradoxical that the majority of participants who felt stressed by pregnant colleagues also felt that pregnancy had a positive or humanizing effect on the work environment. Franco et al. speculated that the question's wording may have elicited an ambivalent response, permitting individuals to feel better by voting positively for motherhood while expressing the problem of stress as well. Further, the authors believed that intrapsychic conflict could have been brought about by working with pregnant colleagues.

Franco et al. (1983) also found that a large number of respondents thought that pregnant colleagues were able to maintain interest in their patients, field of medicine, and their departments. However, 30% of respondents believed that hiring a woman of the childbearing age range was a risk. While the study indicated that the majority of respondents were receptive to special considerations for their pregnant colleagues, a higher percentage of those responding negatively to such statements were residents. The authors hypothesized that some of the reasons for these results included increased workload, "sibling" rivalry, and time limitations on residencies. The latter findings are particularly relevant to the present study, which is examining stereotypes toward graduate school peers.

In another study examining workers' attitudes toward their pregnant colleagues, Pattison et al. (1997) predicted that in the employed populations, women would express more positive views than men and that negative beliefs would be less common among individuals who recently worked as or with a pregnant woman. Results showed a clear gender effect for perceptions and beliefs about pregnancy and work. Women expressed

significantly more positive views than men. Respondents who were between 26 to 45 years old (ages close to when women typically become pregnant) responded more positively than older and younger participants. The latter result was treated with caution though, since the age groups were unevenly distributed throughout the different work settings.

According to the investigators (Pattison et al., 1997), results did indicate that people with a recent experience of pregnancy at work and those who had themselves been or had a partner who was employed during pregnancy, expressed more positive views. However, no differences were found between those who had worked directly with pregnant women and those who had not. Pattison et al. noted that some people in the study may not have thought about these matters before and were responding in a way that might not have been reflected in a real life situation.

Comparable to the studies discussed above, Gueutal and Taylor (1991) were also interested in discovering how pregnancy impacts pregnant employees and those with whom they work through the changes in work procedures, employment practices, organizational policies, and career patterns. Their findings suggested that pregnant employees' (PEs) co-workers often had concerns about the additional workload placed on them as a result of pregnant co-workers. PEs' reduced workloads may have caused co-workers to feel resentment and negative attitudes towards pregnancy and the organization (Gueutal et al., 1995).

In order to assess the individuals' perceptions toward PEs and the impact of pregnant employees on the work environment, the authors (Gueutal & Taylor, 1991)

developed a measure, the Pregnancy in the Workplace questionnaire (PIW), which they used to collect demographic information and asked participants about their readiness to take specific positive and negative actions with regard to PEs. Using the PIW, the researchers examined three aspects of work environment which could potentially be affected by employee pregnancy. These included maternity leave policy and practices, workload expectations, and career impacts. In addition, each topic assessed two perspectives: one explored what participants believed was true regarding the treatment of PEs, and another looked at what they thought should be appropriate.

Results indicated that participants in this study (Gueutal and Taylor, 1991) believed organizations should provide more supportive maternity leave policies as well as seek to minimize negative career impacts, such as reduced promotional opportunities, on PEs. At the same time, they believed that employers tended to be too generous when making reductions in the workload for the PEs. Thus, while study participants agreed that more should be done to help PEs, they were unwilling to personally behave in ways that support such actions. The data also revealed that participants' opinions varied as a function of sex, age, and nationality of the respondent, as well as supervisory experience with PEs.

Overall, women, younger employees, non-U.S. citizens, and individuals with no previous or current experience supervising a pregnant employee were more supportive of PEs, and reported greater support for legislation assisting PEs. Gueutal and Taylor (1991) suggested that those with supervisory experience have had to manage PEs within organizationally mandated constraints and may have had to deal with problems of

perceived inequity by co-workers of the PEs. Conversely, those without supervisory experience likely had not been confronted with such issues, and therefore held a more positive attitude toward PEs. Of note, women were less likely to approve statements supporting special workload considerations for PEs, which the investigators (Gueutal & Taylor) theorized may have stemmed from women's recognition that pregnancy is not related to work capability, and thus are likely not to endorse special considerations as often as men. Conversely, it could be that women experience fear that pregnancy will somehow be held against them if given special considerations.

In a similar fashion, Halpert et al. (1993) conducted two studies to investigate stereotypes about pregnant working women and the effects an employee's pregnancy had on performance evaluations. Results from the first study indicated that considerable negative stereotyping existed, particularly among men. Pregnant women were viewed as excessively emotional, frequently irrational, physically limited, and less committed to their jobs. Moreover, they were not perceived as valued or dependable employees.

The second study (Halpert et al., 1993) included women and men who viewed videotapes of either a pregnant or non-pregnant woman performing assessment center-type tasks and then asked to evaluate her performance. The data revealed that the pregnant employee was consistently rated lower compared to when she was not pregnant. In addition, a main effect was found for rater sex whereby men assigned lower ratings than women. Additionally, a rater sex by pregnancy condition interaction was found, indicating that men were more negatively affected by the pregnancy condition.

In their discussion section, Halpert et al. (1993) reported that results of their research suggested that pregnant women may face additional workplace discrimination beyond any gender bias that may exist already. The investigators also noted that the finding that men seemed more susceptible to negative pregnancy influence than women should be a concern as most women report to a male supervisor. Halpert et al. believed that any bias that exists on the supervisory level could make it even harder for women to have both children and careers. This is particularly true for women in graduate school as the mentoring literature (Clark et al., 2000; Tennenbaum et al., 2001) demonstrates that graduate students are being supervised primarily by men.

While Gueutal et al. (1995) also evaluated the impact that pregnancy had on performance appraisal ratings, their findings were not in the predicted direction. Results revealed that the overall performance appraisal ratings of pregnant employees were significantly higher than that of the control group. This finding was in direct contrast to the Halpert et al. (1993) study whereby pregnant employees were evaluated less favorably than non-pregnant employees. Gueutal et al. provided two alternative explanations for the unexpected findings. One was that the job performance actually increased during pregnancy and that the ratings were accurate representations of work performance. The second explanation was that a leniency effect was at work.

In addition to findings of biases against pregnant employees in professional settings, negative stereotypes have also been found toward women in supervisory positions. Corse (1987) examined image perceptions of the pregnant employee and found that the pregnant manager was perceived less favorably than the non-pregnant manager.

