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Sex segregation and young adults' gender-typed attitudes about occupations

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Sex Segregation and Young Adults' Gender-typed Attitudes about Occupations

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ABSTRACT

Sex Segregation and Young Adults'

Gender-typed Attitudes about Occupations

By Lisa DiDonato

The present study examined the relation between the prevalence of sex segregation, or the division of men and women within social interactions, and young adults' gender-typed attitudes. Specifically, gender-typed attitudes about the occupations that are preferred for the self and viewed as appropriate for others were investigated. The objectives of the current study were partially based on the suggestion that gender-typed attitudes may be a consequence, as well as a cause, of sex segregation (McHale, Kim, Whiteman, & Crouter, 2004). The gender-typed personality traits of expressivity (i.e., traits typically associated with femininity; e.g., being emotional) and instrumentality (i.e., traits typically associated with masculinity; e.g., being assertive) were examined as mediators of the relation between sex segregation and gender-typed attitudes about occupations. Activity preferences, or the activities that individuals choose to engage in, was also investigated as a mediator of the relation between sex segregation and gender-typed attitudes about occupations. Participants were 284 young adult college students between 18 to 23 years who completed questionnaires for the study online. The results indicated that men and women have more same-sex friends than other-sex friends. The frequency of sex segregation was found to be partially dependent on factors such as sex and context of the interaction (i.e., school vs. "hanging out"). Furthermore, men and women were found to have gender-typed attitudes about occupations viewed as appropriate for the self and for others. Overall, sex segregation was not found to be related to gender-typed attitudes about occupations. Reasons for these findings are discussed. Additionally, the potential consequences of the findings

are discussed in relation to the continuing sex segregation that is observed within many occupations.

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TABLE OF CONTENTS

Abstract	ii
Acknowledgments	iv
Table of Contents	v
LIST OF FIGURES	vi
LIST OF TABLES	vii
INTRODUCTION	1
METHODS	20
RESULTS	29
DISCUSSION	40
REFERENCES	57
APPENDIX	77

LIST OF TABLES

Table 1	69
Table 2	70
Table 3	71
Table 4	72
Table 5	73

LIST OF FIGURES

Figure 1.....	74
Figure 2.....	75
Figure 3.....	76

Sex Segregation and Young Adults' Gender-typed Attitudes about Occupations

The division of girls and boys within social interactions and same-sex friendships is labeled sex segregation (Thorne & Luria, 1986). Sex segregation has been observed at different ages, from children in preschool to adults within careers (Hoffman & Powlishta, 2001; Maccoby & Jacklin, 1987; Ruble, Martin, & Berenbaum, 2006; Thorne, 1986). The majority of research, however, has focused on children. Sex segregation has also been observed in various contexts (e.g., at school, "hanging-out") and the context in which interactions occur has been suggested to influence the degree of sex segregation displayed (Strough & Covatto, 2002). The present study examined the proportion of same-sex friends reported by young adult women and men. Additionally, the contextual specificity of sex segregation in young adulthood was investigated.

Numerous studies have documented sex segregation; however, its causes and consequences are still not sufficiently understood (see Mehta & Strough, 2009). Previous research has suggested that friendships, specifically sex-segregated friendships, are a context in which socialization occurs (Maccoby, 1998; McHale, Kim, Whiteman, & Crouter, 2004; Leaper, 1994). Furthermore, it has been suggested that socialization within friendships may impact the development of attitudes (Leaper). Thus, a potential cause and consequence of sex segregation may be the development and maintenance of gender-typed attitudes (Crouter, Whiteman, McHale, & Osgood, 2007; McHale, et al., 2004). This may include the development of attitudes that reflect society's stereotypes regarding the occupations that are viewed as appropriate for men and the occupations that are viewed as appropriate for women (i.e., gender-typed attitudes about occupations, see Liben & Bigler, 2002). The current study investigated young adults' gender-typed attitudes about occupations. The relation between gender-typed attitudes and sex segregation was examined because research suggests that the development of gender-typed

attitudes may be related to having sex-segregated friendships (McHale, et al., 2004). Finally, potential mediators (gender-typed personality traits: expressivity, instrumentality; activity preferences) of the association between gender-typed attitudes and sex segregation were considered. Specifically, the gender-typed personality traits of expressivity (i.e., traits typically associated with being feminine; e.g., being helpful) and instrumentality (i.e., traits typically associated with masculine; e.g., being independent) were considered.

In the examination of gender-typed attitudes, previous research has suggested that it is important to differentiate between attitudes about what is appropriate for the self (i.e., what is preferred for the self) and attitudes about what is appropriate for others (i.e., men and women in general; Bartini, 2006; Katz & Ksiansnak, 1994; Liben & Bigler, 2002). Thus, the present study examined gender-typed attitudes regarding occupation choices viewed as appropriate and preferable for oneself (i.e., individuals' self-preferences for occupations that are in line with gender stereotypes for their own sex) and those viewed as appropriate for others (i.e., individuals attitudes about the occupations that are appropriate for others to hold).

Defining Terminology

When discussing sex and gender, it is important to define the terms involved. Whereas the term "sex" is typically defined as a physical trait referring to biological sex (Fausto-Sterling, 2005; Money, 1980; Prince, 1985; Unger & Crawford, 1993; Unger, 1979), the term "gender" can be defined as the cultural, psychological, and behavioral traits that are characteristically linked to one biological sex (Bussey & Bandura, 1999; Prince; Unger & Crawford; Unger). There is not always a clear distinction in the way in which theorists use these terms. In fact, the terms are often used interchangeably (for recent reviews see Halpern et al., 2007). However, the

above-stated definitions of the terms are commonly employed. In the current study, the terms sex and gender will be utilized in the above-stated manner.

Overview of the Introduction

To discuss the relation between sex segregation in young adults' friendships and gender-typed attitudes regarding occupation choices, a theoretical background will first be given. Second, a brief overview of the development of sex segregation within friendships in childhood, adolescence, and young adulthood will be discussed. Third, the development of gender-typed attitudes about occupations throughout these age periods will be described. Fourth, the role of sex segregation in the development of gender-typed attitudes about occupations will be examined. The lack of previous research examining sex segregation and gender-typed attitudes will also briefly be discussed.

Conceptual Background

The current study drew from a developmental social-constructionist perspective. This perspective emphasizes that contextual factors may influence the expression of gender-typed behaviors (Leszczynski & Strough, 2008; Strough & Berg, 2000; Strough & Covatto, 2002) and that gender-typed behaviors result from transactions between the individual and their context (e.g., Deaux & Major, 1987; Maccoby, 2000). Stemming from this theoretical background, the current study investigated sex-segregated friendships and sex-segregated peer interactions (i.e., at school, hanging out) as contexts relating to the development and maintenance of gender-typed attitudes. Additionally, the mediators examined in the current study (i.e., expressivity and instrumentality personality traits, and activity preferences) may be viewed from a social-constructionist perspective as gender-typed behaviors that have developed as a result of interactions between an individual and their context.

The Development of Sex Segregation in Friendships

Childhood and preadolescence. Preference for peers of the same sex is pervasive throughout friendships and peer interactions in childhood (Thorne, 1999). Previous research has found evidence of sex segregation in the peer interactions of children as young as two years of age (Howes, 1988; Fagot, 1994; LaFreniere, Strayer, & Gauthier, 1984; Maccoby & Jacklin, 1987). As children begin to spend an increasing amount of time around their peers in settings such as preschool, sex segregation within friendships becomes increases (Maccoby & Jacklin; Powlishta, Serbin, & Moller, 1993).

Sex segregation increases in school-aged children (Maccoby, 1998; LaFreniere et al., 1984) and the division between the sexes is readily apparent within the school context (Thorne, 1999). As children age, sex segregation appears to persist. Previous research has found that preadolescents typically indicate a preference for engaging in activities with same-sex peers at school (Strough & Covatto, 2002; Strough, Swenson, & Cheng, 2001; Webb, Baxter, & Thompson, 1997). However, sex segregation has been found to vary as a function of context in that preadolescents' interactions are less sex segregated at home (Strough & Covatto).

Adolescence. In comparison to children, adolescents are more likely to spend time with other-sex peers (Bukowski, Sippola, & Hoza, 1999). This change is partially because adolescents typically spend more time in social situations than children (Klieber, Larson, & Csikszentmihalyi, 1986). Another shift that occurs in adolescents' peer interactions is the onset of romantic relationships. Specifically, as adolescents begin to date, they are more likely to have other-sex friends (Bukowski, et al.; Connolly, Craig, Goldberg, & Pepler, 2004; Darling, Dowdy, Van Horn, & Caldwell, 1999).

Despite changes in adolescents' social interactions, previous research has indicated that adolescents still prefer same-sex friends, especially in close, dyadic friendships (Clark & Ayers, 1992; Dijkstra, Lindenberg, & Veenstra, 2007). Furthermore, the frequency and importance of same-sex friends does not decrease (Bukowski et al., 1999; Lundy, Field, McBride, Field, & Largie, 1998) and adolescents continue to have significantly more same-sex friends in comparison to other-sex friends (Poulin & Pedersen, 2007). In addition, Strough and Covatto (2002) found that adolescents' peer preferences continue to be more sex segregated in the school context as compared to the home context. Thus, despite the increase in other-sex friendships during adolescence, sex segregation still occurs.

Additionally, stereotypes about the academic subjects that boys and girls excel at (e.g., boys are better than girls at math) may influence sex segregation in adolescence. These stereotypes may affect adolescents' friendships because in adolescence (i.e., in high school) individuals often choose their own academic courses. Specifically, girls are less likely to choose math and science classes as compared to boys on the basis of existing stereotypes (e.g., girls are not good at math) (Correll, 2001; Xie & Shauman 2003). The classes that boys and girls are enrolled in may predict who they choose as friends (Kubitschek and Hallinan 1998). Additionally, academic interests may influence friend selection (Riegle-Crumb, Farkas, & Muller, 2006).

Young adulthood. The current study examined sex segregation in young adults' friendships. While previous studies in this area have focused primarily on children and adolescents, a limited amount of research has investigated young adults. Examining sex segregation in young adulthood is important because friendships are a vital part of an individual's social network (Berry, Willingham, & Thayer, 2000). This may be especially true

considering that the average age of marriage for both men and women in the United States has been increasing over the years (Arnett, 2001). In 1970, the average age of marriage was 23 for men and 21 for women (U.S. Bureau of the Census, 2009). By 2006, the average age of marriage had risen to 28 for men and 26 for women (U.S. Bureau of the Census). Because men and women are no longer marrying during their early twenties, it has been suggested that friends may be especially pertinent in young adulthood and may even play a more important role than romantic relationships in satisfying the interpersonal needs of young adults (Strough, Powlishta, & Mehta, 2009). Therefore, in comparison to previous cohorts, investigating sex segregation in current cohorts of young adults may be especially relevant.

The limited amount of research investigating sex segregation in young adulthood suggests that young adults prefer same-sex friends over other-sex friends (Reeder, 2003; Rose, 1985). Other-sex friendships do occur in early adulthood but to a significantly lesser extent than same-sex friends (Monsour, 2002). Thus, sex segregation appears to persist even during a period of the life span when heterosexual romantic relationships are common (Surra, Gray, Boettcher, Cottle & West, 2006). Furthermore, research indicates that young adults seem to prefer same-sex friends rather than other-sex friends for close, intimate friendships (Barbee, Gulley, & Cunningham, 1990; Reeder). Following from the existing research on friendships in young adulthood, sex segregation was investigated within the present study by examining the close friendships young adults report having rather than larger networks of friends or peer groups.

Whereas some young adults do immediately enter the workplace after high school graduation, many others enter into academic institutions, such as universities and colleges (Gerald & Hussar, 2003). The number of high school graduates who enroll in college has increased recently from 49.3% in 1980 to 66 % in 2006 (U.S. Bureau of the Census, 2009).

Universities and colleges then have become the context in which most social interactions take place during young adulthood. Specifically, classes and social events may offer frequent opportunities for young adults to interact with both same-sex and other-sex peers.

Despite having opportunities to interact with same-sex and other-sex peers, existing research suggests that young adults appear to be sex segregated within the academic setting (England & Li, 2006; Wilson & Boldizar, 1990). Specifically, sex segregation exists in academic majors. Some majors, (e.g., nursing, literature, and language) are dominated by female students, whereas other majors (e.g., engineering, physics, and mathematics) are dominated by male students (Bradley, 2000; England & Li; Wilson & Boldizar). Sex segregation within majors may stem from existing stereotypes that men and women excel at different academic subjects (e.g., men are better at science than women) (Correll, 2001; Xie & Shauman 2003). Sex segregation within academic majors may often lead to sex segregation with college classrooms (England & Li) and perhaps, eventually, to segregation within careers. Thus, sex segregation may persevere even in age-related contexts, such as colleges, that facilitate other-sex friendships (Mehta & Strough, 2009). Following from this research, one objective of the current study was to examine college classroom settings (i.e., English, math) as potential contexts in which sex segregation may occur during young adulthood. Sex segregation within young adults' friendships outside of the academic context has not been extensively examined by previous research (Monsour, 2002). Thus, another objective of the current study was to examine sex segregation in a non-academic context (i.e., "hanging out" outside of school).

The Development of Gender-typed Attitudes about Occupations

Childhood. A review of the literature indicates that gender-typed attitudes regarding occupation appropriateness are observed in children of all ages (Alpert & Breen, 1989;

Kriedberg, Butcher, & White, 1978; Looft, 1971; Siegel, 1973). As early as preschool, children exhibit knowledge about which occupations are traditionally considered to be either appropriate for men or appropriate for women (Maccoby, 1998; Weisberg, Bigler, & Liben, 2010). Previous research has also found that when children were asked what they wanted to be when they grew up, they typically indicated an occupation considered as appropriate for their gender (Trice & Rush, 1995).

