Masculinity and School Engagement in Middle School

by

Adam A. Rogers

A Thesis Presented in Partial Fulfillment
of the Requirements for the Degree
Master of Science

Approved December 2014 by the
Graduate Supervisory Committee:

Kimberly A. Updegraff, Chair
Carol Lynn Martin
Carlos E. Santos

ARIZONA STATE UNIVERSITY

May 2015

ABSTRACT

The primary goal of this study was to extend previous research on traditional masculinity by examining the longitudinal associations between traditional masculinity, school engagement and attitudes toward school in a sample of middle school students. Following a sample of 338 (M_{age} = , SD_{age} = , 54% male, 46% Latino) students from the 7th to 8th grades, I examined how students' self-reported endorsement of and adherence to physical toughness and emotional stoicism norms of masculinity were associated with their engagement with school and their attitudes of school liking and school avoidance. I also examined whether the endorsement and adherence to these norms varied by sex and ethnicity, and whether they changed over the one-year period. Results indicated that endorsing and adhering to masculinity norms of emotional stoicism were negatively associated with school engagement, after controlling for school engagement at Time 1. Furthermore, endorsing and adhering to masculinity norms of physical toughness were negatively associated with attitudes of school liking even when controlling for school liking at Time 1. These results were the same boys and girls, and for Latino and White adolescents. Moreover, results indicated sex, but no ethnicity differences in traditional masculinity, such that males generally reported higher levels of endorsement and adherence to norms of physical toughness and emotional stoicism. There were also identifiable developmental patterns in traditional masculinity over a one-year period. The contributions of these findings to the current scholarship on masculinity, along with their implications for future research and practice, are discussed.

ACKNOWLEDGEMENTS

I am grateful for the indispensable supervision and encouragement of Dr. Kimberly A. Updegraff during the preparation of this thesis. Her time and efforts have helped facilitate not only the completion of this work, but also my personal growth as a scholar. I express appreciation to Drs. Carol Lynn Martin and Carlos E. Santos for serving as members of my supervisory committee and for selflessly offering their time and assistance at all levels of the project. I express appreciation to Drs. Richard A. Fabes, Carol Lynn Martin, and Erin Pahlke, the Principal Investigators of this project, and Carlos E. Santos for permitting the use of these data. I also acknowledge Dr. Richard A. Fabes for providing the financial means, laboratory facilities, and research opportunities necessary to pursue this work. I am grateful for personal mentors and colleagues, Steven N. Elliott and Melissa Nolen, who have helped to direct and counsel me in this process. Finally, I am most grateful to my wife, Amy, and to my parents and grandparents for their abiding love, support, and belief in me throughout this process.

This study was funded by the Challenged Child Project, a Presidential Intellectual Fusion Initiative at Arizona State University, and by the T. Denny Sanford School of Social and Family Dynamics as part of the Lives of Girls and Boys Enterprise.

Page

Page

LIST OF TABLES

Table Page

LIST OF FIGURES

Figure Page

INTRODUCTION

Gender discrepancies in education have existed for years, but traditionally they have favored males (Buchmann, DiPrete, & McDaniel, 2008). Within the last two decades, however, this gender gap has shifted so that females now fare better in education, in areas of engagement, performance and attainment. Adolescent males report lower levels of school engagement than adolescent females (Ueno & McWilliams, 2010; Li & Lerner, 2011) and also report decreasing levels of engagement over time (Li & Lerner, 2011; Upadaya & Salmela-Aro, 2013). Not surprisingly, then, when it comes to performance in primary and secondary education, although males still achieve standardized math scores higher than or equal to females, females outperform them on standardized reading scores (Marks, 2008; Catsambis, 2005; NCES 2013) and earn higher grades in all subjects areas, including math and science (Burke, 1989; Perkins, Kleiner, Roy, & Brown, 2004; DiPrete & Buchmann, 2013). Additionally, female students now complete advanced high school courses in mathematics and chemistry at higher rates than male students (DiPrete & Buchman, 2013).