The pregnant manager was seen as less democratic, less understanding, less empathic, less fair, and more authoritarian and controlling than the non-pregnant manager. As such, the pregnant managers received lower ratings, findings which have implications for the supervisors themselves, as well as their employees, business productivity, and professional atmosphere.

Whereas the studies discussed above examined workers' attitudes toward pregnant coworkers or supervisors, DeNicolis-Bragger, Kutcher, Morgan, and Firth (2002) were interested in studying how discrimination faced by pregnant women in the workplace was manifested in employment or hiring decisions. Results indicated that the participants rated pregnant candidates significantly lower in their recommendation for hiring, but did not recommend significantly lower starting salaries for pregnant applicants. Additionally, pregnant teaching applicants were rated higher than pregnant sales applicants. The investigators suggested that it could be that the bias against pregnant candidates was not entirely due to a perceived inability to perform the job, but also due to the predicted inconveniences of maternity and family leave and of a work-family conflict that likely occurs with an infant. The data in this study also revealed that hiring conducted in a structured interview format reduced the pregnancy bias. The authors believed these to be the most important results because they indicated that although bias existed against applicants in the workplace, low cost and practical changes in the hiring process could reduce or eliminate such biases. The latter results suggest that equal treatment of individuals will help reduce or eliminate biases that might hinder the

academic achievements of women graduate students who are mothers and/or are pregnant.

The Experiences of Pregnant Women, Mothers, and Partners

Studies that measure attitudes toward women, mothers, and pregnant individuals help researchers understand the relevance and implications of these beliefs. However, personal experiences gathered via qualitative studies such as questionnaires, interviews, or individual accounts, often provide more valuable pieces of information that help grasp the academic and professional ramifications caused by pregnancy and motherhood as observed from the affected women's points of view. In simplest terms, qualitative research involves methods of data collection and analysis that are non-quantitative in nature (Lofland & Lofland, 1984). Additionally, a qualitative investigation may be defined as a study that focuses on "quality," a term referring to the essence or ambience of something (Berg, 1989) and also involves subjective methodology and one's self as the research instrument (Adler & Adler, 1987).

To gain a better understanding of some of those individual perspectives and decisions, qualitative information on mothers' and pregnant women's work related experiences (Klein, Hyde, Essex, & Clark, 1998; Lyness, Thompson, Francesco, & Judiesch, 1999; Marshall & Jones, 1990; Miller, 1996; Taniguchi, 1999) and encounters within the graduate school setting and academia (Lynch, 2002; Neal-Kimball, Schwer-Canning, Watson, & Laidig-Brady, 2001; Padula and Miller, 1999; Skandera Trombley, 2003; Ulku-Steiner, Kurtz-Costes, & Kinlaw, 2000; Younes & Asay, 1998) have been reviewed. While the results do not directly address the current study's interest in peer

stereotypes toward their cohorts who are pregnant and/or are mothers, findings could help illustrate existing beliefs and behaviors and facilitate in creating suggestions for individual, departmental, organizational, and policy improvements.

Work related experiences. A study by Lyness et al. (1999) indicated that women whose organizations guaranteed jobs after childbirth made plans to work later into their pregnancies as well as to return to work sooner after delivery. Moreover, women who perceived supportive work-family cultures reported feeling more committed to their jobs and planned to return to work more quickly following delivery than women who felt they were in less supportive environments. Thus, the study (Lyness et al.) illustrated how a supportive and family friendly work environment was conducive to women's job expectations prior to and following childbirth and to their dedication and desire to work. It might also be suggested that this type of environment would increase individual and organizational productivity. Extrapolating from the study's findings, this researcher might suggest that graduate students who know that their programs are supportive and welcoming to individual needs would be more likely to return to them following delivery. They might also be more likely to recommend their programs to others.

Along the same lines, Miller (1996) found that mothers who found a balance between their personal and professional identities, as well as women who negotiated part-time positions, enjoyed a more harmonious relationship between their personal needs and aspirations and reported feeling satisfied. Thus, employment flexibility appears to contribute to healthier functioning for working mothers and might therefore improve productivity. Similarly, this investigator would expect that graduate students who are

pregnant and/or are mothers would benefit from a flexible academic schedule and consequently make more productive contributions to their graduate departments.

Because of the important contribution employment has on women's identity, it is necessary to briefly explore the emotional implications of vocational status changes for women who gave birth. Klein et al. (1998) found that mothers who experienced incongruencies between personal and professional roles felt more depressed and/or anxious, while job overload and role restrictions were associated with maternal distress. The latter result seems to imply that the professional setting within which data was gathered had family unfriendly policies that contributed to a more stressful working environment. If true, this further emphasizes the importance of a family supportive work atmosphere. Overall, the studies emphasized the implications of the occupational atmosphere on mothers and pregnant women, findings that are likely to be relevant to graduate students who are pregnant and/or are mothers. Given that professional policies and environments can affect pregnant women's and mothers' emotional well being and decisions, an unsupportive work environment may breed more negative stereotypes toward peers affected by these policies.

The experiences of women in graduate school and academia. A limited amount of literature has explored women graduate students' perceptions of their lives as graduate students and their attempts to negotiate a balance between their family and education (Lynch, 2002; Neal-Kimball et al., 2001; Padula and Miller, 1999; Skandera-Trombley, 2003; Ulku-Steiner et al., 2000; Younes & Asay, 1998). Overall, women reported feeling unsupported by their graduate departments, experiencing role strain as a result of family

and school obligations, feeling tired, guilty, and discriminated against, particularly while pregnant. Additionally, they felt that their departments and faculty lacked policies that encouraged graduate students with families to achieve their success potential.

Investigators (Ulku-Steiner et al., 2000) examined similarities and differences in the graduate school experiences of female and male doctoral students in programs that contained primarily male or gender-balanced faculty. Ulku-Steiner and her colleagues found that women in the male-dominated programs reported less sensitivity in their departments to family issues, lower academic self-concept, and lower career commitment. These reports are consistent with the results from studies mentioned previously, where men within the academic and professional settings reported less support for family friendly policies, and less acceptance of peers and supervisors who were mothers or were pregnant.