Previous research has suggested it is important to consider that individuals may have inconsistent attitudes about the occupations that they view as appropriate for themselves and the occupations that they view as appropriate for others (Bartini, 2006; Katz & Ksansnak, 1994; Liben & Bigler, 2002). In this context, the term “others” refers to men and women respectively. Thus, a child may think a certain occupation is appropriate for only men, only women, or both men and women. According to Liben and Bigler, this attitude may be inconsistent with the occupations a child thinks are appropriate for themselves. This study found that children often reported having stereotypical views about others, but not about themselves. For example, several girls reported “only men should be doctors” (p. 101) and then stated they themselves would like to grow up to be a doctor (Liben & Bigler).

Adolescence. Previous research suggests that because boys and girls appear to learn about gender stereotypes regarding occupations early in life, their subsequent choices about which academic classes to take or “track” to be on (e.g., a math track) may stem from these acquired gender-typed attitudes (Archer & Loyd, 1985). For example, an adolescent girl may choose to not take upper level math classes at school because math classes are viewed as stereotypically more appropriate for boys (Li, 1999). It does appear that adolescent girls and boys are choosing different academic tracks in high school- a substantial amount of previous

research has found that adolescent girls' enrollment in math and science classes is significantly lower than that of adolescent boys (Else-Quest, Linn, & Hyde, 2010; National Center for Education Statistics, 2005; Owens, Smothers, & Love, 2003; Tenenbaum & Leaper, 2003). Girls, in comparison to boys, are more likely to enroll in language, literature, and English related classes (National Center for Education Statistics). These academic choices may affect girls' and boys' future career goals and selection (Eccles, Jacobs, & Harold, 1990; Owens et al., 2003; Sadker & Sadker, 1994; Tenenbaum & Leaper).

Young adulthood. Previous research indicates that young adult men and women do appear to have gender-typed attitudes about occupations. For example, one study found that young adults typically rate traditionally masculine jobs, such as engineer, as higher in prestige than traditionally feminine jobs, such as a teacher (Parker, Chan, & Saper, 1989). This finding seems to be consistent with current theories suggesting that as the number of women in a career field increases, the number of men choosing to enter that field decreases (England et al., 2007). Young adult men and women also rated job applicants as higher in desirability when the applicant was a male applying for a typically male-dominated occupation and a female applying for a typically female-dominated occupation (Judd & Oswald, 1997). Taken together, this research indicates that young adults may have gender-typed attitudes about occupation appropriateness. Furthermore, having gender-typed attitudes about occupations may be related to the finding that young adults tend to choose occupations which are considered as traditionally appropriate for their gender (Wolfe & Betz, 1981).

Liben and Bigler (2002) examined the attitudes of young adults in regards to occupations that are appropriate for others (men and women in general) and themselves by utilizing their adult version of the Occupations, Activities, and Traits scale (OAT). To develop the OAT, two

separate studies assessed the reliability and validity of the OAT for measuring attitudes about three domains: occupations, activities, and traits. For each study, participants were first asked to rate occupations (e.g., doctor, social worker) as appropriate for either men, women, or both. Second, participants were also asked to rate their own personal interest in several different occupations (e.g., auto mechanic, dental assistant). This study found that young adult men and women endorsed stereotypical occupations both for themselves and others. For example, men were more likely than women to state that they would want to be an auto mechanic and that only men should be auto mechanics. Women, conversely, were more likely than men to state that they would want to be a dental assistant and that only women should be dental assistants. Following from Liben and Bigler's work, the current study examined young adults' gender-typed attitudes about the occupations that are personally preferred (i.e., men's preferences for occupations that are stereotypically viewed as appropriate for males and women's preferences for occupations that are stereotypically viewed as appropriate for females). The present study also examined young adults' attitudes about the occupations they viewed as appropriate for others (i.e., men and women in general).

In addition, Liben and Bigler's (2002) also found that, in comparison to men, women expressed a more flexible attitude about the occupations they viewed as appropriate for others (i.e., women were more likely than men to say that both men and women could hold stereotypically masculine and feminine occupations). To further investigate Liben and Bigler's findings, the current study also examined gender differences in young adults' attitudes about occupations.

Sex Segregation and Gender-typed Attitudes about Occupations

Past research has not investigated the potential relation between sex segregation and gender-typed attitudes about occupations. Sex segregation within young adults' friendships may be an important phenomenon to study in relation to gender-typed attitudes regarding occupation choices because young adults' friends may play an important role in the socialization and development of gender-typed attitudes regarding occupations (Crouter et al., 2007; McHale, et al., 2004). Thus, the current study investigated young adults' gender-typed attitudes regarding the occupations they view as appropriate for themselves (i.e., preferences for occupations that are consistent with gender stereotypes) and others and how these attitudes may relate to sex segregation.

Sex segregation is often evident within occupational fields because men and women tend to hold different occupations (Blackburn, Browne, Brooks, & Jarman, 2002; Guy & Newman, 2004; Reskin, 1993). Many occupations, such as positions in the science, technology, engineering, and mathematics fields (STEM), are primarily still held by men (Betz & Hackett, 1981; Bystydzienski, 2009). Other professional fields, such as education, are sex segregated as they are dominated by women (Reeder, 2003). For example, most preschool and elementary school teachers are women (U.S. Department of Labor, 2007). Perhaps, gender-typed attitudes may play a role in the continuing segregation of men and women into different fields of occupations. Because many careers are still dominated by either men or women, investigating the association between sex segregation in young adulthood and gender-typed attitudes about occupations is important.

The current study considered the association between sex segregation and gender-typed attitudes about occupations based on existing research suggesting that sex-segregated friendships may be associated with the development and maintenance of gender-typed attitudes (Crouter et

al., 2007; McHale, et al., 2004). Specifically, spending time with same-sex friends may influence the development of and reinforce gender-typed attitudes about the types of occupations that are appropriate for men and women (i.e., that men should hold stereotypically masculine jobs and women should hold stereotypically feminine jobs). To examine the association between sex segregation and gender-typed attitudes about occupations, the current study investigated two mediators: gender-typed personality traits (expressivity, instrumentality) and gender-typed activity preferences (for stereotypically feminine activities, for stereotypically masculine activities). The proposed mediators were selected because having sex-segregated friendships has been suggested to be related to the development of gender-typed personality traits (expressivity, instrumentality) and gender-typed activity preferences (see Leaper, 1994; Maccoby, 1990; Mehta & Strough, in press). Specifically, spending time with same-sex friends may influence the development of personality traits that are stereotypically associated with an individual's own sex (Leaper; Maccoby; Mehta & Strough). For example, if a boy spends more time with same-sex friends than other-sex friends he may be more likely to develop and maintain instrumental traits as opposed to expressive traits. Similarly, spending time with same-sex peers may facilitate the development of and perpetuate gender-typed activity preferences (Leaper; Maccoby; Mehta & Strough). For example, if a girl spends more time with same-sex friends than other-sex friends she may be more likely to develop and maintain an interest in activities that are viewed as appropriate for girls (e.g., going shopping). The rationale for looking at gender-typed personality traits and activity preferences as mediators is that both may facilitate the development of and maintenance of gender-typed attitudes, specifically gender-typed attitudes about occupations. Additionally, the endorsement of gender-typed personality traits and gender-typed activity preferences may explain the endorsement of gender-typed attitudes about

occupations better than sex segregation (or having more same-sex friends than other-sex friends) does. Hence, the current study examined the association between sex segregation and gender-typed attitudes about occupations, as well as examining potential mediators of this association.

Personality Traits. Sex segregation may be directly related to attitudes about occupations or indirectly related through an association with gender-typed personality traits. Expressive gender-typed personality traits are defined as traits typically thought to be traditional for females, such as being emotional and kind (Spence, Helmreich, & Stapp, 1975). Instrumental gender-typed personality traits are defined as traits traditionally thought to be stereotypical for males, such as being independent and active (Spence et al.).

In childhood and adolescence, boys and girls differ in their display of instrumental traits and expressive traits (Hoffman & Powlishta, 2001; Maccoby, 1998; Phye & Sola, 2001). Specifically, girls are more likely than boys to display expressive traits and boys are more likely than girls to display instrumental traits (Leszczynski & Strough, 2008; Mehta & Strough, in press). These gender differences appear to persist into young adulthood (Grimmell, 1998; Maltby & Day, 1999). Bigler and Liben (2002) found that young adult men and women are more likely to endorse traits that are viewed as traditionally gender-appropriate.

Existing literature has suggested that gender differences in the display of expressive and instrumental traits may be associated with sex segregation (see Leaper, 1994; Maccoby, 1990; Mehta & Strough, in press). Specifically, gender-typed personality traits may be related to sex segregation in that personality traits may influence friend selection. For example, a woman who endorses expressive personality traits may be more likely to choose female friends (because they similarly endorse expressive traits) (see Leaper; Maccoby; Mehta & Strough, 2009). Existing literature has supported this suggestion with the finding that young adults' friendships are often

based on similarities (Duck, 1994; Kubitschek & Hallinan, 1998; Newcomb, 1961).

Additionally, because peers are suggested to play a role in socialization (McHale, et al., 2004), friends selected by an individual may influence the development of gender-typed personality traits. Specifically, if a man selects to hang out with same-sex friends, these friends may influence his development of instrumental personality traits. Despite this rationale, Mehta and Strough did not find support for the hypothesis that gender-typed personality traits are related to sex segregation in adolescence. However, the association between gender-typed personality traits and sex segregation has not been examined in young adulthood. Thus, despite Mehta and Strough's findings, the current study examined the association in young adulthood.

Bigler (1997) stated that identifying with gender-typed personality traits (expressiveness, instrumentality) may be related to attitudes about occupations. Liben and Bigler (2002) found that gender-typed attitudes about occupations were highly correlated with the endorsement of gender-typed personality traits. This may be because individuals choose careers that utilize personality traits they endorse. For example, a woman who reports that she is very sympathetic and likes to help others (i.e., aspects of expressivity) may chose to be a social worker or counselor.

Despite the suggestions of previous literature that gender-typed personality traits may be related to sex segregation and gender-typed attitudes about occupations, expressivity and instrumentality have not been examined as potential mediators of the relation between sex segregation and gender-typed attitudes about occupations. Stemming from the suggestions of prior research, the current study examined gender-typed personality traits as a mediator in the association between sex segregation and gender-typed attitudes about occupations during young adulthood.

Activity preferences. Sex segregation may be directly related to attitudes about occupations or indirectly related through an association with gender-typed activity preferences. The term activity preferences refers to the activities that women and men choose to engage in.

Gender differences in activities preferences are observed in both childhood (Hoffman & Powlishta, 2001) and adolescence (Passmore & French, 2001). Specifically, girls tend to engage in more cooperative play (Maccoby, 1998; Lever, 1976) whereas boys prefer competitive activities (Stoneman, Brody & MacKinnon, 1984). Continuing into young adulthood, gender differences in activity preferences are still observed (Bystydzienski, 2009; Klonsky, 1985; Leaper & Ayres, 2007; Lippa, 1998; Prediger, 1982).

Existing literature has suggested that sex segregation may result from individuals' choices to interact with peers with similar activity preferences and interests (Leaper, 1994; Maccoby, 1990; Strough et al., 2009). Previous research has also found that young adults often form friendships based on similarity (Duck, 1994; Kubitschek & Hallinan, 1998; Newcomb, 1961). Thus, because men and women may be choosing to engage in disparate, separate activities, the activities they choose to engage in may place them in contexts where they are interacting with same-sex peers who also chose that activity or similar activities (also see Maccoby, 1998). Mehta and Strough (in press) examined the association between sex segregation and activity preferences with findings indicating that the two variables are unrelated in adolescence. However, previous research has not examined the association in young adulthood, as the current study did.

Activities may also provide a context for the development of attitudes (McHale, Kim, Dotterer, Crouter, & Booth, 2009). Hence, the continuation of differences in activity preferences may further influence the development of gender-typed attitudes about occupations appropriate

for oneself and others because activities engaged in may influence the skills and interests of individuals. For example, a person who prefers activities that involve helping others (e.g., doing volunteer work, talking to friends) may believe that occupations requiring people skills (e.g., therapist) are best for him or her. In support of this hypothesis, Liben and Bigler (2002) found that the endorsement of gender-typed activity preferences correlated positively with having gender-typed attitudes about occupations.

Activity preferences, however, have not been investigated as a mediator in the association between sex segregation and gender-typed attitudes about occupations. The current study took this mediation model into consideration based on the rationale that individuals may choose activities that same-sex peers are also selecting (i.e., sex segregated activities) and the context of these same-sex peers may perpetuate gender-typed attitudes (i.e., if same-sex peers hold gender-typed attitudes, this may influence an individual's attitudes). Thus, the current study examined activity preferences as a mediator in the association between sex segregation and gender-typed attitudes about occupations.

Statement of the problem

Sex segregation is a persistent phenomenon across the life span (Maccoby, 1998). However, since previous studies have focused primarily on children and adolescents, research is needed that examines sex segregation in young adults' friendships. Investigating young adults' friendships is imperative because these relationships may play a more important role for contemporary cohorts than for previous cohorts. In addition to examining the prevalence of sex segregation, potential correlates of this phenomenon, namely the attitudes of young adult women and men regarding occupations viewed as appropriate for oneself and for others, are investigated. This study also examines how the relation between sex segregation and attitudes about

occupations may potentially be mediated by traits and activity preferences. Because sex segregation in young adulthood often occurs in specific contexts, specifically academic contexts such as within major or classroom, the current study also examines the contextual specificity of the sex segregation in young adults' friendships. Although many researchers have looked broadly at gender-typed attitudes towards occupation choice, very few have focused on young adults exclusively. Furthermore, previous research has not considered the potential relation between sex segregation and gender-typed attitudes about occupations, which may be important to consider based on the research suggesting that peers can influence the development of gender-typed attitudes (McHale et al., 2004). Additionally investigating gender-typed attitudes about occupations is important since many occupations are still held primarily by men or by women.