Male students also trail female students when it comes to educational attainment. Only 43% of all enrolled college students are males (Snyder & Dillow, 2007; NCES, 2013). Furthermore, male students earn only 42% of all bachelor's degrees, 41% of all master's degrees, and 48% of all doctoral degrees nationally (Snyder & Dillow, 2007; NCES 2013), though they still make up 53% of students starting J.D. programs (Catalyst, 2013) and 52% of students graduating from medical schools (Kaiser, 2011). Male students are also more likely to delay (Freeman, 2004) or drop out of college than female students (Buchmann et al., 2008; Snyder & Dillow, 2007; NCES 2013).

That males are consistently trailing their female counterparts in their overall school adjustment is of concern. Scholars have attempted to explain this trend in various ways. Some have suggested that a 'feminization' of schools has taken place in which the predominantly female teaching staffs of many North American primary schools has led to the adoption of curriculum delivery methods, teacher expectations, and management strategies that favor girls over boys (Pollack, 1998). Others suggest that inherent physiological differences between boys and girls lead to differing capacities for effortful control in the classroom, and thus differing levels of performance (Else-Quest, Hyde, Goldsmith, & Van Hulle, 2006). Regarding higher education, some researchers suggest that women benefit more from a college education and are, therefore, more likely to be drawn into post-secondary education (Buchmann, et al., 2008). Females' better performance in secondary education also may place them on an advantaged trajectory as they transition to post-secondary education (Goldin, Katz, & Kuziemoko, 2006; Buchmann et al., 2008). These explanations seem reasonable and likely account for some of the differences between males' and females' academic successes.

It is surprising, however, that the gender gap in education has not been more thoroughly addressed using gender-based perspectives. Regarding boys' academic struggles, the Sex Role Strain paradigm of masculinity (Pleck, 1981), which highlights the correlates of male gender role socialization, may be particularly informative. This line of work points to the existence of socially constructed role expectations for males to present themselves as powerful and invulnerable, but that these expectations are ultimately both dysfunctional and unrealizable. For this reasons, boys' and men's accommodation of these expectations, also referred to as their traditional masculinity, is

concurrently and predictively associated with diminished well-being across behavioral, psychological, emotional, and social indices of adjustment (see Pleck, Sonenstein, & Ku; 1993; Levant et al., 2003). Research also suggests that, in industrialized nations, the tenets undergirding traditional forms of masculinity are fundamentally contradictory to the characteristics necessary for success in school (Jackson & Dempster, 2009). Therefore, the Sex Role Strain paradigm of masculinity is a promising approach for understanding gender discrepancies in education.

Traditional masculinity varies considerably across key demographic factors such as gender and ethnicity. In adult populations, males report higher levels of traditional masculinity than females and African Americans report higher levels of traditional masculinity than European Americans (Levant et al., 2003). Less is known, however, about how masculinity varies by gender and ethnicity among adolescent populations. Furthermore, little is known about the developmental course of masculinity throughout early adolescence. That is, it remains unclear whether adolescents experience increasing, decreasing, or stable levels of traditional masculinity over time. Therefore, continued research is needed not only in terms of identifying demographic and developmental variations in masculinity among early adolescent populations, but also in terms how these demographic variations may influence associations between masculinity and school related outcomes. Indeed, it is possible that the relations between masculinity and school outcomes are moderated by one or more of these demographic factors.

The goals of the current study are to identify the associations between traditional masculinity and two important indices of school adjustment in a sample of middle school students: attitudes toward school and school engagement. In particular, this study will

examine whether traditional masculinity is associated with negative attitudes toward school and lower levels of school engagement. An additional goal will be to examine demographic variations in traditional masculinity, namely variations across sex, ethnicity, and grade level, and to examine if these demographic variations influence the associations between masculinity and school attitudes and school engagement. Findings from this study will help identify how adolescents' internalizations of masculinity are associated with their success in middle school, and therefore could serve to inform school-based prevention efforts aimed at increasing school engagement and decreasing school dropout by targeting the specific beliefs that students hold about the male gender role.