Utilizing qualitative research methods, Younes and Asay (1998) completed a case study that explored how female graduate students negotiated their multiple roles. Role multiplicity emerged as the most significant theme in these women's lives with reports that their first obligation and commitment was to their family. For those who were mothers, concern for children and other priorities as mothers were their primary responsibilities. Further, the data revealed that the educational imposition on family time and commitment appeared to be a great source of discomfort in the lives of the participants, expressed in the form of guilt, self-doubt, and loneliness. However, the women also expressed a sense of self-realization and empowerment, noting that the road was filled with opportunities for self-discovery and a new identity.

This case study (Younes & Asay, 1998) illustrated the personal difficulties experienced by women graduate students who face role strains potentially brought on by academic stress, lack of departmental sensitivity and/or resources to help balance personal and academic lives, an unfriendly atmosphere resulting from negative stereotypes towards these women. The last two factors are particularly relevant to the current study's points of interest, as lack of departmental support and helpful resources may generate an unwelcoming setting which may, in turn, exacerbate the existence of negative stereotypes toward peers who are pregnant and/or are mothers.

Similarly, a study by Padula and Miller (1999) described the experiences of married women with children at home who reentered the university as full-time students after absences due to career, child care, and homemaking responsibilities. The data indicated that the women shared many common experiences in their return to graduate school. The authors identified eight themes that depicted the core of the participants' experiences. These included: decision to return, expectations versus reality, measuring up, frustrations and difficulties, changing family relationships, necessity of organization, and rewards. Of particular interest was the theme of frustrations and difficulties. The women identified several areas as frustrating or difficult since returning to school, including lack of understanding or support from family and friends, little time, stress, and exhaustion. They all felt very frustrated with not having enough time to do everything they needed and wanted to do, such as juggling work and school obligations, family responsibilities, social needs, and time for themselves. The investigators (Padula & Miller) noted that some of the negative emotions and attitudes that were reported and/or

observed when discussing frustrations and difficulties included depression, exhaustion, anger, disappointment, confusion, and bitterness.

With regards to the theme of changing family relationships, the four participants expressed concern over their inability to invest as much energy in their families as they would have liked, and reported feeling worried that being in graduate school put a strain on their family relationships. Thus, this research showed that when mothers returned to school as graduate students, lack of departmental and familial support had negative emotional implications which may have been avoided via family friendly policies, supportive graduate departments, and empathic faculty and personnel. While Padula and Miller (1999) argued that it is the role of faculty members and institutions to help reentry students be successful in achieving their academic goals by providing a balance of challenge and support, this often is not reality. Instead, students often have to seek out their own support systems, most often their peers. As such, it becomes important that mothers and pregnant women know how their parental status is impacting the perceptions of others.

In another qualitative study, investigators (Neal-Kimball et al., 2001) examined the reasons women's voices were missing in the positions of authority or decision-making positions in psychology. In particular, they wanted to explore the special barriers to professional success that women with children face. Analysis of the data found that guilt and the notion of being a 'good-enough' mother was a common struggle for the women. In addition to their own guilt, several women dealt with perceptions imposed from the outside. Many of the interviewees also spoke about their resentment that men do

not face the same conflicts, often resulting with those in authority remaining ignorant about these issues. The women who were attempting to “do it all” found themselves emotionally depleted, fatigued, and with a constant sense of guilt over career-family conflicts.

The investigators (Neal-Kimball et al., 2001) pointed out that many of the women were moving from the questions of “Can I do it?” to “Do I want to do it?” and that they were defining their professional success as how they could make the greatest impact. The women felt that they could make the most impact by teaching and mentoring while research projects and publishing did not rank high on their priority list. Time appeared to be a factor throughout the interviews and the women were clear in their accounts that they could not do it all. They noted that they needed more time to do research and writing and/or they needed the academic institutions to be more family friendly towards women and men who have families. Consistent with the research documented throughout, this study illustrated the lack of departmental support, which not only contributed to the emotional stress and role strain these academic women experienced, but in this researcher’s perspective, may have also been a breeding ground for negative attitudes by peers towards these women.

Similarly, Lynch (2002) proposed that women should have children while in graduate school as those are their most fertile years. She also claimed that graduate school is an academic’s most flexible period, a time during which a woman may take a break without leaving a gap in her resume. In fact, she may find it advantageous to take a little longer to finish her dissertation during a period with a tight job market. Conversely,

Lynch cited some reasons to postpone having children until women completed their graduate studies, including the cost of daycare, which is difficult to pay for when an individual is a full time student. She also claimed that graduate schools are not supportive of motherhood, adding that a pregnant “belly” is not perceived by prospective advisors in a positive manner. This is consistent with related research in the area of stereotypes and discrimination toward pregnant women (i.e., Corse, 1987; Franco et al., 1983; Gueutal and Taylor, 1991; Halpert et al., 1993; Shapiro, 1982).

Lynch (2002) made the point that women who want to have children often fear making that step during graduate school. According to the author, one of the great illusions of young individuals is that life is always about to start, suggesting that, for various reasons, graduate students remain in a stagnant state of delayed gratification and responsibility. She continued by arguing that this fantasy may be particularly dangerous for women in a reproductive sense. As such, she claimed, the future is the present. Lynch’s article depicted the reproductive discrimination graduate women experience and the fear that starting a family while in graduate school could harm their academic reputation. Further, it portrayed some specific implications of such discrimination, including postponing pregnancy and childbirth with the potential sacrifice of optimal fertility, as well as contributing to a sense of fear and guilt if a woman chooses to become pregnant. Extending Lynch’s work, graduate school peers’ support or lack thereof may, respectively, help or hinder the experience of pregnancy and motherhood in that peer attitudes toward these women may influence how the latter perceive the life decisions they have made.

In another biographical article, Skandera-Trombley (2003) provided an account of her experiences as an administrator and mother, dating her moment of epiphany to the time she was sitting in an academic council meeting with the provost, three deans, and assistant provost. She was distracted by one of the consequences of being a nursing mother who was also a full-time professional who worked for long stretches. At this important meeting, her left breast was full and hardened and she faced a dilemma forcing her to choose between leaving the room to attend to biological necessity or demonstrating professionalism and not allowing her motherhood status to interfere with her work, a gender-based pressure that many professional women who are mothers face.

Skandera-Trombley believed that any statement that called attention to biological distinctions between women and men created a no-win situation.