Research Questions and Hypotheses

The current study investigated the potential existence of sex-segregated friendships during young adulthood. Previous research found that both young adult women and men have a greater number of same-sex friends than other-sex friends (Reeder, 2003). The first research question was: Are young adults' friendships sex segregated? The hypothesis was:

1. Both women and men will have a higher proportion of same-sex friends than other-sex friends.

The present study also examined how sex segregation in young adults peer interactions may vary as a function of the context. Specifically, previous research has found that same-sex peer preferences were more apparent in the school setting as compared to the home setting (Strough & Covatto, 2002). Thus, the first part of the second research question was: Does the degree of sex segregation in young adults' friendships vary by context? The hypothesis was:

2a. Young adults will have more sex-segregated peer preferences in the school contexts (i.e., English class and math class) as compared to the hanging-out context.

Additionally, the current study investigated young adults' peer preferences in college classroom settings (i.e., English, math) and outside of the school context (i.e., "hanging out"). Research suggests that stereotypes about how men and women perform in academic subjects currently exist, specifically men are thought to do better than women at math and women are thought to do better than men at English (see Else-Quest et al., 2010). Thus, the second part of the second research question was: Do young adults' peer preferences follow stereotypes? The hypothesis was:

2b. Young adults' peer preferences will follow stereotypes in the school contexts (i.e., in the English class setting, women and men will both choose more women over men to work with; however, in the math class setting, both women and men will choose more men over women to work with). In the "hanging-out" context, however, it is predicted that women's and men's peer selection will not follow a stereotype.

The present study also investigated young adults' gender-typed attitudes regarding occupations that were preferred for the self and attitudes about occupations that were viewed as appropriate for others. The findings of Liben and Bigler's (2002) two previous studies examining young adults' gender-typed attitudes about occupations were inconsistent. Specifically, in the first study it was found that young adults did not have gender-typed personal preferences for occupations, but did have gender-typed attitudes about occupations that were viewed as appropriate for others. Thus, in Liben and Bigler's first study young adults' attitudes about the self were inconsistent with their gender-typed attitudes about others. Liben and Bigler's second study, however, (that was conducted using a refined and validated version of the OAT) found

that young adults' personal occupation preferences were gender-typed (i.e., both women and men preferred occupations that were stereotypical for their sex). Hence, in the second study it was found that young adults had consistent attitudes about occupations for the self and for other-both were gender-typed. Following from this research, the first part of the third research question was: Do young adults have gender-typed attitudes regarding occupations that are personally preferred? The hypothesis was:

3a. Young adults will have gender-typed attitudes about occupations that are preferred for the self.

The second part of the third research question was: Do young adults have gender-typed attitudes about occupations that are viewed as appropriate for others? Based on Liben and Bigler's (2002) findings, the hypothesis was:

3b. Young adults will have gender-typed attitudes about the occupations that are viewed as appropriate for others.

Liben and Bigler (2002) found that women had a more flexible (i.e., less gender-typed) attitude about the occupations that were viewed as appropriate for others (i.e., women were more likely than men to report that both men and women could be doctors while men were more likely than women to report that only men could be doctors). Thus, the third part of the third research question was: Do women have more flexible attitudes than men about the occupations that are viewed as appropriate for others? The hypothesis was:

3c. Women, as compared to men, will express a more flexible attitude about the occupations viewed as appropriate for others.

The relation between sex-segregated friendships and gender-typed attitudes in young adulthood was also investigated. Based on research that has suggested that friendships,

specifically sex-segregated friendships, are a context that may influence the development and maintenance of attitudes (Maccoby, 1998; McHale et al., 2004; Leaper, 1994), the fourth question was: Does sex segregation within young adults' friendships relate to gender-typed attitudes regarding occupations? The hypothesis was:

4a. Young adults who report a higher proportion of same-sex friends (i.e. more sex-segregated friendships) will also have a more gender-typed attitude towards occupations that would be appropriate for the self (i.e., men will prefer occupations that are viewed as stereotypically appropriate for males and women will prefer occupations that are viewed as stereotypically appropriate for females) as well as occupations that would be appropriate for other people.

4b. The relation between having sex-segregated friendships and having gender-typed attitudes about occupations will be mediated by two predictor variables: gender-typed traits (expressivity and instrumentality) and gender-typed activity preferences. (i.e., activities that are viewed as stereotypically feminine and activities that are viewed as stereotypically masculine)

Method

Participants

The initial sample consisted of 334 participants. Participants were young adults (186 females, 113 males, 35 missing) ages 18-24 years ($M = 19.31$ years, $SD = 1.22$). The participants were Caucasian (81.7 %), African-American (1.2 %), Asian (1.2 %), Hispanic (.3 %), listed as "other" (3.3 %), or not reported (12.3 %). This was typical of the population from which they were drawn (see Table 1). Participants also reported on their year in college: freshman (30.9 %), sophomores (43.5 %), juniors (17.5 %), seniors (8.1 %). Participants' majors in college included

(but were not limited to) Exercise/ Physiology (12.9%), education (12.6%), psychology (11.4%), Nursing (10.8%), sciences (i.e., biology etc.; 5.1%), business (4.2%), etc.

Women and men were recruited from undergraduate psychology classes at West Virginia University. Flyers were displayed on campus as well as shown in psychology classes. Participants were given extra credit in their psychology class as incentive to complete the study. To be able to participate in the study, participants were required to be between 18 and 23 years of age and not married. No restrictions were placed on year of enrollment in school.

Fritz and MacKinnon's (2007) method for calculating sample size for use of the Sobel test (Sobel, 1987) was utilized to determine that 98 complete cases for women and 98 complete cases for men were needed to detect a mediated small effect for two predictor variables in a regression with .80 as the power value when alpha is equal to .05. The Sobel test's method of determining power was utilized because of its accuracy and low statistical power requirement.

Procedure

The current study was completed online through the use of the Experiment Management System developed by Sona Systems, Ltd. Each participant's informed consent was obtained prior to data collection. Participants answered a series of online questionnaires, however, only the questionnaires that were utilized in the present study will be discussed. The questionnaires were presented in this order: three context-specific nominations of preferred peers (to work with in an English class, to work with in a math class, and to hang out with outside of school; amended from Strough & Covatto, 2002), the open-ended friend nomination, the Occupations, Activities, and Traits (OAT; Liben & Bigler, 2002) measure, a demographics questionnaire, and the Personal Attributes Questionnaire (PAQ; Spence et al., 1975; see Appendix A).

Measures

Context-specific nominations of preferred peers. The context-specific nominations were used to measure the proportion of same-sex peers participants preferred to work with (in English and math class) and hang out with (see Appendix A) were adapted from Strough and Covatto's (2002) context-specific peer nomination procedure. For academic context-specific nominations, English and math classes were chosen specifically because, as previously discussed, past research indicates that college math classes and majors tend to be primarily made up of men while humanities and education (especially English) classes and majors tend to be dominated by women (England & Li, 2006; Wilson & Boldizar, 1990). For the "hanging out" context-specific nomination, the current study amended Strough and Covatto's nomination list to make it more appropriate for young adults by asking participants to list peers with whom they would prefer to hang out with outside of school (as opposed to peers they would invite over their homes, see Strough & Covatto).

For the academic context (i.e., English class, math class), the instructions stated that participants should try to imagine that their goal for each project is to do well and get a good grade on that particular project. For the "hanging-out" context, the instructions stated that participants should try to imagine that their goal was to have fun. In each set of instructions, participants were also told that they could select any person with whom they would like to work and that selected peers did not have to be enrolled in any of their classes or even be in attendance at their university. On all three questionnaires, participants were then instructed to list the names of up to five peers they would prefer to work with/ hang out with in order of preference. After listing each peer, participants were asked to indicate the sex of that peer, the reason they chose that peer (open-ended response), and their relationship with that peer. Possible choices for relationship status included responses of "*we don't like each other,*" "*we like each other,*" "*we*

are friends,” “*we are good friends,*” “*we are best friends.*” Separate scores were calculated for each context and indicated the proportion of same-sex peers nominated for each context. Because not all participants listed five peers, proportion scores were computed based on the number of peers listed. Higher scores indicated a greater preference for same-sex peers over other-sex peers in English class ($M = .67$, $SD = .20$, range = .00 to 1.00), Math class ($M = .57$, $SD = .26$, range = .00 to 1.00), and hanging out ($M = .70$, $SD = .20$, range = .00 to 1.00).

Open-ended friend nomination. The open-ended friend nomination was used to measure sex segregation in young adults’ friendships (i.e., the proportion of same-sex friends listed; see Appendix A). This questionnaire was similar to Reeder’s (2003) utilization of a nomination list that allowed participants to list up to eight of their closest friends. Reeder suggests allowing participants to list this number of friends because prior research (Bell, 1981; Parker & deVries, 1993) has suggested that women and men tend to have six to seven close friends on average. For this nomination, participants were instructed to not include family members or romantic partners as close friends. Based on previous research (Davis & Todd, 1982; Hodges, Boivin, Vitaro & Bukowski, 1999), participants were given the definition of friendship as “people you like, feel close to, or enjoy spending time with.” Participants were then instructed to list up to eight of their closest friends and to indicate each friend’s sex. Participants were also asked indicate who, of the eight friends listed, was their best friend. The number of reported same-sex friends was divided by the total number of friends listed in order to calculate proportion scores. Higher scores indicated a greater proportion of same-sex friends listed in comparison to other-sex friends ($M = .71$, $SD = .18$, range = .25 to 1.00).

Friendship nomination question number 18 inquired as to whether or not the participant was dating. The instructions for this item defined dating as “spending time with another person

with whom you are romantically interested, where they are romantically interested in you too.”

If the participant stated that they were dating, they were asked to give the first name of the individual (friendship nomination question number 19; see Appendix A).

Gender-typed attitudes. The occupations, activities, and traits (OAT; Liben & Bigler, 2002) scale was utilized to assess participants’ gender-typed attitudes towards the self and others. The OAT has been developed as a personal measure (OAT-PM) and as a measure of attitudes about others (OAT-AM). The OAT-PM and the OAT-AM contain similar items, however, the OAT-PM asks participants to answer questions about oneself while the OAT-AM asks about the participant’s attitudes about others. The OAT-PM and the OAT-AM both consist of subscales that separately measure gender-typed attitudes about occupations, activities, and traits. Both long and short versions of each subscale within the OAT-PM and the OAT-AM have been developed and may be employed concurrently (i.e., one long version of a subscale may be utilized with a short version of another subscale). Furthermore, each subscale contains masculine, feminine, and neutral items; neutral items are answered by participants but not included in analyses.

When Liben and Bigler (2002) constructed the OAT-PM and the OAT-AM, specific items within each subscale were selected to cover a wide range of traditionally stereotypical items as well as potentially desirable or attractive items (Liben & Bigler, 2002). To measure validity, Liben and Bigler had 120 college students rate the extent to which each item is viewed as being culturally stereotyped as masculine or feminine (specific to the United States), and desirable.

Occupations: self preferences. To measure gender-typed attitudes regarding occupations preferred for the self, an adapted long version of the OAT-PM (i.e., occupations; personal measure) subscale was utilized. Liben and Bigler’s original version of the OAT-PM included 80

occupation items (20 feminine items, 52 masculine items, 8 neutral items). The adapted QAT-PM subscale used in the current study listed 70 occupation items (18 feminine items, 45 masculine items, 7 neutral items). Items were selected from the original version of the QAT-PM to represent careers that are related to the fields of English and math (see Appendix A for a comparison between the original version OAT and the adapted version utilized in the current study). The instructions for the QAT-PM ask participants to indicate which occupations they themselves would want to hold by rating each occupation on a numerical scale (1 = “*not at all*” to 4 = “*very much*”). An example of a feminine item is “How much would you want to be a nurse?” An example of a masculine item is “How much do you want to be a lawyer?” Separate scores were computed for feminine and masculine items. Scores for feminine items ($M = 1.88$, $SD = .55$, range = 1.00 to 4.00) were computed by adding up the number of points for feminine items and dividing by the total number of feminine items. Scores for masculine items ($M = 1.80$, $SD = .48$, range = 1.00 to 4.00) were computed by adding up the number of points for masculine items and dividing by the total number of masculine items. Higher scores indicated a greater preference for feminine or masculine occupations. In the present study, the Cronbach’s alpha for the QAT-PM subscale was .90 for feminine items and .95 for masculine items (Liben & Bigler, 2002). In Liben and Bigler’s (2002) study, the reported Cronbach’s alpha for the QAT-PM subscale was .87 for feminine items and .94 for masculine items.

Occupations: others. To measure gender-typed attitudes regarding the occupations appropriate for others (i.e., men and women in general), an adapted long version of the QAT-AM (i.e., occupations; attitudes measure) was used. The QAT-AM utilized in this study listed 70 occupation choices that were identical to those listed on the QAT-PM (i.e., the self-preference subscale; see Appendix A). The instructions for the QAT-AM ask participants to indicate

whether they think each occupation should be held by “*only men*”, or “*mostly men, some women*,” or “*both men and women*,” or “*mostly women, some men*,” or “*only women*.” An example item is “Who should be an engineer?” For the ANOVA analysis conducted in this study, separate scores were computed for feminine and masculine items. Proportion scores for feminine items were computed by adding up the number of answers given as “both men and women” on feminine items ($M = .54$, $SD = .26$, range = .00 to 1.00) and dividing by the total number of feminine items. Proportion scores for masculine items were computed by adding up the number of answers given as “both men and women” on masculine items ($M = .69$, $SD = .21$, range = .04 to 1.00) and dividing by the total number of masculine items. For the mediation analyses (see Results section), responses of “both men and women” were computed together for both feminine and masculine items. For both analyses, higher scores indicated a more flexible (i.e., less gender-typed) attitude about the occupations that are appropriate for others (i.e., indicating that both men and women could hold a specific occupation, rather than stating that only men or only women should hold that occupation, resulted in a higher flexibility score). Cronbach’s alpha for feminine items was .90 and .94 for masculine items. Liben and Bigler (2002) reported that the Cronbach’s alpha was .89 for feminine items and .91 for masculine items. When the feminine and masculine items were combined for the purposes of the mediations analyses, Cronbach’s alpha was .82.