In the literature review that follows, a theoretical and empirical basis will be established that will culminate in the delineation of specific research hypotheses. First, to properly identify the construct of traditional masculinity, its measurement tools and its correlates, I will discuss in detail the Sex Role Strain paradigm of masculinity (SRS; Pleck, 1981; Levant, 1995) and a body of associated empirical literature. Then, I will provide empirical and theoretical support for the supposition that traditional masculinity is associated with school related outcomes, in particular my key dependent variables of school engagement and school attitudes. Finally, I will outline my specific hypotheses.

LITERATURE REVIEW

Part I: The Sex Role Strain Paradigm (SRS) and Traditional Masculinity

Early approaches to the study of masculinity relied on the Gender Role Identity paradigm (GRI; Pleck, 1981), which was based on a core assumption that masculinity and femininity were inborn (i.e., intra-individual, psychologically-derived) qualities that

a man or woman was required to possess in order to be properly psychologically adjusted (Pleck, 1981). The improper and/or incomplete development of such qualities would lead to psychological maladjustment. Although it was the prevailing framework for understanding masculinity, the GRI paradigm often struggled to explain anomalous findings. On one hand, the assumption that "less masculine" men were less psychologically adjusted did not receive scholarly support (Barron, 2010; Connell, 1995). Furthermore, research had documented that there was great variation in how functional societies defined and enacted gender roles (Mead, 1935; Gilmore, 1990). Anomalies such as these challenged conventional notions of masculinity that suggested that it was fixed, inborn and necessary for psychological health. Rather, these anomalies suggested that masculinity might not be inborn and that individual variations in masculinity might not actually be psychologically harmful. Naturally, this shift in thinking allowed researchers to begin considering social factors as significant in the development of masculinity.

Thus, a new paradigm for understanding masculinity soon arose. Diverging from the Gender Role Identity paradigm, Pleck (1981) introduced a Sex Role Strain (SRS) paradigm of masculinity which held that masculinity was socially constructed, or that social contexts produce varying scripts that prescribe the limits of appropriate and inappropriate male behavior. The implication of this social constructionist viewpoint of masculinity was that there was no single form of masculinity, but that there are various 'masculinities,' or socially constructed scripts for proper male behavior that exist within and across social contexts. Of particular interest to researchers who use the SRS paradigm is a form of masculinity called 'traditional masculinity' because of its

prevalence in Western cultures, especially the United States (Pleck, Sonenstein, & Ku, 1993; Pleck, 1995; Kimmel, 2008). The concept of traditional masculinity is largely credited to Brannon (1976), who asserted that a 'blueprint for manhood' exists in the United States that is comprised of four fundamental dimensions that serve to uphold males' elevated status in society: the avoidance of things perceived to be feminine, an orientation toward status and achievement, emotional stoicism, and aggression and toughness. This conceptualization does not deny the existence of varying masculinities across social contexts, but does assume that there is a prevalent form of masculinity within Western societies (Pleck, 1995).

Pleck (1981) then suggested that individuals internalize the male role norms (i.e., the masculinity) of their particular social contexts. The result is that individuals develop personalized beliefs about male roles in society, referred to as *masculinity ideologies,* and in many cases, a degree of conformity to those beliefs. Therefore, instead of being a set of inherent traits that a man is supposed to possess for optimal psychological adjustment, masculinity is now understood to comprise a person's internalized beliefs regarding being a male (Levant, 1995; Brooks & Silverstein, 1995) as well as his/her personal adherence to those norms (O'Neil, Helms, Gable, & Wrightman, 1986). Pleck (1981) postulated that the personal accommodation of traditional masculinity creates three types of psychological strain, which in turn have negative consequences. *Discrepancy strain* refers to the stress individuals experience as a result of failing to live up to the norms they have personally endorsed. *Trauma strain* results from the harmful processes by which the individual is socialized into a traditional masculinity. *Dysfunction strain* is the notion that the actual dimensions of traditional masculinity are inherently negative in

nature, and that the conformity to these produces negative outcomes for those that endorse or adhere to them (Pleck, 1981; Pleck et al., 1993; Levant et al., 2003). For the purposes of the present study, discriminating among the specific types of strain in relation to the variables of interest is, unfortunately, beyond the scope of this study (due to available measures). Of importance to this study is simply that accommodating the tenets of a traditional masculinity have various negative consequences for health and well-being.