In her article, Skandera-Trombley (2003) reported that when she was passed up for a promotion and received critical feedback on her annual review despite her numerous achievements that year, she interpreted her pregnancy and motherhood as liabilities. The author discovered that during her pregnancy and in the first few months after giving birth, people seemed to assume that she was not working full time, not working as hard as she once did, or as hard as she should have been. Skandera-Trombley's account of her experiences portrayed not only the stereotypes and discrimination pregnant women and mothers in academia face, but also the modifications that women are socially and culturally forced to make if they want to be successful in patriarchal society and careers, namely ignoring their physical, biological, and mental needs and muting their intuitive guide. Extrapolating negative attitudes and lack of peer support toward graduate women

who are pregnant and/or are mothers may lead the latter to ignore their needs and intuitions for fear of being overlooked or disrespected.

Statement of the Problem

As the literature review has revealed, no researchers to date have addressed the issue of psychology graduate students' attitudes towards peers who are pregnant and/or who are mothers. The lack of existing information contributes to continued ignorance about the topic which, as a result, may prevent biases from being revealed and suggestions from being implemented. However, there is a limited amount of literature that covers similar or relevant issues (Corse, 1987; Franco et al., 1983; Gorman & Fritzsche, 2002; Gueutal et al., 1995; Gueutal & Taylor, 1991; Halpert et al., 1993; Pattison et al., 1997; Shapiro, 1982).

Overall, related research has revealed that mothers and pregnant women are perceived in a negative manner and consequently are discriminated against by their colleagues and peers. These are the very individuals with whom women spend large amounts of time and whose attitudes can promote or damage the academic environment within which women could succeed. In addition to peer attitudes, studies have shown that there is a general lack of women mentors in the academic field, suggesting a reduced opportunity to be advised on pregnancy and mothering issues. Moreover, related research found that there is a sense of deficiency in family friendly policies accompanied by beliefs that academic departments and professional organizations should provide more supportive maternity leave policies as well as seek to minimize negative career impacts. Taken together, the findings underline the reasons why studying stereotypes toward peers

who are pregnant and/or are mothers in graduate psychology departments is important. Additionally, exploring differences between genders, psychology departments, and parental status could unveil patterns and help in developing implications, suggestions for departmental improvements, and proposals for future research.

Hypotheses

Stereotypes in the following hypotheses refer to psychology graduate students' negative attitudes towards peers who are mothers and/or are pregnant:

- Hypothesis 1: Fifty-one percent or more of the respondents will indicate negative stereotypes by scoring 68 points or above on the Pregnancy and Motherhood Attitude Questionnaire.
- Hypothesis 2: Men will score higher on The Pregnancy and Motherhood Attitude Questionnaire than women.
- Hypothesis 3: There will be group differences on stereotypes between psychology disciplines.
- Hypothesis 4: Students who are not parents will score higher on the Pregnancy and Motherhood Attitude Questionnaire than students who are parents.

CHAPTER III

METHODS

Participants

One-hundred-seventy-two psychology graduate students from different disciplines of psychology completed the internet-based questionnaire, including 154 women (90%) and 18 men (10%). The participants' ages ranged from 21 years old to 53 years old and their ethnic composition consisted of 89% Caucasian, 5% Hispanic (Latino(a), 2% Asian or Asian-American, 1% African or African American, 1% biracial, 1% Native American, and 1% who described themselves as other. Regarding their psychology graduate program, participants included 53% clinical psychology students, 15% counseling psychology students, 8% school psychology students, 5% developmental psychology students, 5% social psychology students, 1% health psychology students, and 13% other (including cognitive psychology, behavioral and cognitive neuroscience, animal behavior, experimental, and behavioral psychology). Fifty-six percent of the participants were in a Ph.D. psychology graduate track, 31% in a Psy.D. graduate track, 11% in an M.A. graduate track, and 2% in an M.S. graduate track.

With respect to participants' partnership status, 40% described themselves as married, 29% as single, 26% as partnered, 2% as separated, 2% as divorced, and 1% preferred not to answer. Twenty-four percent of the graduate students participating in the study reported having children (of those, 2% had children and were also expecting and

3% did not have children at the time but were expecting) and 76% reported not having children. Additionally, of the 154 women participants, 85% were not pregnant during their psychology graduate program while 15% were pregnant sometime during their graduate studies. Eighty-two percent of the respondent acknowledged that they knew someone pregnant during their graduate studies whereas 18% did not.

Instrumentation

Demographic Questionnaire. The Demographic Questionnaire (see Appendix A) is an author-generated questionnaire created to assess specific participant characteristics, such as gender, race/ethnicity, age, religious affiliation, psychology graduate program, graduate track (i.e., M.A., Ph.D, PsyD), partnership status, and parental status (i.e., children, no children, currently expecting, children and currently expecting). Other items, such as whether participants experienced a pregnancy while in graduate training and whether they knew or heard about a pregnant graduate student in their department, were asked in accordance with the literature on stereotyping.

The Pregnancy and Motherhood Attitude Questionnaire. The Pregnancy and Motherhood Attitude Questionnaire (PMAQ) is a 17-item Likert-type instrument developed to assess graduate students' attitudes toward a pregnant peer (see Appendix B). The PMAQ was adapted with permission from Halpert et al.'s (1993) questionnaire that examines workers' attitudes towards their pregnant coworkers. Halpert and her colleagues used a 63-item questionnaire that was designed to tap various attitudes about the place of women, pregnant women, and mothers in business. Responses were made on a 6-point Likert-type scale, ranging from "strongly disagree" to "strongly agree." The items

were created along six *a priori* dimensions that included pregnant women as employees ($\alpha = 0.84$), company treatment of pregnant employees ($\alpha = 0.83$), choosing career or family ($\alpha = 0.76$), emotional stereotypes ($\alpha = 0.76$), physical limitations ($\alpha = 0.70$), and contemporary feminism ($\alpha = 0.63$).

In order to select questions for the current survey, the investigator reviewed the rotated factor matrix of Halpert et al.'s (1993) questionnaire, which revealed the items with the highest internal reliability (i.e., 0.40 and higher). The questionnaire used in the current study was adapted with the goal of including those questions that pertained to graduate students' experiences of studying and/or working with a pregnant peer. Eighteen out of the 63 original questions were chosen and modified for the present study. After the adaptation process was completed, a pilot study was conducted to examine the validity and reliability of the adapted questionnaire. Fourteen participants from different doctoral psychology programs (i.e., counseling, clinical, school, industrial/organizational) completed the modified questionnaire.