Activities: self preferences. Liben and Bigler’s (2002) short version of the OAT-PM (i.e., activities; personal measure) subscale was adapted and employed in the current study to examine gender-typed attitudes regarding activities preferred for the self. This subscale consisted of 25 items (8 feminine, 11 masculine; 6 neutral) selected from Liben and Bigler’s (2002) original long version of the subscale as well as two items that were included for the purposes of the current

study (see Appendix A). The intended focus of the included items was to assess activities potentially related to academic contexts and related skills (e.g., designing a computer program and the context of math class). The instructions for the OAT-PM ask participants to indicate which activities they themselves would prefer to do in their free time by rating each activity on a numerical scale (1 = “not at all” to 4 = “very much”). An example of a feminine item is “how often do you talk on the phone?” An example of a masculine item is “how often do you shoot pool?” Separate scores were computed for feminine and masculine items. Scores were computed by totaling the number of points for feminine ($M = 2.37$, $SD = .54$, range = 1.25 to 4.00) and masculine items ($M = 1.77$, $SD = .44$, range = 1.00 to 4.00) respectively and dividing by the total number of items for each. Higher scores indicated a greater preference for feminine or masculine activities. Cronbach’s alpha for this subscale of the OAT-PM was .76 for feminine items and .77 for masculine items. Liben and Bigler (2002) reported that Cronbach’s alpha for the OAT-PM subscale was .81 for feminine items and .75 for masculine items. When items that were adapted for the purposes of the current study were removed from reliability analyses Cronbach’s Alpha was .70 for feminine items and .74 for masculine items. A previous study (see Signorella & Frieze, 2008) that utilized Liben and Bigler’s (2002) occupations, activities, and traits scale for children (i.e., the COAT) reported the reliability of the activities subscale to be .76 for feminine items and .85 for masculine items.

Activities: others. To measure gender-typed attitudes regarding the activities viewed as appropriate for others (i.e., men and women in general), an adapted long version of the OAT-AM (i.e., activities; attitudes measure) was used. The OAT-AM utilized in this study listed 25 activities that were identical to those listed on the OAT-PM (i.e., the self preference subscale; see Appendix A). The instructions for the OAT-AM ask participants to indicate whether they

thought activities should be done by “*only men*”, or “*mostly men, some women,*” or “*both men and women,*” or “*mostly women, some men,*” or “*only women.*” An example item is “who should wash clothes?” For this subscale, feminine and masculine items were computed together (for the purposes of mediation analyses). Scores were computed as the proportion of answers given as “both men and women” ($M = .70$, $SD = .25$, range = .00 to 1.00). Higher scores indicated a more flexible attitude about the activities that are appropriate for others. Cronbach’s alpha for this subscale of the OAT-AM was .61 for feminine items and .65 for masculine items. When items that were adapted for the purposes of the current study were removed from reliability analyses Cronbach’s Alpha was .61 for feminine items and .66 for masculine items. Liben and Bigler (2002) reported that Cronbach’s alpha was .87 for feminine items and .89 for masculine items. When Signorella and Frieze (2008) utilized the COAT (Liben & Bigler, 2002) to investigate attitudes about other’s activities they found Cronbach’s alpha to be .88 for feminine items and .85 for feminine items.

Demographic Questionnaire. Participants were asked to complete a demographics questionnaire that included questions about their sex, age, race, etc. (see Appendix A).

Gender-typed personality traits. The Personal Attributes Questionnaire (PAQ; Spence et al., 1975) was used to assess gender-typed personality traits. On this measure, expressive or feminine traits were assessed by eight items (e.g., very rough vs. very gentle) and instrumental or masculine traits were also assessed by eight items (e.g., not at all competitive vs. very competitive). Each item was rated on a 5-point numerical scale (e.g., 1 = *not at all rough*, 5 = *very rough*) that was customized for the given trait. Items that assessed androgyny were answered by participants but were not utilized by the current study. As reported by Spence et al., the instrumental scale on the PAQ had a coefficient alpha of .85 and the expressive scale had a

coefficient alpha of .82 (Spence et al.). In the current study, the instrumental scale on the PAQ had a coefficient alpha of .75. The expressive scale had a coefficient alpha of .81. Higher scores on this questionnaire indicated a greater endorsement of instrumental and expressive traits respectively. Each participant had an average score for expressivity ($M = 3.99$, $SD = .53$, range = 2.38 to 5.00) and instrumentality ($M = 3.69$, $SD = .59$, range = 1.43 to 5.00).

Results

Data Screening

Missing data. The initial sample for this study included 334 participants. Participants were excluded from the following analyses if they failed to give certain demographic information. Specifically, stipulations for the conducted study required that participants be between 18-23 years of age. Furthermore, because “*participant sex*” was an integral variable in the following analyses, participants were required to report their sex. Of the initial sample, 42 (12.6 %) participants were excluded from the analyses because they did not report their age or sex (29, or 8.7 %, of participants, did not complete the second part of the study, which included the Demographic questionnaire). Also, two (.6 %) participants reported age their ages as 24 years and were excluded from the study. Furthermore, 3 (.9 %) participants were excluded because they reported their sex as male or female but then incorrectly completed a questionnaire designated for the other sex. Finally, because stipulations for the current study required that participants not be married, two (.6 %) cases were dropped because marital status was not reported on and one (.3 %) case was dropped because they reported being married. Thus, from the initial sample, 284 cases were left with mostly complete data.

A small percentage of data was missing from each measure used in the present study. For each measurement scale, the percentage of missing data was computed by adding up the number

of missing cases for all of the items on that measure. Missing data was handled in two ways- on open-ended measures (open-ended friend nomination, context-specific nominations) participants were excluded if they did not list the sex of at least one friend/ peer (see specific analyses below for further discussion). On measures of continuous data (i.e., on the OAT and PAQ), missing values were replaced with the mean score of all of the other participants' values given for the item in question (i.e., sample mean replacement; described by George & Mallery, 2008; also see Tabachnick & Fidell, 2007). Specifically, mean replacement was used for the 10 participants who did not respond to approximately one item on the QOAT-PM (occupations; personal measure), the 12 participants who did not respond to one item on the QOAT-AM (occupations; attitudes about others measure), the 4 participants who did not respond to one item on the OAT-PM (activities; personal measure), and the 4 participants who did not respond to one item on the OAT-AM (activities; attitudes about others measure). Mean replacement was also used for the 2 participants who did not respond to one item on the PAQ. Overall, 32 non-responses were found within the continuous data collected. George and Mallery have suggested that using the sample mean procedure to replace a small number of values should not overtly influence the results of subsequent analyses.

Data Inspection. The data was inspected to examine the possibility of participants engaging in random responding. Specifically, the duration of time it took each participant to complete the study was examined. Each participant's pattern of responses was also inspected to attempt to distinguish randomly entered responses (i.e., did the participant enter the same response for each question). No participants were excluded as a result of manipulation checks.

Outliers. In the current study, statistical outliers in the data were identified by creating box-plots for each variable. Statistical outliers for each variable were recoded to be two standard deviations above or below the mean (Field, 2009; Tabachnick & Fidell, 2007). Specifically, one

outlier was found for the variable of “*proportion of same-sex friends*” (as measured by the open-ended friend nomination), 15 outliers were found for the context-specific peer preference variables (hanging-out: 5, English: 5, math:5), 4 outliers were for the scores on the OAT-PM (occupations; personal measure), 2 outliers were found for the scores on the OAT-AM (occupations; attitudes measures), 7 outliers were found for the scores on the OAT-PM (activities, personal measure), and 3 outliers were for the scores on the PAQ.

Normality. To investigate the normality of the data, z-scores for skewness and kurtosis were computed for each variable. There were three variables that exhibited significant positive skew: “*self-preference for masculine occupations*” ($z = 3.58, p < .01$), “*attitudes about activities appropriate for others*” ($z = 2.99, p < .01$), and “*instrumentality*” ($z = 3.03, p < .01$). Additionally, four variables exhibited positive kurtosis: “*self-preference for feminine occupations*” ($z = 3.22, p < .01$), “*attitudes about activities appropriate for others*” ($z = 2.70, p < .01$), “*proportions of same-sex peers in the math class context*” ($z = 2.63, p < .01$), “*proportions of same-sex peers in the English class context*” ($z = 2.63, p < .01$). As discussed by Field (2009), even small deviations from normality can lead to finding significant skew in samples that are over 200. In large samples, the finding that a variable has significant positive skew may be somewhat arbitrary and Field argues that it is more important to take the shape of the distribution and the value of the skewness statistic into consideration rather than the significance of the z-score. Given the sample size of the current study and the relatively small skewness statistics, transformations of the data were not thought to be necessary.

Sex Segregation

For the following analyses examining sex segregation in young adulthood, 1 (.3 %) participant was excluded because they did not answer or declined to list the sex of any of their closest friends on the open-ended friend nomination measure (i.e., participants were allowed to

decline to give the name of each friend, however, they had to provide the sex of each friend). Furthermore, 36 participants listed their romantic partners in the nominations of close friends (despite the instructions given not to), however, these participants were not excluded because the names of the romantic partners given appeared to be of the other-sex (i.e., were not counted in the participant's same-sex friend proportion score).

Participants were instructed to list up to eight friends and most participants listed eight friends. However, 13 women listed less than eight friends. Specifically, five women listed seven friends, four listed six friends, one listed five friends, one listed four friends, and two listed three friends. In comparison, only two men listed less than eight friends (these participants both listed five friends).

To investigate Hypothesis 1, that young adults' friendships would be sex segregated, a one-sample t-test was conducted. This analysis was conducted to determine if young adults' number of reported sex-segregated friendships, as measured by the open-ended friend nomination, differed significantly than what would be expected by chance. By chance, we would expect to find that half of young adults' friendships were same-sex peers. Thus, the analysis compared the proportion of same-sex friends listed by young adults to .50.

The results supported the first hypothesis. The proportion of same-sex friends nominated ($M = .71$, $SD = .18$) by young adults was significantly greater than what would be expected by chance, $t(1, 282) = 18.91$, $p < .001$, $r^2 = .75$. Women nominated significantly more same-sex friends ($M = .68$, $SD = .18$, Range = .25-1.00) than would be expected by chance, $t(1,176) = 13.24$, $p < .001$, $r^2 = .71$. Men also nominated significantly more same-sex friends ($M = .75$, $SD = .18$, Range = .38-1.00) than would be expected by chance, $t(1,106) = 14.26$, $p < .001$, $r^2 = .81$.

A one-way ANOVA was conducted to examine potential gender differences in the proportion of sex-segregation within young adults' friendships. In this analysis, the independent variable was "*participant sex*" and the dependent variable was the "*proportion of same-sex peers*," as measured by the open-ended friend nomination. It was found that men did differ significantly from women in the proportion of same-sex friends they nominated (see Figure 1). Specifically, men were more likely to list same-sex peers when compared to women (see Figure 1).

Sex Segregation and Context

Each of the three context-specific preferred peer nomination measures (English, math, "hanging out") had missing data on a small percentage of items. For each context-specific nomination measure, participants were excluded if they did not provide the sex of at least one of the peers they wanted to work/hang out with (i.e., the participant was allowed to decline to provide each peer's name but had to include the peer's sex to be included in the following analysis. The participant was allowed to list up to five peers but had to give the sex of at least one peer) or if they did not provide a valid answer. Specifically, 4 (1.2 %) cases in the English class context, 4 (1.2 %) additional cases in the math class context, and 1 (.3 %) additional case in the "hanging out" context were excluded from the following analysis.

To address the second hypothesis, that peer preferences in the school context would follow stereotypes (i.e., women are viewed as being better at English, men are viewed as being better at math) whereas the "hanging-out" context would not, a 2 X 3 Mixed-model ANOVA was conducted. The between-subjects factor was "*participant sex*" (male, female), the within-subjects variable was "*context*" ("hanging out," English class, math class), and the dependent variable was the "*proportion of same sex peers listed*" as measured by the context-specific

preferred peer nomination measures. An examination of Mauchly's test of sphericity indicated that a violation of sphericity had occurred during this analysis and thus the Greenhouse-Geisser correction was used. A main effect of context was found such that the proportion of same-sex peers nominated was greater in the hanging out context than in English class and math class (see Table 2). A main effect of sex was not found (see Table 2). The main effect of context was modified by an interaction between context and sex (see Table 2). To further investigate this interaction, simple effects were examined. A simple effect of sex was found for the hanging out context, but not in either of the two school contexts (see Table 2). Specifically, when specifying peers to hang out with, men were more likely to select same-sex peers to hang out with than were women (see Table 2). Contrary to our hypothesis, in the English and math classroom contexts, it appeared that women and men both preferred same-sex peers over other-sex peers to work with.

Gender-typed Attitudes about Occupations

Occupations: self-preference. To address Hypothesis 3a, that young adults would have gender-typed personal preferences for occupations, a 2 X 2 mixed-model ANOVA was conducted. The within-subjects factor was "*occupation gender*" (masculine, feminine), the between-subjects factor was "*participant sex*" (male, female), and the dependent variable was "*self-preference*" as measured by the QAT-PM (occupations; personal measure). The main effect of sex was significant and was modified by an interaction with occupation gender (see Figure 2). Follow-up analyses indicated women were more likely than men to indicate a personal preference for stereotypically feminine occupations (see Figure 2). Men were more likely than women to personally prefer a stereotypically masculine occupation (see Figure 2).