Traditional Masculinity and its Correlates

As an outgrowth of this new theorizing, scholars developed measurement tools to tap into the construct of traditional masculinity. These measures differed in important ways from existing trait masculinity scales, such as the Bem Sex Role Inventory (BSRI; Bem 1974) and the Personality Attributes Questionnaire (PAQ; Spence & Helmreich, 1978) that measured masculinity as a set of personality traits and behaviors (i.e., instrumental versus expressive traits) thought to be more typical of men than of women. The measurement tools under the Sex Role Strain paradigm measure masculinity as a person's internalized beliefs about traditional male norms and/or the adherence to those norms. Thus, these masculinity measures were designed to tap into a construct that was conceptually distinct from trait masculinity (Levant, Rankin, Williams, Hasan, & Smalley, 2010) and other related constructs, such as hyper-masculinity, gender stereotypes, and gender ideologies. Popular measures of masculinity ideology include the Male Role Norms Inventory – Revised (MRNI; Levant et al., 2010), the Male Role Norms Scale (MRAS; Pleck, Sonenstein, & Ku, 1994), and, for adolescents, the Adolescent Masculinity Ideology in Relationships Scale (AMIRS; Chu, Porche, &

Tolman, 2005). The items in these measures present participants with prescriptive statements about male role norms that represent Brannon's (1976) dimensions of masculinity (and sometimes other related dimensions), to which respondents indicate their level of agreement or disagreement. Measures of adherence to masculinity assess individuals' actual conformity to these same masculinity norms. Some of the more widely used of these measures include the Conformity to Masculine Norms Inventory (CMNI; Mahalik et al., 2003), which assesses the degree of a person's own affective, cognitive, and behavioral conformity to masculine norms, and the Gender Role Conflict Scale (GRCS; O'Neill et al., 1986) which is a measure of the degree of personal conflict or restriction resulting from the endorsement and enactment of traditional male roles.

Studies using these and similar measures have revealed significant associations between traditional masculinity and a number of negative outcomes for men and boys, across behavioral, psychological, emotional, and social indices of adjustment. These studies are typically conducted using school-/university- or community-based samples, although clinical samples are occasionally used. Findings from these studies suggest that the endorsement of traditional male role norms is significantly associated with behavioral problems in male adolescents, such as drug and alcohol use, being suspended from school, and getting into trouble with law enforcement (Pleck et al., 1993; Blazina & Watkins, 1996); psychological problems in men and boys such as lower levels of self-esteem, higher levels of loneliness (Blazina, Eddins, Burridge, & Settle, 2007; Counroyer & Mahalik, 1995), depression, anxiety, obsessive compulsive behavior in both clinical and non-clinical samples (Arrindell, Kolk, & Martin, Kwee, & Booms, 2003; Hayes & Mahalik, 2000; Blazina & Watkins, 1996), and separation-individuation difficulties

(Blazina et al., 2007), as well as negative attitudes toward psychological help-seeking (Berger, Levant, McMillan, Kelleher, & Sellers, 2005); emotional problems in men, such as clinical and subclinical levels of alexithymia (the inability to identify and express emotion) (Fischer & Good, 1997; Levant et al., 2003); and social problems in men and boys, such as negative attitudes toward racial diversity and women's equality (Wade, Brittan & Powell, 2001) and an increased likelihood of perpetrating sexual violence against women (Jakupcak, Lisak, & Roemer, 2002; Locke & Mahalik, 2005; Murnen, Wright, & Kaluzny, G., 2002; Truman, Tokar, & Fischer, 1996). These findings validate the SRS paradigm's claims that the tenets of a traditional masculinity present risks to the overall well-being of accommodating individuals.