A reliability of .78 was found while a factor analysis utilizing an orthogonal varimax rotation procedure was performed to determine the construct validity of the PMAQ that was used in the pilot study. Results indicated that the questionnaire contained five factors explaining 84% of the variance. Factor 1 ("support by graduate department") explained 30% of the variance and contained items 6, 7, 8 and 9. Factor 2 ("academic and familial implications of pregnancy and motherhood") included items 5, 14, 15, and 17 and explained 24% of the variance. Factor 3 ("ability to balance academic and personal lives") explained 12% of the variance and contained items 2, 3, 4, and 13. Factor 4

(“effects of physical attributes of pregnant women”) explained 11% of the variance and included items 16 and 18, while factor 5 (“academic status security when raising children”) contained items 11 and 12 and explained 7% of the variance. Of note, all participants answered item number 1, “I don’t have confidence in women who are pregnant” the same way. Because there was no variance in the answers, it was ineligible for factor analysis and was thus omitted, resulting in a 17-item survey.

Procedure

Participants nationwide were solicited via electronic mail addressed to the directors of various graduate psychology programs as well as to relevant online groups (e.g., the Psychology of Women listserv, APAGS listserv). The letters (see Appendix C) included a description of the study, a request to participate on a voluntary and anonymous basis and the information necessary for graduate students to take the online survey. The letter also informed potential volunteers of the opportunity to be included in a drawing to win one of four \$25 value gift card prizes to a Barnes & Noble bookstore.

Participants accessed a secure website (surveymonkey.com) where they viewed an online consent form (see Appendix D) outlining participation details and procedures and asking them to voluntarily complete the demographic questionnaire and the PMAQ. This process lasted no more than 15 minutes. Upon completion of the survey, participants had the option of sending the investigator their contact information if they opted to receive the study’s findings and/or chose to enter their names in a drawing to win one of four \$25 gift certificates. Although the present study was exempt from review at the Institutional Review Board (IRB) at the investigator’s university, participants were treated according to the

guidelines set forth by the IRB as well as the ethical principles and codes of conduct outlined by the American Psychological Association (APA, 1992) for carrying out psychological research.

Analysis

This study used quantitative analyses to determine whether graduate students held negative stereotypes about their peers who are mothers and/or are pregnant. For the first hypothesis analyzing the overall attitudes of the sample, each participant's total PMAQ score was reviewed to determine whether it met the cut-off score of 68 points and higher. The second hypothesis examining gender differences in attitudes was analyzed utilizing an independent t-test between scores for men and women on the stereotype scale. To determine if there were differences in attitudes toward mothers and pregnant women among psychology disciplines, a one-way analysis of variance (ANOVA) was conducted on the PMAQ, followed by additional exploratory analyses, including an ANOVA and an independent t-test. For the fourth hypothesis comparing parents and non-parents, an independent t-test between the two groups was done.

Four hypotheses were generated. Regarding the PMAQ, it was expected that 51% or more of the respondents would indicate possessing negative stereotypes by scoring 68 points or above on the questionnaire. The second hypothesis postulated that men would score higher than women on the PMAQ, thereby indicating having more negative stereotypes toward peers who are pregnant/mothers. The third hypothesis predicted that differences on PMAQ scores would be found between psychology disciplines, and the fourth hypothesis expected that students who are not parents would score higher on the

PMAQ, suggesting that they possess more negative stereotypes than students who are parents.

CHAPTER IV

RESULTS

Hypotheses Analyses

The first hypothesis predicted that a majority of respondents would score above 68 points on the PMAQ (a higher score on the PMAQ indicated a negative attitude toward pregnant individuals). Possible PMAQ total scores ranged from 17 points to 102 points. A cut-off score of 68 points and higher was obtained by multiplying the score that reflected the introduction of negative stereotypes on the Likert scale choices of the PMAQ ("Somewhat Agree" = 4 points) by the number of questions in the study (17) in order to distinguish between high scorers (68 and above = greater stereotyping) and low scorers (17-67 points = positive attitudes-low-grade stereotyping). A review of the scores revealed that only 1% of the 172 ($n = 2$) respondents had a score above 68 points on the PMAQ. For all respondents, the mean score on the PMAQ was 35.58. Therefore, the first hypothesis was not confirmed by the data.

An independent-sample t-test was computed to examine the second hypothesis, in which the researcher predicted that men would score higher than women on the PMAQ. As Table 1 indicates, there were no statistically significant differences between men and women ($M = 37.68$ and $M = 35.27$, respectively), $t = 1.09$, $p = .28$. Thus, the second hypothesis was not supported.

Table 1

Mean Pregnancy and Motherhood Attitude Questionnaire Scores by Gender

Group	Sample size	Mean	Standard Deviation
Male	22	37.68	10.73
Female	150	35.27	9.48

Note. Possible total scores on the PMAQ ranged from 17 points to 102 points, with higher scores indicating greater negative stereotyping toward pregnancy and motherhood.

To examine whether statistically significant differences on the PMAQ mean scores existed between the different psychology disciplines (areas of concentration with five respondents or below were included in the “Other” category), a one-way analysis of variance was performed. The results of the analysis revealed that statistically significant mean differences among the six psychology areas of concentration were not confirmed, $F(1, 5) = 1.32, p = .26$ (see Table 2). Since the hypothesized between-subject effect was not statistically significant, a post-hoc analysis was not performed.

Table 2

Mean Pregnancy and Motherhood Attitude Questionnaire Scores by Psychology Area of Concentration

Group	Sample size	Mean	Standard Deviation
Clinical	91	35.87	9.32
Counseling	27	35.30	8.72
School	13	37.38	4.12
Developmental	8	27.75	13.85
Social	9	38.22	9.38
Other	24	35.58	9.65

Note. Possible total scores on the PMAQ ranged from 17 points to 102 points, with higher scores indicating greater negative stereotyping toward pregnancy and motherhood.