Occupations: others. To address Hypothesis 3b, that young adults would have gender-typed attitudes about the occupations that are viewed as appropriate for others, and Hypothesis

3c, that women would have more flexible attitudes than men about others, a 2 X 2 mixed-model ANOVA was conducted. The within-subjects factor was “*occupation gender*” (masculine, feminine), the between-subjects factor was “*participant sex*” (male, female) and the dependent variable was “*flexibility*” (i.e., stating that both men and women could hold an occupation) as measured by the OAT-AM. The main effect of occupation gender was significant (see Figure 3). Both men and women rated stereotypically masculine occupations as more appropriate for both men and women than stereotypically feminine occupations (see Figure 3). Contrary to Hypothesis 3c, however, the main effect of sex was non-significant.

Sex segregation and Gender-typed Attitudes about Occupations

Mediation analyses were originally proposed to examine the association between sex segregation and gender-typed attitudes about occupations by investigating gender-typed personality traits (expressivity, instrumentality) and gender-typed activity preferences as mediators. To investigate these associations, Baron and Kenny’s (1986) requirements for mediation were followed. Because of the unequal number of women ($N = 186$) and men ($N = 113$) in the sample, separate mediation analyses for men and women were planned. Specifically, the associations between women’s sex-segregated friendships and gender-typed attitudes about occupations were examined. The mediators considered were expressivity and preferences for feminine activities. Additionally, the associations between men’s sex-segregated friendships and gender-typed attitudes about occupations were examined. The mediators considered were instrumentality and preferences for masculine activities. However, an examination of the correlations between the variables to be included in the mediation models indicated that, for women, having sex-segregated friends was not related to the mediators of expressivity or preferences for feminine activities. Furthermore, women’s sex-segregated friendships were not

found to be related to self-preferences for feminine occupations or attitudes about which occupations are appropriate for both men and women or (see Table 3). Additionally, men's sex-segregated friendships were not found to be related to the mediators of instrumentality or preferences for masculine activities. Furthermore, for men, having sex-segregated friends was negatively correlated to self-preferences for masculine occupations (see Table 3). For women, given that correlations between sex-segregated friendships and preferences for feminine occupations were non-significant, requirements for mediation were not met and the originally proposed mediation analyses were not conducted. For men, the direction of the relation between sex segregation and self-preferences for masculine occupations was not in the predicted direction. Thus, the originally proposed mediation analysis was untenable for men.

Further examination of the correlations amongst variables indicated that, for women, having a high number of sex-segregated friendships was negatively correlated with a preference for masculine activities (see Table 3). Correlations also indicated that, for men, having sex-segregated friendships is negatively correlated with a preference for feminine occupations such that men who have more sex-segregated friendships have less of a preference for feminine occupations (see Table 3). Additionally, men who have sex-segregated friendships also indicated less of a preference for feminine activities.

Exploratory Analyses: Gender-typed Personality Traits

Additional analyses were conducted to examine the mean scores of men and women for the gender-typed personality traits of expressivity and instrumentality. Based on previous research, it would be expected that men would score higher than women on instrumental traits because these traits are typically thought to be associated with masculinity (e.g., being assertive, being aggressive). For women, a higher score on expressive traits would be expected because

expressive traits are typically thought to be associated with femininity (e.g., being helpful, being emotional). Participants' scores for gender-typed personality traits were assessed with the PAQ (Spence et al., 1975) and separate scores for instrumentality and expressivity were computed for each participant. To determine if men and women differed significantly in their scores on instrumentality and expressivity, one-way ANOVAs were conducted. In these analyses, the independent variable was "*participant sex*" and the dependent variables were the participant's "*instrumentality score*" and "*expressivity score*." Contrary to expectations, it was found that men and women did not differ significantly in their endorsement of instrumental traits, $F(1, 282) = .00, n.s., r^2 = .00$. In line with expectations, it was found that men and women did differ significantly in their endorsement of expressive traits, $F(1, 282) = 32.59, p < .001, r^2 = .33$. Specifically, women ($M = 4.12, SD = .50$) were more likely than men ($M = 3.77, SD = .50$) to endorse expressive traits.

Exploratory Analyses: Gender-typed activity preferences

Exploratory analyses were also conducted to compare the means scores of men's and women's gender-typed activity preferences. Based on previous research, it was expected that women would prefer activities viewed as stereotypically feminine (e.g., going shopping) and that men would prefer activities viewed as stereotypically masculine (e.g., playing video games). Participants' gender-typed activity preferences were assessed using Liben and Bigler's (2002) OAT measure and participants were given a score for feminine activity preferences and masculine activity preferences respectively. To determine if men and women differed significantly in their scores on activity preferences, one-way ANOVAs were conducted. In these analyses, "*participant sex*" was the independent variable and the dependent variables were "*feminine activity preferences*" and "*masculine activity preferences*." As expected, a significant

gender difference was found for preferences for feminine activities, $F(1, 282) = 139.12, p < .001, r^2 = .58$. Specifically, it was found that women ($M = 2.6, SD = .41$) reported more of a preference for feminine activities than did men ($M = 1.98, SD = .48$). Also in line with expectations, a significant gender difference was found for preferences for masculine activities, $F(1, 282) = 27.80, p < .001, r^2 = .30$. Specifically, it was found that men ($M = 1.90, SD = .34$) reported more of a preference for masculine activities than did women ($M = 1.67, SD = .38$).

Exploratory Analyses: Mediation

Exploratory analyses were conducted to investigate the association between sex and gender-typed attitudes about occupations. These analyses stemmed from the previously conducted mixed-model ANOVA finding gender differences in self-preferences for occupations (see above findings for Hypothesis 3a; i.e., men were found to prefer masculine careers, women were found to prefer feminine careers). Exploratory mediation analyses investigated gender-typed personality traits (instrumentality, expressivity) as a mediator in the association between sex and gender-typed self-preferences for occupations (i.e., preferring occupations viewed to be stereotypical for one's gender) by following the requirements of mediation as stipulated by Baron and Kenny (1986). However, the requirements of mediation were not met and gender-typed personality traits were not found to mediate the association between sex and gender-typed self-preferences for occupations.

Exploratory mediation models also investigated activity preferences as a mediator in the association between sex and gender-typed self-preferences for occupations. Because feminine and masculine items are scored separately on all of the OAT-PM subscales (including activity preferences), the variable of "*feminine activities*" included only those items that were designated as feminine (e.g., read romance novels) within the activity preference subscale of the OAT-PM

(personal measure). The variable of “*masculine activities*” included only those items that were designated as masculine (e.g., ride a motorcycle) within the activity preference subscale of the OAT-PM (personal measure).

Attitudes about occupations for the self: feminine activities. To determine if preferences for feminine activities would mediate the association between sex and self-preferences for feminine occupations, a series of regressions were conducted. First, the predictor variable (sex) was regressed on the mediator variable (preferences for feminine activities). The results indicated that the variable of feminine activity preferences was related to sex such that women indicated more of a preference than men for feminine activities (see Table 4). Second, sex was regressed on the criterion variable (preferences for feminine occupations) and the results showed that these two variables were related such that women reported more of a preference for feminine occupations than did men (see Table 4). To meet Baron and Kenny’s (1986) third requirement to establish mediation, that the mediator affects the criterion variable when the predictor variable is controlled for, self-preferences for feminine occupations was regressed on sex and activity preferences. Sex was entered in step 1 and preferences for feminine activities was entered in step 2. The results showed that when preferences for feminine activities was entered into the model, the association between sex and self-preferences for feminine occupations decreased (see Table 4). The association between the two variables was still significant, however, suggesting that preferences for feminine activities only partially mediates the relation between sex and self-preferences for feminine occupations.

Occupations for the self: masculine activities. To determine if a preference for masculine activities mediated the association between sex and self-preferences for masculine occupations, a series of regressions were conducted. First, the predictor variable (sex) was regressed on the

mediator variable (preferences for masculine activities). The results indicated that men reported more of a preference for masculine activities as compared to women (see Table 5). Second, preferences for masculine occupations (the criterion variable) was regressed on sex. The results showed that men indicated more of preference for masculine occupations as compared to women (see Table 5). Third, self-preferences for masculine occupations was regressed on sex and masculine activity preferences. Sex was entered in step 1 and activity preferences was entered in step 2. The results showed that when preferences for masculine activities was entered into the model, the association between sex and self-preferences for masculine occupations decreased (see Table 5). The association between sex and self-preferences for masculine occupations remained significant, however, suggesting that activity preferences only partially mediated the association.

Discussion

The current study contributes to the existing literature by investigating sex segregation in young adults' friendships, an area that has rarely been investigated. The findings indicate that young adults do have a greater proportion of same-sex friends in comparison to other-sex peers. The present study is consistent with the two studies that do exist on this topic (Reeder, 2003; Rose, 1985) and extends research that has observed sex segregation in childhood (Maccoby & Jacklin, 1987; Thorne, 1986) and adolescence (Mehta & Strough, in press; Strough & Covatto, 2002). The findings of the current study also compliment existing literature suggesting that sex segregation is a phenomenon that occurs across the life span (Mehta & Strough, 2009). The contextual specificity of young adults' peer nominations was also examined and the findings support previous research (Strough & Covatto) that suggests that the context of an interaction may influence young adults' preferences for same-sex peers. Overall, the findings of the current

study suggest that sex segregation in young adults' friendships and peer preferences is an area that may warrant future research.

The current study also investigated young adults' gender-typed personal preferences for occupations. The findings indicate that young adults do prefer occupations that are viewed as appropriate for their own gender. The current study extends previous research which has utilized the OAT (Liben & Bigler, 2002) to investigate gender-typed self-preferences for occupations. Furthermore, the findings of the current study are in accord with previous research that has found that young adults prefer gender-typed occupations (Liben & Bigler, 2002; Messersmith, Garrett, Davis-Kean, Malanchuk, & Eccles, 2008). The current study also examined young adults' gender-typed attitudes about occupations that are appropriate for others. The findings indicate that young adults do have gender-typed attitudes about the occupations that are viewed as appropriate for others. Specifically, young adults (both men and women) view women holding stereotypically masculine jobs as more appropriate than men holding stereotypically feminine jobs. Taken together, the findings of this study suggest that despite men and women reporting that it was acceptable for women to hold masculine occupations, women still prefer to hold feminine occupations.

In the present study, the association between sex segregation and gender-typed attitudes was investigated. It was found that gender-typed personality traits (expressivity, instrumentality) and activity preferences were not significant mediators of the relation. Correlations were examined and it was found that men with a high number of sex-segregated friendships reported less of a preference for feminine occupations and activities (see Table 3). Women with a high number of sex-segregated friendships indicated less of a preference for masculine activities (see Table 3). The association between sex and gender-typed attitudes was also investigated. Partial

mediation was found in this association when preferences for masculine activities and preferences for feminine activities were introduced into the model. These findings suggest that there may be other variables that explain the endorsement of gender-typed attitudes besides sex. Specifically, being a man or a woman may not be the only factor involved in the development of gender-typed attitudes. Other variables, such as preferring certain activities may also predict the endorsement of gender-typed activities.

Sex Segregation in Young Adulthood

In support of Hypothesis 1, the findings of the current study suggest that young adults' friendships are sex segregated. This finding extends research that has observed sex segregation in adolescents' friendships. As previously discussed, same-sex friendships do not decrease in adolescence, despite the observation that the number of other-sex friends increases (Klieber et al., 1986) with the occurrence of dating and the formation of heterosexual romantic relationships (Bukowski et al., 1999; Connolly et al. 2004; Darling et al., 1999). Similarly, sex segregation appears to continue in young adulthood despite the common occurrence of heterosexual romantic relationships (Surra, et al., 2006) and the facilitation of interactions with other-sex peers that age-related contexts, such as college, may offer (Mehta & Strough, 2009).

The findings of the present study support the extant literature that suggests that young adults prefer same-sex peers over other-sex peers (Monsour, 2002) for close friendships (Barbee, et al., 1990; Reeder, 2003). Specifically, when asked to list their closest friends, young adults were more likely to nominate same-sex peers than other-sex peers. This finding compliments previous research that has found that young adults appear to be more likely to disclose personal, intimate information with close same-sex friends over other-sex friends (Barbee et al., 1990), even though males do disclose some personal information to their female friends. Prior research

suggests that young adults may feel closer to same-sex friends because these relationships may be more stable than those with other-sex peers (Lansford, Sherman, & Antonucci, 1998).

The findings of the conducted study also suggest that a gender difference exists in the proportion of same-sex friends that young adults report having. Specifically, men, in comparison to women, reported a higher proportion of same-sex individuals when asked to nominate their closest friends. More research is needed to examine what the potential cause of this gender difference in sex segregation might be. One possible reason why men have a greater proportion of same-sex friends may be that men are uncomfortable with the high level of disclosure that typically takes place in friendships with females. Even though research has found that men do share personal information with their same-sex friends (Barbee et al., 1990), the level of disclosure in these relationships appears to be less as compared to female same-sex friendships (Dindia & Allen, 1992). Perhaps men prefer same-sex friendships because they feel that they will be required to disclose less personal information in these friendships as compared to other-sex friendships. Another reason that could contribute to men's high proportion of same-sex friends may be a concern with social desirability. Reeder's (2003) findings suggested that men who endorse feminine personality traits, as compared to men who endorse masculine personality traits, were more likely to have other-sex friendships. Perhaps men feel that having a lot of other-sex friends would reflect on their masculinity and make them appear more feminine.