Evidence for Social Construction: Sex, Ethnicity, and Developmental Change

Importantly, research also suggests that traditional masculinity is variable across key demographic factors, corroborating a central SRS assumption that masculinities are socially constructed. One of the more common of these factors examined in the literature is categorical sex (Levant, Hirsch, Celentano, & Cozza, 1992; Pleck et al., 1994). Across all nationalities and cultures studied, males endorse traditional masculinity more highly than females (Levant et al., 1998; Levant, Richmond, et al., 2003; Levant, Cuthbert et al., 2003), although this difference is larger in the United States than in other countries (Levant, Richmond et al., 2003; Levant, Cuthbert et al., 2003). In fact, sex differences in the endorsement of traditional masculinity produce larger effect sizes than ethnicity (Levant et al., 1998). Fewer studies have examined whether these sex differences exist within adolescent populations, but such differences are likely as studies have found

adolescent males to score higher on trait masculinity than adolescent females (Galambos, Almeida, & Petersen, 1990).

Traditional masculinity also varies across nationality and ethnicity. Cross-national studies show that Russian, Chinese, Japanese, and Pakistani men endorse higher levels of traditional masculinity than men in the United States (Hayashi, 1999; Levant, Cuthbert et al., 2003; Rashid, Yasin & Massoth, 2000; Wu, Levant & Sellers, 2001). Within the United States, ethnic differences in masculinity ideology are present such that African American men and women report higher levels of traditional masculinity ideology than their European American counterparts (Levant et al., 1992; Pleck, Sonenstein & Ku, 1994; Levant et al., 2000; Levant & Majors, 1997; Levant, Majors & Kelly, 1998; Levant, Richmond et al., 2003). Findings are more mixed regarding Latinos, however. Some research suggests that Latinos are more traditionally masculine than African Americans and European Americans (Abreu, Goodyear, Campos, & Newcomb, 2000). Others have found no differences between Latinos and other ethnicities in their levels of endorsement of traditional masculinity (Pleck et al., 1994), and yet others have found that Latinos score somewhere between European Americans and African Americans (Levant et al., 2003). Further complicating findings from Latino samples is Levant's and colleagues' (2003) discovery that there are differences between Latino males in the U.S. and Latino males from the Caribbean, not only in terms of overall endorsement of masculinity, but also in the specific dimensions of masculinity they endorsed. In particular, Latino males from the U.S. endorsed higher overall levels of traditional masculinity and were more endorsing of avoidance of femininity and status/achievement dimensions of masculinity than Latino males from the Caribbean.

Given the complicated nature of findings from Latino samples, Levant et al. (2003) have called for further research examining how masculinity varies among Latino populations.

Traditional masculinity may also be subject to developmental change, as some scholars have suggested (Marcell, Eftim, Sonenstein, & Pleck, 2011). Formal investigations specific to this question have yet to be conducted on early adolescent populations. Drawing from developmental literature may help piece together a picture of how masculinity could change over time during early adolescence, although this literature is admittedly inconclusive (see Galambos, Berenbaum, & McHale, 2009). On one hand, some scholars suggest that early adolescents experience increasing pressures to conform to gender norms, leading them to exhibit more traditional gender attitudes and behaviors during this period (Hill & Lynch, 1983; Galambos, Almeida, & Petersen, 1990). For example, Crouter, Manke, and McHale (1995) followed a sample of European American early adolescents over a one year period and found that participants experienced increased gender socialization in their families, with boys spending more time with their fathers and girls spending more time with their mothers. These authors also found that adolescents in families whose parents relied on traditional divisions of household labor (and for girls, those who had an opposite-sex younger sibling) were more likely to increase their performance of gender-typical household tasks themselves. In another study using cross sectional data, Galambos et al. (1990) found that adolescents' self-reported trait masculinity was higher across grades, with the largest differences appearing between seventh and eighth grade students. These grade differences were more pronounced for boys than for girls.