For the fourth hypothesis, the investigator predicted that respondents who were not parents would have significantly higher mean scores on the PMAQ than those respondents who were parents. An independent-sample t-test revealed that non-parents had significantly higher mean scores than parents on the PMAQ ($M = 36.77$ and $M = 31.78$, respectively), $t = 2.95$, $p < .01$ (see Table 3).

emphasize clinical practice experience and the second to predominantly research oriented fields. Following this task, the researcher clustered each of the seven categories, including specifications provided in the “Other” according to its suitable field, such that “Applied” disciplines included clinical, counseling, and school psychology while the “Non-Applied” specialty included developmental, social, and health psychology, as well as all the disciplines provided by participants in the “Other” option (i.e., cognitive psychology, behavioral and cognitive neuroscience, animal behavior, experimental, and behavioral psychology). An independent-sample t-test was computed to examine the differences between participants in Applied and Non-Applied fields on mean scores. As Table 4 indicates, there were no statistically significant differences between Applied and Non-Applied specialties ($M = 35.90$ and $M = 34.56$, respectively), $t = .78$, $p = .44$

Table 4

Mean Pregnancy and Motherhood Attitude Questionnaire Scores by Psychology Specialty

Group	Sample size	Mean	Standard Deviation
Applied Specialties	131	35.90	9.48
Non-Applied Specialties	41	34.56	10.24

Note. Possible total scores on the PMAQ ranged from 17 points to 102 points, with higher scores indicating greater negative stereotyping toward pregnancy and motherhood.

CHAPTER V

DISCUSSION

Summary of Significant Findings

While the first three hypotheses were not supported by the data, this fact, in and of itself, is interesting and will be discussed shortly. The fourth hypothesis which the researcher expected to reveal significantly higher scores on the PMAQ among psychology graduate students who are not parents, was the only hypothesis confirmed in this study. Since no studies thus far have examined the relationship between parental status and attitudes toward mothers and pregnant women, it is important to talk about the value of these results as well as the present study's other findings and their implications for theory, research, and practice.

Implications for Theory

Because studies exploring the relationship between parental status and attitudes toward pregnant women and mothers do not exist in the literature at this time, the present investigator's finding that graduate students who are not parents possess stronger negative stereotypes toward this group than parents, is noteworthy, and may thus be an expansion to existing research in this area of study. These results may suggest that individuals with children are more empathic about the experiences of pregnant and/or parenting graduate students and that those without children might struggle to have empathy since that experience is out of their purview. It is also plausible that an

in-group/out-group phenomenon is in effect, an occurrence describing the tendency to favor one's own group while having negative views about people who are not part of an individual's group (Ryan & Bogart, 1997). Research has documented the pervasiveness of negative stereotypic beliefs about out-groups, especially when those out-groups are women (Banjai & Hardin, 1996; Blair & Banjai., 1996; Rudman & Glick, 2001). It has also been demonstrated that majority groups who were perceived as the in-groups, were more negative toward minority groups, or out-groups (Guimond, 2000). In this case, graduate students who are not parents would occupy the in-group as well as the majority because they outnumber mothers/pregnant students, and will perceive those in the out-group/minority—mothers and pregnant women—in more stereotypical terms. Additionally, results may possibly reflect resentment by childfree students who may experience pregnant women and mothers in their program as receiving preferential treatment and added attention.

The literature review section of this study has described numerous investigations which repeatedly showed that negative attitudes and stereotypes toward motherhood and pregnancy in the academic and professional sectors do exist (Angelique & Culley, 2000; Corse, 1987; Franco et al., 1983; Gorman & Fritzsche, 2002; Gueutal et al., 1995; Gueutal & Taylor, 1991; Halpert et al., 1993; Pattison et al., 1997; Peterson & Kroner, 1992; Shapiro, 1982). Since participants in this study did not reveal an overall negative attitude toward their peers, results are somewhat surprising as they are not what would have been predicted by related research. Moreover, the finding that women and men did not differ in their endorsement of negative stereotypes toward peers is also surprising in

light of previous research that has revealed that men perceived motherhood and pregnancy less favorably than women (Franco et al.; Gueutal et al.; Gueutal & Taylor; Halpert et al.; Pattison et al.; Peterson & Kroner; Shapiro). Thus, it would be valuable to explore some of the reasons these two hypotheses were not confirmed in the present study.

Given that the current researcher focused on graduate psychology students, it might be argued that this population as a whole is more liberal and tolerant (Probst, 2003; Szalanski & Szymanska, 1977) than individuals working in the medical and business fields, the professions within which much of the related research about attitudes toward pregnancy and motherhood was conducted. Additionally, previous researchers have shown that psychology students express more empathy than students in other majors (Bécares & Turner, 2004, Harton & Lyons, 2003), a finding which may also help explain the current results. Results may also indicate that psychology graduate students, regardless of gender, are more sensitive and attuned to gender-related issues, and/or that the psychology field is experiencing an improvement in diversity training as well as an overall increased awareness of gender and cultural diversity (Johannes & Erwin, 2004; Robinson & Morris, 2000). Such training has been documented in counseling psychology (Quintana & Bernal, 1995; Rogers, Hoffman, & Wade, 1998), school psychology (Loe & Miranda, 2005; Rogers et al.), and predoctoral psychology internship sites (Murphy, Wright, & Bellamy, 1995). Domain D of the APA guidelines for graduate training programs mandates systemic infusion of multicultural and diversity concerns within psychology programs desiring accreditation (APA, 2005). It requires graduate programs

students in both applied and non-applied specialties relatively comparable levels of empathy and gender-sensitive training. It is also plausible that individuals choosing studies and careers in psychology, regardless of which specialty, possess similar levels of consideration for other people and their experiences even before any graduate training in psychology.

Implications for Research

Although the present study's sample size was respectable, future investigators interested in the current topic may benefit from seeking an even larger participant pool. They might also find value from studying a larger sample of men, and one that is relatively equal in size to that of women. Similarly, since no prior research has investigated attitude differences among psychology disciplines, future researchers should attempt to acquire larger and comparable samples from different specialties, as well as examine whether students from different graduate psychology degree tracks (i.e., Ph.D., Psy.D., M.A., M.S.) differ in endorsement of stereotyped beliefs. It has also been suggested by one of the participants via a letter to the researcher's e-mail account that the survey often seemed to discourage participants from answering against pregnancy because many of the statements may have been leading, threatening the validity of the questionnaire. Therefore, prospective studies may obtain more valid results if they design more moderate statements that would be capable of detecting subtle biases.

Subjective matters, such as attitudes and stereotypes, may be more difficult to capture via quantitative methods, whereas qualitative methods have been developed to obtain more descriptive, and perhaps more significant, results, particularly since such

methods focus on detecting an ambience or an essence of the variable being measured (Berg, 1989). When performing qualitative studies, researchers have been encouraged to utilize several methods of collecting narratives in order to generate plentiful data as well as to increase validity (Patton, 2002). Therefore, future studies in this area could benefit from exploring individuals' experiences via such methods as interviews, personal accounts, and logs, and thus gain a better reflection of personal attitudes and experiences.