Contextual Factors of Sex Segregation

The hypothesis that young adults would have more sex-segregated peer preferences in the academic context as compared to the hanging-out context was not supported by the results of the current study. Rather the opposite was found--young adults reported having a greater preference for same-sex peers in the hanging-out context as compared to the academic contexts. As

previously discussed, young adults' friendships were sex segregated. Specifically, when asked to list up to eight friends, young adults reported a greater number of same-sex friends over other-sex friends. Thus, young adults' preference for same-sex peers in the hanging out context appears to mirror the representation of same- and other-sex peers in their larger group of friends. These findings are consistent with previous research indicating that young adult men and women do appear choose to spend time with same-sex peers over other-sex peers (Reeder, 2003). The preference to hang out with same-sex peers seems to occur despite factors (e.g., the commonality of heterosexual romantic relationships) in young adulthood that may encourage interactions with other-sex peers. Despite the lack of support for the original hypothesis, the findings of the current study suggest that contextual factors do play a role in sex segregation during young adulthood. The findings extend Strough and Covatto's (2002) research on adolescents which indicated that sex segregation is more pronounced in academic contexts. The findings of the present study suggest that in early adulthood, sex segregation is more pronounced when hanging out. Future research could be directed toward understanding developmental shifts from adolescence through early adulthood in relative preferences for same and other sex peers when hanging out. Men were more likely than women to indicate a preference for hanging out with same-sex peers; this gender difference was less pronounced in academic contexts (English, math). The gender difference mirrors the results described above indicating that men's friendships are more sex segregated than women's friendships. The finding that men preferred to hang out more with same-sex peers in comparison to other-sex peers may offer further evidence that sex segregation exists to a greater extent in men's friendships as compared to women's friendships.

Additionally, and in contrast to our hypothesis, young adults' peer preferences in the academic context (i.e., English class, math class) were not found to conform to stereotypes about women and men. Rather, the findings indicated that young adults' peer preferences were similar in each of the two academic contexts. Instead of matching the stereotype of the academic context, the majority of the peers young adults chose to work with were of the same-sex regardless of the academic subject matter in the context. This finding supports and extends previous research on adolescents (Strough & Covatto, 2002) that has found that sex segregation exists in the academic context. Young adults may prefer to work with same-sex peers in the academic context because young adults appear to have more same-sex friends as compared to other-sex friends (Reeder, 2003). Perhaps young adults are more comfortable working with individuals they already know and, thus, choose to work with their friends who are of the same-sex. This issue can be addressed with future research that utilizes data from the current project that were not included in this report that asked participants to state the reason why they selected a given partner.

The lack of difference in preferences for same-sex peers as a function of stereotypes associated with the academic context may also reflect a decline in the once popular belief that men are better than women at math but women are better than men at certain subjects, such as English (Else-Quest et al., 2010). If young adults now hold the belief that both women and men can excel in math, then their beliefs would be consistent with a substantial amount of research finding evidence that there may be many gender similarities in mathematical abilities (Else-Quest et al; Hyde, Fennema, & Lamon, 1990).

Gender-typed Attitudes about Occupations

Occupations: self-preference. The current study investigated young adults' gender-typed attitudes about occupations that are personally preferred. In support of Hypothesis 3a, the findings of the current study suggest that young adults do prefer occupations that are viewed as appropriate for their own gender. Specifically, men prefer jobs viewed as stereotypically masculine (e.g., engineer) over jobs that are stereotypically feminine (e.g., social worker). Women prefer stereotypically feminine jobs to masculine jobs. This finding extends Liben and Bigler's (2002) study that utilized a refined version of the OAT. The finding that young adults do prefer gender-typed occupations is also in accord with previous research on the topic (see Messersmith et al., 2008).

The finding that young adults prefer gender-typed occupations may have implications for understanding the persistence of sex segregation within occupations. Specifically, the lack of women in STEM (science, technology, engineering, and math) careers (Betz & Hackett, 1981; Bystydzienski, 2009) and the shortage of men in other professional fields, such as education (Reeder, 2003; U.S. Department of Labor, 2007) may be related to gender-typed personal preferences. Research suggests that women and men may only apply for jobs that are viewed as stereotypical for one's gender (Hanson & Pratt, 1995). Many occupations are considered to be "women's jobs" or "men's jobs" (pp. 229, Maccoby, 1998), and these designations may act as deterrents to men and women when they are applying for potential jobs. Furthermore, the findings of the current study build on extant career development theories, which propose that individuals' beliefs and attitudes play a role in career selection (Messersmith et al., 2008).

Additionally, sex segregation within occupations is related to several important issues that may have negative implications for women. For example, women, in comparison to men, typically hold jobs that offer lower wages, few advancement opportunities, inferior health

benefits, and require less skill (Meece, 2006). Currently, employed women do make approximately 77 cents per every dollar than men make (Travis, Gross, & Johnson, 2009). Taken together, this research suggests that the occupations that many women hold (and the feminine occupations that young adult women indicated a preference for in the current study) may make them unable to independently support themselves or their families (Meece).

As previously discussed, sex segregation in occupations may stem from sex segregation within academic settings. Throughout childhood and adolescence, sex segregation does exist within the school context. The results of the current study suggest that sex segregation in the academic context does extend into young adulthood (i.e., the majority of peers young adults chose to work with in English and math classes were of the same-sex). Previous research has also found sex segregation in college majors (England & Li, 2006; Wilson & Boldizar, 1990), with both men and women choosing majors that are considered to be appropriate for their respective genders. Academia (both at the secondary and post-secondary levels) may filter men and women into stereotypically gender-appropriate careers (e.g., STEM etc.) (Sells, 1980) and thus sex segregation and gender inequality in the workplace may be perpetuated.

Occupations: others. When considering young adults' attitudes about occupations appropriate for others, the finding of the current study support Hypothesis 3b, that young adults would have gender-typed attitudes about the occupations appropriate for others. Specifically, it was found that both men and women view women holding stereotypically masculine occupations as more appropriate than men holding stereotypically feminine occupations. This finding seems to be consistent with current cultural standards that imply that it is more acceptable for girls and women to engage in stereotypically masculine activities (e.g., being a "tomboy," playing sports) than it is for boys and men to engage in stereotypically feminine activities (e.g., playing with

dolls, being a homemaker) (Schope & Eliason, 2004). The finding of the current study may also reflect changes in opportunities and roles for women, but not men, as a result of the second wave of the women's movement (see Stewart & Healy, 1989).

Occupations: self-preferences and others. Despite the finding that men and women do appear to think that it is acceptable for women to hold stereotypically masculine occupations; women still prefer to pursue stereotypically feminine careers. The finding that women still prefer stereotypically feminine careers also supports existing literature suggesting that women often choose not to pursue stereotypically masculine careers because they perceive such careers to be male-oriented (Messersmith et al., 2008). This finding could have important implications for the shortage of women who go into STEM careers and other male-dominated fields (e.g., construction).

Sex Segregation & Gender-typed Attitudes about Occupations: Mediation

It was originally proposed to examine gender-typed personality traits (expressivity, instrumentality) and gender-typed activity preferences as mediators of the association between sex segregation and gender-typed attitudes about occupations. The rationale for these analyses included the concept that having sex-segregated friendships could be related to gender-typed attitudes about occupations, based on previous research suggesting that friends act as an agent of socialization for the development of gender-typed attitude (e.g., McHale et al., 2004). Additionally, it was hypothesized that an individual's endorsement of gender-typed personality traits and gender-typed activity preferences could aid in explaining the relation between sex segregation and gender-typed attitudes about occupations. However, because this association was not found to be significant, these mediation analyses were not conducted.

One reason why the proposed mediation analyses were not found to be significant may be that the current study investigated gender-typed personality traits and gender-typed activity preferences as variables potentially affecting the attitudes of young adults. However, because personality traits and activity preferences may be somewhat stable by young adulthood it may be more effective for future research to study how these variables affect the attitudes of younger age groups (e.g., children). Specifically, personality traits and activity preferences may be more malleable during the early periods of the life span and more easily influenced by the traits, attitudes, and preferences of friends.

Despite the lack of mediation found in the association between sex segregation and gender-typed attitudes, an inspection of the correlations amongst variables indicated that women with a high number of same-sex friends indicated less of a preference for masculine activities than women with a low number of same-sex friends. This finding extends existing literature (e.g., Leaper, 1994; Maccoby, 1990) suggesting that sex-segregated friendships facilitate the development of gender-typed activity preferences. This finding may indicate that women who have sex-segregated friendships also do not prefer activities that are not appropriate for their sex (i.e., a preference for gender-typed activities may be influenced by friendships). However, this finding may also suggest that a preference for gender-typed activities leads women to make friends with same-sex peers who are also engaging in those activities. The latter suggestion supports previous research that has suggested that friendship selection is based on similarities (Duck, 1994; Kubitschek & Hallinan, 1998; Newcomb, 1961). Future research should attempt to disentangle the relation between women's sex-segregated friendships and gender-typed activity preferences.

Correlations did indicate that, for men, sex segregation was related to gender-typed self-preferences for occupations. Specifically, men with a high number of same-sex friends indicated less of a preference for feminine occupations as compared to men with a low number of same-sex friends. This finding suggests that men's occupation preferences may be influenced by friendships (i.e., being friends with same-sex peers may influence the occupations that men prefer), which supports research suggesting that friends facilitate the development of gender-typed attitudes (e.g., McHale et al., 2004). However, this finding could also suggest that men with gender-typed occupation preferences may choose to be friends with same-sex peers. Perhaps, same-sex peers also share similar occupational preferences. Additionally, men with a high number of same-sex peers also preferred masculine activities more than men with low numbers of same-sex peers. This finding supports existing literature indicating that sex segregation and gender-typed activity preferences are related (Leaper, 1994; Maccoby, 1990). Similarly to women, men may choose activities based on the same-sex activities that their friends choose or men who choose gender-typed activities may come in contact with and/ or choose to develop more friendships with same-sex peers. This finding extends existing research suggesting that similarities are the basis for friend selection (Duck, 1994; Kubitschek & Hallinan, 1998; Newcomb, 1961).

Sex and Gender-typed Attitudes about Occupations: Exploratory Mediation Analyses

The results of exploratory mediation analyses indicated that feminine activity preferences partially mediated the association between sex and self-preferences for feminine occupations. Specifically, it was found that when preferences for feminine activities was entered into the model, the relation between sex and self-preferences for feminine occupations decreased. These findings suggest that among both men and women, a preference for engaging in feminine

activities is associated with reporting a personal preference for a career that is viewed as stereotypical for women. Perhaps, a preference for feminine activities facilitates the development of skills that are typically utilized in stereotypically feminine careers (e.g., listening to others feeling, being sympathetic). However, feminine activity preferences did not completely mediate the relation between sex and gender-typed attitudes about occupations -- sex was still a significant predictor of self-preferences for feminine occupations when activity preferences was entered into the model. More research is needed to investigate the mechanisms of the relation between sex and gender-typed attitudes about occupations. Factors in addition to self-preferences for feminine activities, such as parents' occupations (i.e., having a parent with an occupation that is not stereotypical for their gender, e.g., having a mother that is an engineer), may be important mediators to consider. For example, future research could examine how parents' occupations impact the occupations that individuals prefer for themselves.

Similar to the relation between activity preferences and attitudes about occupations found for feminine activities, exploratory mediation analyses indicated that masculine activity preferences partially mediated the relation between sex and self-preferences for masculine occupations. For both men and women, a preference for masculine activities was associated with preferences to hold an occupation that is stereotypically viewed as appropriate for men. Perhaps, engaging in masculine activities perpetuates the development of skills that are often used in stereotypically masculine occupations (e.g., being assertive, acting as a leader). However, because activity preferences only partially mediated the association between sex and preferences for masculine occupations, more research is needed to examine other potential mediators (e.g., parents' occupations, academic interests such as liking math and science). Thus, although men are relatively more likely than women to prefer stereotypically masculine occupations, a

preference for masculine activities may better predict the occupations that men choose. In addition, preferences for masculine activities may be one factor that is important for understanding women's selection of stereotypically masculine careers.

Gender Differences in Expressivity and Instrumentality

The findings of the current study indicate that a significant gender difference was found for expressivity, but not for instrumentality. Specifically, women were more likely than men to endorse expressive traits (e.g., being kind). This finding is in line with previous research that has found that women are more likely to endorse expressive traits that are associated with being feminine. Contrary to previous research, women did not differ significantly from men in their endorsement of instrumental traits (e.g., being assertive). This result may reflect changes in women's endorsements of instrumental traits (see Twenge, 1997). Perhaps because it is currently viewed as more acceptable for women to act in masculine ways (as compared to men acting in feminine ways; see Schope & Eliason, 2004) women have come to endorse instrumental traits as well as expressive traits. This supports Twenge's findings suggesting that over time women's endorsements of masculine traits have increased whereas men's endorsements of feminine traits have not. Future research should examine gender differences in the endorsement of gender-typed personality traits in young adulthood with more proportionate sample sizes because these differences may change over time and may be dependent on cohort (as suggested by Twenge).

Gender Differences in Activity Preferences

As expected based on previous research (see Maccoby, 1998; Mehta & Strough, 2009), gender differences were found in the types of activities men and women preferred. Specifically, it was found that women preferred activities viewed as stereotypically feminine (e.g., shopping) more than men did. Men preferred stereotypically masculine activities (e.g., playing video

games) more than women did. This finding extends research that has observed gender differences in activity preferences in earlier age periods (e.g., Liben & Bigler, 2002). Additionally, this finding also compliments previous literature that has suggested that young adult men and women do engage in disparate activities (Klonsky, 1985; Liben & Bigler; Maccoby; Mehta & Strough) and prefer activities that are gender-typed for their own sex (Liben & Bigler).

Limitations

Contrary to hypotheses, the findings indicated that the association between sex segregation and gender-typed attitudes about occupations was not significant. A limitation of the current study that could explain this lack of findings is the utilization of the adapted version of the OAT (Liben & Bigler, 2002). Although the internal consistency of the adapted version of the OAT was good (i.e., OA-T-PM: .90 for feminine items, .95 for masculine items; OA-T-AM: .90 for feminine items, .94 for masculine items; OA-T-PM: .76 for feminine items, .77 for masculine items; OA-T-AM: .61 for feminine items, .65 for masculine items), utilizing the original measure may have provided a more comprehensive assessment of the possible associations between activity preferences and attitudes about occupations.