Not all research supports the notion of gender intensification during adolescence, as a fairly recent longitudinal study of middle school students failed to detect expected increases in trait masculinity and femininity over time (Priess, Lindberg, & Hyde, 2009). Some scholars draw upon cognitive developmental perspectives, such as gender schema theories (e.g. Martin & Halverson 1981), to suggest that developmental advances in cognition should promote more flexibility in adolescents' gender attitudes and behaviors. In support of this perspective, Katz and Ksansnak (1994) found a generally positive trend toward greater gender role flexibility from middle childhood to late adolescence. Specifically, these authors found that the adolescents in their study generally became more flexible in their own interests and more tolerant of others' a-typical gender activities over time. Ultimately, experts concede that studies on gender development in adolescence are too few in number to make sense of the complexities thereof (Galambos et al., 2009). One challenge is that the concept of gender is a complex and multifaceted one (Ruble, Martin & Berenbaum, 2006), meaning that gender developmental trends during adolescence could vary according to the specific dimension under consideration. Current research on gender development in adolescence has yet to examine all, or even most, of these different aspects of gender. Furthermore, development during this phase is likely be influenced by myriad of contextual factors, such as the family and the peer group, which vary widely among adolescents (see Crouter et al., 1995; Crouter, Whiteman, McHale, & Osgood, 2007).

These issues present theoretical and methodological challenges to making predictions about developmental trends in masculinity during adolescence. Still, one pattern in this literature may be helpful. Research has shown that there are sex

differences in gender role flexibility, such that adolescent girls exhibit increasing gender role flexibility, while boys frequently do not (Ruble, Martin, & Berenbaum, 2006). For example, in Galambos et al.'s (1990) cross sectional study of middle school students, older girls reported more egalitarian attitudes toward gender roles than younger girls, whereas older boys were more disapproving of these attitudes than younger boys. Galambos and colleagues (2009) assert that these differences in gender role flexibility arise because traditional male roles are seen as having greater social value than traditional female roles in Western cultures (see also Ferree, 1990; Feinman, 1984). That is, many female adolescents may not persist in accommodating traditional gender roles as they increasingly realize the negative implications of these roles for their social statuses, whereas many of their male counterparts may be more likely to accommodate these roles for the opposite reason. This notion that the male role is of more social value than the female role is foundational to the concept of traditional masculinity. Indeed, one key purpose of traditional masculinity norms is to maintain the elevated social status of males (Jansz, 2000). Therefore, during adolescence, boys may become increasingly more accommodating while girls may become less accommodating of traditional masculinity, given its implications for social status. This explanation actually utilizes both the gender intensification and increasing schematic flexibility explanations of development, which have often been exercised in opposition to one another.

Masculinity in the lives of females. It may now also be apparent that the role of masculinity in females' lives is much less researched. Masculinity scholars have been primarily interested in self-role discrepancy strains (i.e. discrepancy strain and trauma strain). Because such discrepancies are assumed to affect men's more than women's

well-being (failing to live up to male norms evokes more psychological strain and social disapproval for males than it does for females), research on females has been largely neglected. Importantly, however, the SRS paradigm specifies a dysfunction strain, which states that the endorsement and/or enactment of inherently negative male norms should relate to negative outcomes. This type of strain is, in theory, be as applicable to males as it is to females, so long as females endorse or enact traditional masculinity.