Implications for Practice

Given that graduate students who are not parents revealed a higher degree of bias against peers who are pregnant and/or are mothers, there are some implications for practice that should be addressed. However, before reviewing the implications of the finding, it is imperative to discuss statistical versus practical significance. Statistical significance describes a situation in which the null hypothesis can be rejected at some level of certainty, whereas practical significance refers to a research result that will be perceived as having important applications to daily lives, as well as to the improvement in policies, education, and knowledge (Cozby, 1993; Gall, 2001).

Simply because results are statistically significant does not mean that they are meaningful or practical. For instance, many results are statistically significant only because the sample size is very large and/or samples sizes are unequal. In the present research, the number of participant who were not parents was much larger than those who were parents ($n = 131$ and $n = 41$, respectively), leading the investigator to speculate whether the present finding that non-parents endorsed a significantly higher degree of stereotypes than parents was also practically significant. Additionally, graduate students

in applied specialties greatly outnumbered those in non-applied specialties ($n = 131$, $n = 41$, respectively), making it questionable whether the nonsignificant statistical differences between the two specialties was actually practically important.

Given that the PMAQ was adapted from Halpert et al.'s (1993) survey, it is also difficult to know whether the present results are practically significant because they were not normed appropriately. Since there is no norm base for the PMAQ, it is unclear how many points on the survey make a real difference in people's lives. Although practical significance is uncertain, it would nevertheless seem valuable to suggest that psychology departments make themselves aware of and process these and similar biases that might negatively impact the academic environment. Further, although psychology departments ideally train individuals to consider others' experiences, they might benefit from increased empathy-building, consciousness-raising, and sensitivity-training.

For those graduate students who advance toward a clinical profession involving contact with clients, this investigator suggests that, as with other personal beliefs and biases, practitioners who are not parents become conscious of any existing stereotypes about clients who are pregnant/mothers. Baker (1999) emphasized the importance of therapist self-awareness when working with multicultural clients, noting that in combination with cultural sensitivity and consideration of the clients' contexts, it amplifies the lenses within the therapeutic relationship. Lack of such awareness may affect the therapeutic rapport and client progress (Baker, 1999; Carlson, Brack, Laygo, Cohen, Kirkscey, 1998; Constantine, 2001), whereby, according to Parker (1998), therapists who have not explored their attitudes, have not challenged themselves, nor

have addressed any resistance to change, will likely perpetuate negative stereotypes, and thus risk alienating those same clients effected by negative attitudes. It has also been asserted that psychologists who attempt to provide services to individuals from cultures other than their own may be practicing unethically if they did not receive sufficient multicultural training (Ponterotto & Casas, 1991). For graduate students interested in research, it is worth noting that their attitudes, beliefs, and stereotypes can also have an impact on their careers, and have the potential of biasing studies. Therefore, this researcher encourages both practitioners and scientist in the psychology field to process their beliefs, acknowledge growth edges, and seek supervision and consultation.

Limitations

Given the large discrepancy in sample size between men and women, it is reasonable to consider that the findings may have been skewed as a result. In addition, the demographic information that was collected on race/ethnicity determined a predominantly Caucasian sample, a factor which may have also biased the outcomes. Other demographic factors which possibly affected results include participants' age, partnership status, and graduate degree track. When biases such as these are suspected, findings cannot be generalized to the larger population and should be viewed with caution.

As with other self-report measures, particularly those exploring attitudes, a limitation of the PMAQ is that it risks underreporting by the individual completing the survey (Bradburn, Sudman, & Blair, 1978). A factor that may have led to underreporting in this study is social desirability, one of the most common sources of bias that reduces

surveys' validity (Nederhof, 1985). Social desirability occurs when people's attitudes or behaviors conflict with what is approved by society, thereby causing them to respond in a socially desirable manner. Thus, participants in the present study may have misrepresented themselves and refrained from endorsing negative statements in order to provide responses consistent with Western society's pronatalist morals and values (Crano & Brewer, 1973).

In light of students' voluntary completion of the PMAQ following an e-mail request, the researcher questions whether the self-selection process biased the results, whereby individuals who saw the study's topic and felt comfortable with it chose to participate, while those who had negative feelings toward the subject chose not to complete the survey. Additionally, while quantitative analyses attempted to capture negative attitudes in the present research, perhaps the methodology was limited in that it was not sensitive enough to detect subtle attitudes and biases. Qualitative analyses, on the other hand, are procedurally more complex, but would have likely been more sensitive to attitude endorsements, and thus, more qualified at obtaining descriptive results. An additional limitation of this study is that neither the PMAQ nor the original survey from which it was derived (Halpert et al., 1993) was normed, therefore making the validity of both surveys questionable.

Conclusion

The purpose of this study was to identify the degree of stereotyped beliefs by graduate students toward peers who are pregnant and/or are mothers within psychology graduate academic programs. Although the data did not support the first three hypotheses,

they did confirm the fourth hypothesis, which expected participants without children to endorse more negative stereotypes toward peers who are pregnant/mothers than participants with children. Findings provided interesting implications for theory, research, and practice in the field of psychology. While this study had several limitations, suggestions for further research in this specific area could be used to gain a better understanding of negative stereotypes toward pregnancy/motherhood overall and among psychology graduate programs in particular.

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APPENDIX A

Demographic Questionnaire

Demographic Information

1. Please fill in your age:

2. Gender:

Male

Female

3. Race/Ethnicity:

African / African American / Black, non-Hispanic

Asian / Asian-American

Hispanic / Latino

Caucasian / European / White, non-Hispanic

Native American / Pacific Islander / Eskimo / Aleutian

Biracial

Other (please specify)

4. Psychology graduate program:

Counseling

Clinical

School

I/O

Sports

Developmental

Social

Health

Other (please specify)

5. Graduate track:

M.A.

M.S.

Ph.D.

Psy.D.