Another limitation of the present study is that all of the measures utilized were self-report. Whereas some variables (e.g., attitudes about occupations) may be most appropriately or efficiently assessed by self-report questionnaires, other variables (e.g., peer nominations, activity preferences) may benefit from the use of a different type of measure (e.g., observation, etc).

Furthermore, accuracy of the information given by participants could have been affected by the use of self-report measures in that participants may not have correctly reported their own attitudes. Specifically, social desirability could have affected the responses participants gave to

certain self-report measures. For example, when responding to the QAT-AM, participants could have speculated that the measure was designed to assess gender-typed attitudes about occupations and answered the items in a socially acceptable manner. Specifically, participants may have responded that occupations were appropriate for “both men and women” even though this response did not reflect their actual attitudes.

An additional limitation of the current study is the sample utilized. Specifically, the sample reflects young adults enrolled in college only. Young adults who did not attend college were not included in the present study. This limitation could potentially limit the generalizability of the findings. Specifically, there may be many differences in the friendships and attitudes of young adults who pursue a college career and young adults who do not. For instance, young adults who have already transitioned into the workforce may have different attitudes about occupations in comparison to young adults who are still in school.

Lastly, another limitation of the present study was the non-experimental design employed. Specifically, data was only collected at one time and from one group of participants. Thus, age and cohort were confounded in this study. Due to this limitation, the interpretations that can be drawn from this study are somewhat restricted. Specifically, inferences about changes in behavior over time cannot be made (Baltes, Reese, & Nesselroade, 1988). And, as Stewart and Healy (1989) discussed, historical events such as the second wave of the women’s movement could cause cohort effects. Specifically, if young adults’ gender-typed attitudes about occupations were assessed prior to the second wave of the women’s movement the results could be significantly different as compared to these attitudes that were assessed after the movement (as was the case in this study).

Implications and Future Directions

The findings of the current study suggest that sex segregation does continue into young adulthood. This finding is consistent with previous research that also found that young adults have more same-sex friends than other-sex friends (Reeder, 2003; Rose, 1985). More research is needed, however, to investigate the potential causes and consequences of sex segregation in young adulthood (see Mehta & Strough, 2009).

Additionally, future research should examine gender differences in sex segregation during young adulthood. The current study found that men had a greater proportion of same-sex friends as compared to women; however, the reasons for this significant difference were discussed but not assessed by the current study. Future research should attempt to investigate why men, more than women, may prefer same-sex friends over other-sex friends.

One potential direction for future research is to examine sex segregation in the friendships of young adults who are not in the academic context. Although attending college is a popular choice today, many young adults still transition directly from high school into the workplace. Future research should investigate the existence of sex segregation in a broader sample of young adults.

More research is also needed to examine gender-typed attitudes about occupations in young adulthood and across the life span. Gender-typed attitudes about occupations may affect many decisions that individuals make, such as which courses to take in school, which major to pursue in college, and which occupation field to go into. Additionally, future research could examine variables that may be related to gender-typed attitudes about occupations. The current study examined how sex and sex segregation related to gender-typed attitudes about occupations. Prospective studies should attempt to identify other variables that may be related to gender-typed attitudes about occupations.

Conclusions

This study found that young adults have gender-typed attitudes about the occupations that are viewed as appropriate for men but not about the occupations that are viewed as appropriate for women. This disparity in attitudes for men and women may be a result of general changes in society's perceptions of the two sexes. Specifically, the second wave of the women's movement (see Stewart & Healy, 1989) has created more opportunities for women but not for men. However, the present study also found that even though young adults reported that it was acceptable for women to hold stereotypically masculine occupations, women still prefer to pursue stereotypically feminine occupations. Thus, it appears that many women are not taking advantage of the added opportunities that the women's movement has made available. This may aid in explaining the persistent lack of women in STEM careers and other male-oriented fields.

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Table 1

Demographic Characteristics of Participants (N=284)

Demographic	Categories	%
State of residency	West Virginia	52
	Pennsylvania	13.3
	New Jersey	9.8
	Virginia	6.3
	Maryland	3.2
	New York	2.5
	Ohio	2.5
	IL, IN, DE, CT, KY, MI	10.7
Mother's Education	Less than High School	1.4
	High School/GED	26.4
	Some College	21.4
	2-year college degree (Associates)	10.5
	4-year college degree (BA,BS)	23.9
	Master's Degree	14.5
	Doctoral Degree	.7
	Professional Degree	1.1
Father's Education	Less than High School	3.3
	High School/GED	27.3
	Some College	14.5
	2-year college degree (Associates)	5.1
	4-year college degree (BA,BS)	29.5
	Master's Degree	15.3
	Doctoral Degree	1.8
	Professional Degree	3.3

Table 2

Preferences for Same-sex Peers by Context and Person Sex

	Men	Women	Total
Context			
Hanging out	.75 (.02)*	.67 (.01)	.71 (.01)*
English	.65 (.02)	.68 (.02)	.67 (.01)
Math	.65 (.02)	.68 (.02)	.67 (.01)
Total	.68 (.02)	.68 (.01)	.68 (.01)

Values represent means (standard errors) that are significantly different at $p < .05$.

Table 3
Men and Women: Correlations Amongst Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Proportion of Same-Sex friends	1	.493**	-.233*	.353**	-.142	-.111	-.148	-.100	-.225*	-.322**	-.172	-.258*	-.040	.007
2. Proportion peers(hanging out)	.521**	1	-.226*	.386**	-.123	-.134	-.109	-.077	-.122	-.211*	-.058	-.127	.098	.046
3. Proportion of same-sex peers (math)	.230**	.147	1	-.298**	-.091	-.088	-.089	-.141	.049	.181	.104	.180	-.042	-.112
4. Proportion of same-sex peers (English)	.261**	.204**	.274**	1	-.062	-.060	-.051	.014	-.207*	-.252**	-.106	-.204*	.173	-.116
5. Attitudes about Occupations (Others)	-.059	-.063	-.008	-.001	1	.914**	.982*	.807**	.231*	.366**	.268*	.250*	-.074	-.143
6. Attitudes about Feminine Occupations (Others)	-.027	-.061	-.029	-.010	.925**	1	.823*	.736**	.205*	.340**	.300*	.249*	-.037	-.192*
7. Attitudes about Masculine Occupations (Others)	-.070	-.063	.001	.005	.980**	.832**	1	.791**	.225*	.353**	.232*	.232*	-.081	-.111
8. Attitudes about Activities (Others)	-.032	-.108	.044	.037	.818**	.738**	.810*	1	.277**	.335**	.292*	.296*	.019	-.036
9. Preferences for Masculine Occupations	-.125	.031	-.107	.012	.040	.031	.045	.113	1	.703**	.518*	.419*	.070	-.141
10. Preferences for Feminine Occupations	-.004	.164*	-.090	.111	-.118	-.109	-.118	-.035	-.004	1	.581*	.666*	-.173	-.138
11. Preferences for Masculine Activities	-.169*	-.066	-.223**	-.131	.166*	.141	.171*	.240**	.552**	.212**	1	.687*	.019	-.149
12. Preferences for Feminine Activities	.063	.051	-.075	.014	.008	.016	.002	.013	.197**	.229**	.302*	1	-.075	.003
13. Instru	-.086	.017	.095	.065	-.018	-.018	-.015	.001	-.002	-.084	.093	.131	1	.243*
14. Express	.012	.083	.062	.028	.001	.012	-.010	-.060	-.042	.130	-.048	.197*	.171*	1

** Value is significant at the 0.01 level * Value is significant at the 0.05 level. Correlations for women are below the diagonal; correlations for men are above the diagonal

Table 4

Preferences for feminine activities as a mediator in the association between sex and gender-typed attitudes about occupations (i.e., self-preferences for feminine occupations).

	<i>B</i>	<i>SEB</i>	β	R^2	ΔR^2
Requirement 1					
“Sex” on “preferences for feminine activities” (i.e., the predictor variable on the mediator)	-.63	.05	-.57*	.33*	
Requirement 2					
“Sex” on “preferences for feminine occupations” (i.e., the predictor variable on the criterion variable)	-.65	.06	-.56*	.32*	
Requirement 3					
“Sex” on “preferences for feminine occupations”	-.39	.06	-.34*	.32*	.32
“Preferences for feminine activities” on “preferences for feminine occupations” (i.e., the predictor variable and mediator variable on the criterion variable)	.41	.06	.39*	.42*	.10

* $p < .001$

Table 5
Preferences for masculine activities as a mediator in the association between sex and gender-typed attitudes about occupations (i.e., self-preferences for masculine occupations).

	<i>B</i>	<i>SEB</i>	β	R^2	ΔR^2
Requirement 1					
“Sex” on “preferences for masculine activities” (the predictor variable on the mediator)	.24	.05	.30*	.09*	
Requirement 2					
“Sex” on “preferences for masculine occupations” (the predictor variable on the criterion variable)	.36	.05	.39*	.15*	
Requirement 3					
“Sex” on “preferences for masculine occupations”	.23	.05	.25*	.15	.15*
“Preferences for masculine activities” on “preferences for masculine occupations” (the predictor variable and mediator variable on the criterion variable)	.57	.06	.48*	.37	.21*

* $p < .001$

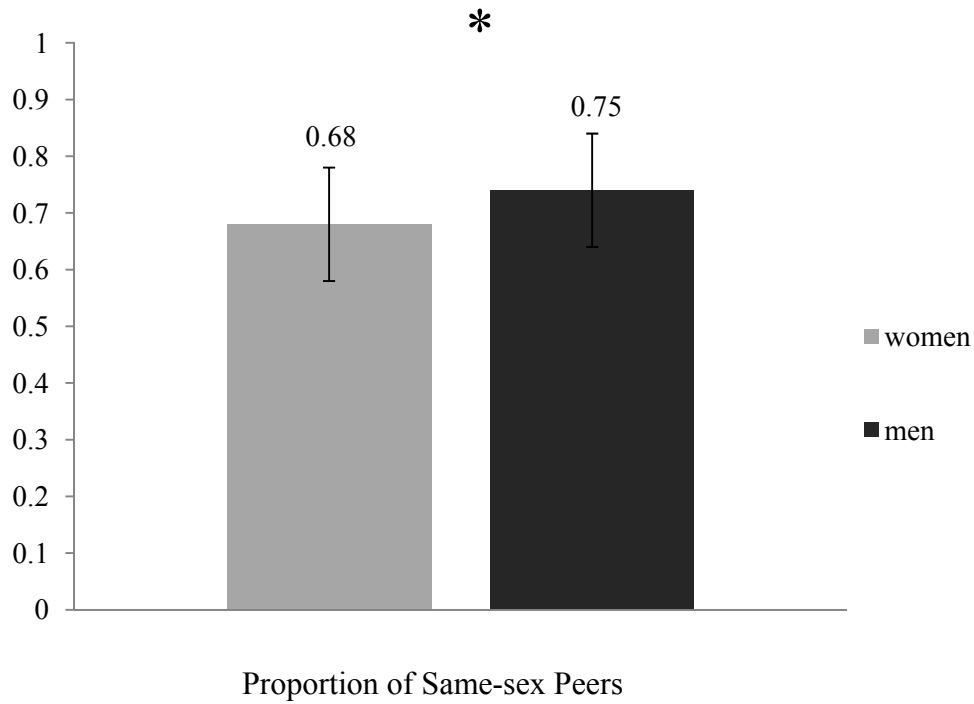


Figure 1. The gender difference in the proportion of same-sex peers reported in young adulthood, $F(1, 282) = 8.99, p < .005, r^2 = .19$.

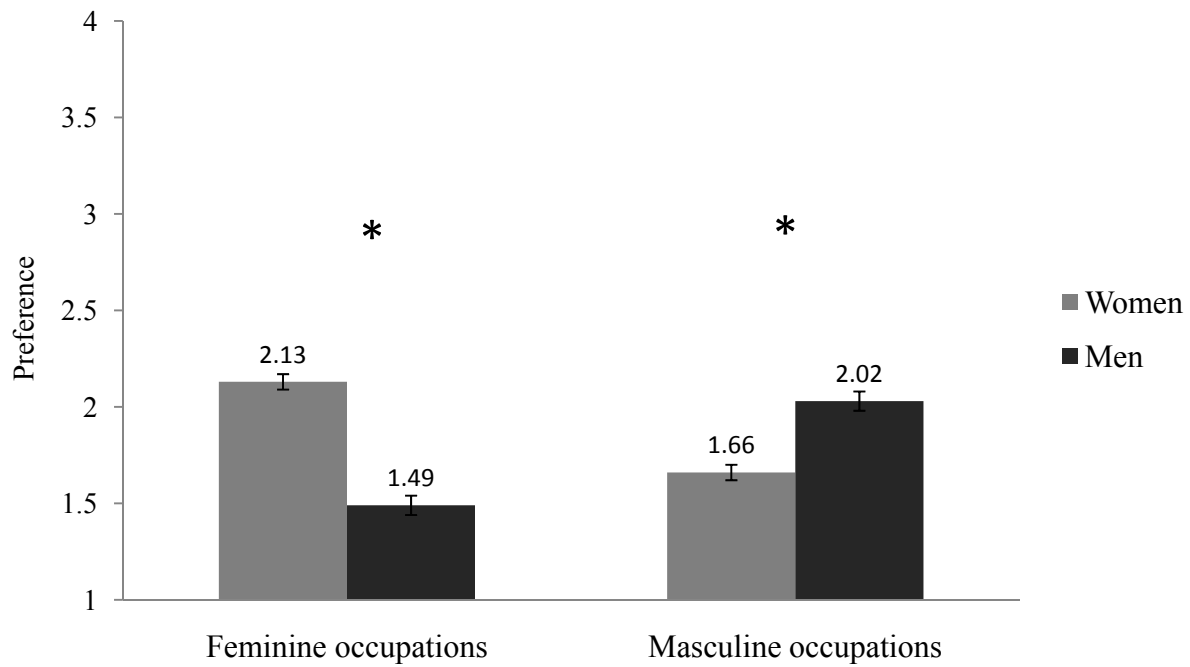


Figure 2. Men's and women's self-preferences for feminine and masculine occupations, $F(1, 283) = 453.97$, $p < .001$, $\eta^2_p = .62$.

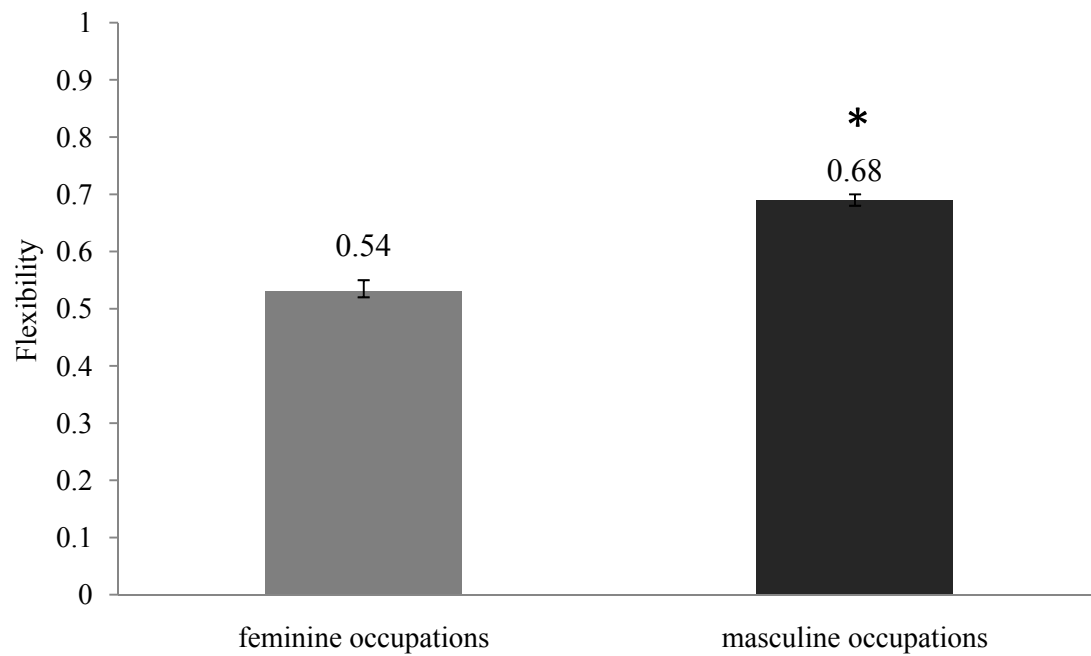


Figure 3. Young adults' (both men's and women's) gender-typed attitudes about the occupations that are viewed as appropriate for others, $F(1, 283) = 280.43$, $p < .001$, $\eta^2_p = .50$.

Appendix A

Part 1

Context-Specific Peer Nomination Measures

A. List five partners to work with on a project in an English class at school:

Imagine that you must work with another student on a project in an English class at school. Your goal is to get a good grade and to do well on the English project. Write the names (in order of preference) of five people who you would choose to work with you on a project in an English class. Place a check in the box to indicate whether the person you listed is male or female. You may select any person you would like to work with (i.e., the person you choose does not have to actually be in your specific class or even attend WVU).

Listed below are questions for this section of the survey. Please provide a response for every question. If you are given the option to decline to answer a question, then declining to answer is considered a response.

#1 Choice for English Project:

1. _____

2. This person is:

___ Male ___ Female

3. I chose this person because:

4. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

#2 Choice for English Project:

5. _____

6. This person is:

___ Male ___ Female

7. I chose this person because:

8. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

#3 Choice for English Project:

9. _____

10. This person is:

___ Male ___ Female

11. I chose this person because:

12. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

#4 Choice for English Project:

13. _____

14. This person is:

___ Male ___ Female

15. I chose this person because:

16. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

#5 Choice for English Project:

17. _____

18. This person is:

Male Female

19. I chose this person because:

20. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

B. List five partners to work with on a project in a math class at school:

Imagine that you must work with another student on a project in a math class at school. Your goal is to get a good grade and to do well on the math project. Write the names (in order of preference) of five people who you would choose to work with you on a project in a math class. Place a check in the box to indicate whether the person you listed is male or female. You may select any person you would like to work with (i.e., the person you choose does not have to actually be in your specific class or even attend WVU).

Listed below are questions for this section of the survey. Please provide a response for every question. If you are given the option to decline to answer a question, then declining to answer is considered a response.

#1 Choice for math project:

1. _____

2. This person is:

Male Female

3. I chose this person because:

4. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

#2 Choice for math project:

5. _____

6. This person is:

___ Male ___ Female

7. I chose this person because:

8. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

#3 Choice for math project:

9. _____

10. This person is:

___ Male ___ Female

11. I chose this person because:

12. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

#4 Choice for math project:

13. _____

14. This person is:

___ Male ___ Female

15. I chose this person because:

16. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

#5 Choice for math project:

17. _____

18. This person is:

Male Female

19. I chose this person because:

20. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

C. List five people who you would choose to hang out with outside of school:

Imagine that you are going to invite five friends to hang out outside of school. Your goal when hanging out is to have fun. Write the names (in order of preference) of five people who you would choose to hang out with. Place a check in the box to indicate whether the person you listed is male or female. You may select any person you would like to hang out with (i.e., the person does not have to live in Morgantown or attend WVU).

Listed below are questions for this section of the survey. Please provide a response for every question. If you are given the option to decline to answer a question, then declining to answer is considered a response.

#1 Choice for hanging out (outside of school):

1. _____

2. This person is:

Male Female

3. I chose this person because:

4. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

#2 Choice for hanging out (outside of school):

5. _____

6. This person is:

Male Female

7. I chose this person because:

8. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

#3 Choice for hanging out (outside of school):

9. _____

10. This person is:

Male Female

11. I chose this person because:

12. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

#4 Choice for hanging out (outside of school):

13. _____

14. This person is:

Male Female

15. I chose this person because:

16. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

#5 Choice for hanging out (outside of school):

17. _____

18. This person is:

Male Female

19. I chose this person because:

20. Describe your relationship with this person:

1	2	3	4	5
We don't like each other	We like each other	We are friends	We are good friends	We are best friends

Open-ended Friend Nomination

Please list the names and first initial of up to eight of your good friends. The friends you list can be friends you know from home and/or friends you know from school. Please indicate whether the friend you list is male or female. The good friends you list should be people with whom you are NOT romantically involved, but who are people you like, feel close to, or enjoy spending time with.

Try to answer all of the questions and remember there are no right or wrong answers to any of these questions.

Listed below are questions for this section of the survey. Please provide a response for every question. If you are given the option to decline to answer a question, then declining to answer is considered a response.

1. Friend 1: _____

2. Is this person:

____ Male ____ Female

3. Friend 2: _____

4. Is this person:

____ Male ____ Female

5. Friend 3: _____

6. Is this person:

____ Male ____ Female

7. Friend 4: _____

8. Is this person:

____ Male ____ Female

9. Friend 5: _____

10. Is this person:

____ Male ____ Female

11. Friend 6: _____

12. Is this person:

____ Male ____ Female

13. Friend 7: _____

14. Is this person:

____ Male ____ Female

15. Friend 8: _____

16. Is this person:

____ Male ____ Female

17. Of the 8 friends you listed, name the person who is your best friend

18. Are you dating anyone? Dating means spending time with another person with whom you are romantically interested, where they are romantically interested in you too. ____ yes ____ no

19. If yes, please the first name and last initial of this person _____

Part 2

Occupations, Activities, & Traits (OAT; see Liben and Bigler, 2002) Measure

1. OAT-PM (Personal Measure) & OAT-AM (Attitude Measure)

Note: The following items from Liben and Bigler's long version of the OAT-PM and AM subscales were not included in the current study's adapted version of this subscale (on both the PM and AM):

Masculine items:

- Refrigerator salesmen
- Bus driver
- Construction worker
- Factory owner
- Landscape architect
- Umpire
- Welder

Feminine items:

- Telephone operator
- Elementary school teacher

Neutral items:

- Baker

2. OAT-PM (personal measure of activity preferences)

The following items from Liben and Bigler's (2002) OAT-PM were not included in the adapted version of the subscale utilized by the current study.

Masculine items:

- Go fishing
- Hunt

- Play darts
- Shoot bow and arrow
- Shoot pool
- Wash a car
- Watch crime/detective shows

Feminine items:

- Baby-sit
- Cook dinner
- Do gymnastics
- Iron clothes
- Set the table
- Vacuum a house
- Wash clothes
- Wash dishes

The following items were created for the purposes of the current study:

- Keep a journal
- Design websites
- Put together furniture

3. OAT-AM (attitude measure about the activities others should engage in)

The following items from Liben and Bigler's (2002) OAT-PM were not included in the adapted version of the subscale utilized by the current study.

Masculine items:

- Fly a model plane
- Shoot pool
- Fix bicycles
- Practice martial arts
- Shoot a bow and arrow
- Draw (or design) cars
- Build model airplanes

Feminine items:

- Knit a sweater
- Sew from a pattern
- Wash clothes
- Do gymnastics
- Do gymnastics
- Watch soap operas
- Baby-sit

The following items were created for the purposes of the current study:

- Keep a journal

- Design websites
- Put together furniture

Part 3 Basic Demographics

Listed below are questions for this section of the survey. Please provide a response for every question. If you are given the option to decline to answer a question, then declining to answer is considered a response.

- | | |
|--|--|
| <p>1. Sex (select one)</p> <p style="padding-left: 20px;"><input type="checkbox"/> Male</p> <p style="padding-left: 20px;"><input type="checkbox"/> Female</p> <p>2. Age _____ years</p> <p>3. Date of Birth: _____</p> <p>4. Today's Date: _____</p> <p>5. Race (select all that apply):</p> <p style="padding-left: 20px;"><input type="checkbox"/> African American</p> <p style="padding-left: 20px;"><input type="checkbox"/> Asian</p> <p style="padding-left: 20px;"><input type="checkbox"/> Caucasian</p> <p style="padding-left: 20px;"><input type="checkbox"/> Hispanic</p> <p style="padding-left: 20px;"><input type="checkbox"/> Other</p> <p>6. Class (select one):</p> <p style="padding-left: 20px;"><input type="checkbox"/> Freshman</p> <p style="padding-left: 20px;"><input type="checkbox"/> Sophomore</p> <p style="padding-left: 20px;"><input type="checkbox"/> Junior</p> <p style="padding-left: 20px;"><input type="checkbox"/> Senior</p> <p>7. Current overall g.p.a.: _____</p> <p>8. Intended Major: _____</p> <p>9. Intended Career: _____</p> <p>10. Occupation: _____</p> <p>11. Are you married? _____ yes _____ no</p> <p>12. Your parents' combined yearly income (select one)</p> <p style="padding-left: 20px;"><input type="checkbox"/> Less than \$10,000</p> <p style="padding-left: 20px;"><input type="checkbox"/> \$10,001- \$20,000</p> <p style="padding-left: 20px;"><input type="checkbox"/> \$20,001-\$30,000</p> <p style="padding-left: 20px;"><input type="checkbox"/> \$30,001-\$40,000</p> <p style="padding-left: 20px;"><input type="checkbox"/> \$40,001-\$50,000</p> <p style="padding-left: 20px;"><input type="checkbox"/> \$50,001-\$60,000</p> | <p style="padding-left: 20px;"><input type="checkbox"/> More than \$60,000</p> <p style="padding-left: 20px;"><input type="checkbox"/> Don't know</p> <p>13. What is your father's occupation? _____</p> <p>14. What is the highest level of education your father attained? (select one)</p> <p style="padding-left: 20px;"><input type="checkbox"/> Less than High School</p> <p style="padding-left: 20px;"><input type="checkbox"/> High School/GED</p> <p style="padding-left: 20px;"><input type="checkbox"/> Some College</p> <p style="padding-left: 20px;"><input type="checkbox"/> 2-year college degree (Associates)</p> <p style="padding-left: 20px;"><input type="checkbox"/> 4-year college degree (BA,BS)</p> <p style="padding-left: 20px;"><input type="checkbox"/> Master's Degree</p> <p style="padding-left: 20px;"><input type="checkbox"/> Doctoral Degree</p> <p style="padding-left: 20px;"><input type="checkbox"/> Professional Degree (MD, JD)</p> <p>15. What is your Mother's occupation?
_____</p> <p>16. What is the highest level of education your mother attained? (select one)</p> <p style="padding-left: 20px;"><input type="checkbox"/> Less than High School</p> <p style="padding-left: 20px;"><input type="checkbox"/> High School/GED</p> <p style="padding-left: 20px;"><input type="checkbox"/> Some College</p> <p style="padding-left: 20px;"><input type="checkbox"/> 2-year college degree (Associates)</p> <p style="padding-left: 20px;"><input type="checkbox"/> 4-year college degree (BA,BS)</p> <p style="padding-left: 20px;"><input type="checkbox"/> Master's Degree</p> <p style="padding-left: 20px;"><input type="checkbox"/> Doctoral Degree</p> <p style="padding-left: 20px;"><input type="checkbox"/> Professional Degree (MD, JD)</p> <p>17. How much financial difficulty do your parents have paying their bills? Would you say: (select one)</p> <p style="padding-left: 20px;"><input type="checkbox"/> 1 A great deal of difficulty</p> <p style="padding-left: 20px;"><input type="checkbox"/> 2 Some difficulty</p> <p style="padding-left: 20px;"><input type="checkbox"/> 3 A little difficulty</p> <p style="padding-left: 20px;"><input type="checkbox"/> 4 No difficulty</p> <p style="padding-left: 20px;"><input type="checkbox"/> 5 Does not apply</p> <p>18. What city/town and state are you a permanent resident of? _____</p> |
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Part 4

Personal Attribute Questionnaire (to access the PAQ, see Spence et al., 1975)