6. Partnership Status:
- Single
 - Partnered
 - Married
 - Separated
 - Divorced
 - Widowed
 - Prefer not to answer
7. Do you have child/ren?
- Yes
 - No
 - Currently expecting
 - Yes, and currently I am also expecting
8. If female, have you ever been pregnant during your graduate training?
- Yes
 - No
9. Have you ever known or do you currently know of a pregnant graduate student in your department?
- Yes
 - No

APPENDIX B

The Pregnancy and Motherhood Attitude Questionnaire

The Pregnancy and Motherhood Attitude Questionnaire

Instructions: Please answer the following questions with respect to how you feel about peers who are pregnant and/or are mothers in your graduate program by marking one answer per question using the scale below:

- 1 = Strongly Disagree
- 2 = Moderately Disagree
- 3 = Slightly Disagree
- 4 = Slightly Agree
- 5 = Moderately Agree
- 6 = Strongly Agree

1. Women cannot separate professional/academic and personal lives when they are pregnant.

1 2 3 4 5 6

2. Pregnant women cannot be trusted to make high-level/important decisions.

1 2 3 4 5 6

3. Pregnant women upset the academic/departmental environment.

1 2 3 4 5 6

4. When a woman becomes pregnant, her attention is diverted from her school work/graduate training.

1 2 3 4 5 6

5. Graduate schools/departments should provide alternative forms of training such as part-time study or distance education for men who wish to both go to graduate school and be with their children.

1 2 3 4 5 6

6. Graduate schools/departments should provide alternative forms of training, such as part-time study or distance education for women who wish to both go to graduate school and be with their children.

1 2 3 4 5 6

7. Graduate school/universities should provide on-site day care facilities for their students' (and employees') children.

1	2	3	4	5	6
<input type="radio"/>					

8. Graduate schools/universities should be required by law to make special accommodations, such as the availability of part-time or distance education to graduate students who become pregnant.

1	2	3	4	5	6
<input type="radio"/>					

9. When a female graduate student becomes pregnant, it's her own choice and she shouldn't expect her graduate program/department to do anything special to help her.

1	2	3	4	5	6
<input type="radio"/>					

10. Female graduate students who take leave of absence to raise their children should be guaranteed their graduate status when the return.

1	2	3	4	5	6
<input type="radio"/>					

11. Male graduate students who take leave of absence to raise their children should be guaranteed their graduate status when the return.

1	2	3	4	5	6
<input type="radio"/>					

12. Pregnant graduate students should spend time worrying about prenatal care, not their graduate training.

1	2	3	4	5	6
<input type="radio"/>					

13. Children of career-oriented women/ female graduate students suffer some bad effects due to their mothers' working/ occupancy with graduate training.

1	2	3	4	5	6
<input type="radio"/>					

14. Pregnant graduate students should not take high-level responsibilities within their department/program and classes.

1	2	3	4	5	6
<input type="radio"/>					

15. When a woman is pregnant, it is difficult to avoid focusing on her stomach.

1	2	3	4	5	6
<input type="radio"/>					

16. Women become irrational and have wide mood swings when they are pregnant.

1	2	3	4	5	6
<input type="radio"/>					

17. Pregnancy shows vulnerability.

1	2	3	4	5	6
<input type="radio"/>					

APPENDIX C

E-Mail Request

E-Mail Request:

My name is Dana Shafir and I am a doctoral candidate at Texas Woman's University. Currently, I am in the process of collecting data for my dissertation research, entitled stereotypes among psychology graduate students toward peers who are pregnant and/or are mothers.

The purpose of my study is to shed light on any existing stereotyped beliefs toward graduate students who are pregnant and/or are mothers as judged by their peers within psychology graduate programs. This field was chosen due to its scope of interest in attitudes, behaviors, and relationships, and because of its ability to raise the awareness of individuals and of society and to dispense helpful information and suggestions. If indeed negative stereotypes are found within this specific population, measures will be taken towards providing research-supported proposals for modifications, improvements, and consciousness-raising.

I am enlisting your assistance in forwarding this e-mail to graduate psychology departments and their students. I would appreciate the participation of any psychology graduate students whom will be asked to enter their demographic information and complete a 17-item attitude survey. Participants will also be given the opportunity to enter a drawing to win one of four \$25 gift certificates to Barnes & Noble. Completion of the surveys should last no more than 15 minutes.

<http://surveymonkey.com/CheckPassword.asp?SID=1198850&U=847831198850&C=Password:peerattitudes>

For questions about the study, you may contact the Principal Investigator, Dana Shafir at dana.shafir@sbcglobal.net, or the Research Advisor, Dr. Debra Mollen at dmollen@mail.twu.edu or 940.898.2317. For questions regarding your rights as a participant, contact the Texas Woman's University Office of Research and Sponsored Programs at 940.898.3378 or via e-mail at IRB@twu.edu.

Your participation is greatly appreciated.

<http://surveymonkey.com/CheckPassword.asp?SID=1198850&U=847831198850&C=password:peerattitudes>

Sincerely,
Dana Shafir

APPENDIX D

Texas Woman's University Consent to Participate in Research

TEXAS WOMAN'S UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

Title: Stereotypes among Psychology Graduate Students toward Peers who are Pregnant and/or are Mothers

Investigator: Dana Shafir.....dana.shafir@sbcglobal.net
Advisor: Debra Mollen, Ph.D.....dmollen@mail.twu.edu/940.898.2317

Explanation and Purpose of the Research

The purpose of this study is to shed light on any existing stereotyped beliefs toward graduate students who are pregnant and/or are mothers as judged by their peers within psychology graduate programs.

Research Procedures

If you decide to take part in this study, you will be asked for your opinions pertaining to your attitudes towards peers who are pregnant and/or are mothers in your graduate program. There are no right or wrong answers. Your maximum total time commitment in this online survey is estimated to be approximately 15 minutes.

Potential Risks

There are no potential risks for participating in this study. Your responses will be anonymous, however, there is a potential loss of confidentiality through all email transactions should you opt to contact the investigator or advisor.

Participation and Benefits

Your involvement in this research is completely voluntary, and you may discontinue your participation at any time without penalty. In addition to receiving a summary of the study's results upon request, you will also be given the opportunity to enter a drawing to win one of four \$25 gift certificates to Barnes & Noble at the completion of the survey.* We hope the information learned from this research will benefit psychology graduate programs and the greater community.

Questions Regarding the Study

If you have any questions about the research study, you may contact the investigator, Dana Shafir and/or the advisor, Debra Mollen, Ph.D.; their contact information is at the top of this page. For questions regarding your rights as a participant, contact the Texas Woman's University Office of Research and Sponsored Programs at 940.898.3378 or via e-mail at IRB@twu.edu.

Completion of the attached survey constitutes your informed consent.

* You may e-mail the investigator to request entrance into the drawing and a summary of the study.