Research is increasingly clear that females endorse *and* enact conventionally male behaviors to varying degrees. Females possess masculinity ideologies through their internalization of societal norms about appropriate male behavior, albeit at lower levels than males (Cicone & Ruble, 1978; Levant et al., 1998; Levant, Richmond et al., 2003; Levant, Cuthbert et al., 2003). In fact, adolescents reference both genders when developing a gender-based identity (Martin, Andrews, England, Zosuls, & Ruble, forthcoming), implying that females who are in the process of forming their own gender identities rely, in part, on their own internalized beliefs about male norms. Females also adhere to male roles to varying degrees. Although there are social sanctions discouraging them from doing so (see Bosson, Taylor, & Prewitt-Freilino, 2006; Lobel, Slone, & Winch, 1997), recent work shows that during middle childhood many girls begin to eschew traditional female interests and behaviors in favor of those of a more masculine nature (Bailey, Bechtold, & Berenbaum, 2002; Paechter & Clark 2007). Somewhere between one-third and one-half of girls in elementary school label themselves as tomboys (Dinella & Martin, 2003; as cited in Halim, Ruble, & Amodio, 2011). Halim (2011) suggests that this increase in girls' preferences for conventional boy activities happens as they age and develop more sophisticated cognitions about their social world, including an

increased flexibility of their gender schemas. These cognitive advances, in turn, lead to an increased social awareness in which they come to comprehend femininity's lower status in their social groups and society at large (see Feinman, 1981; 1984). Recognizing the elevated social status of the male role, some girls shift their gender (and thus social) identities to adopt male-typical preferences and behaviors. Therefore, although girls may experience social disapproval for violating gender norms, the cost of social disapproval may be weak relative to the benefits of an elevated social status that the adoption of "male" behavior can bring. Indeed, Bosson and colleagues (2006) found that individuals' expressed discomfort for violating gender norms may simply be due to the anticipation of identity misclassification by an audience, which was diminished among more intimate and more personal audiences, such as friends, thus reducing the psychological barriers to violating gender norms (Bosson, Taylor, & Prewitt-Freilino, 2006). Taken together, although females are not as likely as males to experience the self-role strains the accompany the internalization of masculinity, and although females may not adhere as closely to masculinity norms as their male counterparts, masculinity norms are still likely to be relevant in how some girls choose to live in their social environments. Thus, the inclusion of females into masculinity research is only logical. Indeed, theorizing on masculinity does not require their exclusion; instead, because females are likely to endorse and enact masculinity norms, the SRS paradigm's notion of dysfunction strain would suggest that they, too, should experience socialized dysfunctional characteristics.

Taken together, traditional masculinity ideology is linked with a host of negative outcomes, but the specific manner in which these outcomes materialize may vary according to the moderating influences of important personal or contextual factors, such

as gender and ethnicity. Furthermore, when considering the negative correlates of masculinity, it is also important to examine developmental change, especially for early adolescents, who may or may not experience intensifying pressures to conform to gender norms. Therefore, the empirical examination of these factors and their relation to adolescents' endorsement of traditional masculinity is an important next step.

Part II: Traditional Masculinity and School Related Outcomes

The SRS paradigm was originally developed as a framework for studying men's mental health, and as such, has been of primary interest in counseling and clinical fields of psychology. Fewer studies have treated the SRS notion of traditional masculinity as a developmental phenomenon that could have implications for other areas of well-being, such as academic adjustment. Nevertheless, consistent links between traditional masculinity and males' diminished adjustment in various domains validate a more comprehensive study of masculinity that extends beyond its predominant focus on mental health. Indeed, the SRS paradigm can help researchers understand a variety of gender-based challenges that confront both males and females.

Of interest to this study is middle school students' academic adjustment, where associations between masculinity and school related variables may be expected. Specifically, the actual endorsement of and/or adherence to traditional masculinity norms may undermine the qualities necessary for success in school. Research on related constructs gives initial evidence to expect such associations. Ueno and McWilliams (2010) recently conducted a study examining associations between gender typicality and school adjustment. In this instance, gender typicality referred to how representative, or typical, an individual's behaviors are of his/her categorical sex. Using a nationally

representative sample of over 12,000 middle school students (approximately ages 11-14), the authors found that extremely gender typical students (defined as the highest scoring 10% of the sample on the typicality measure) reported lower levels of school engagement and lower levels of attachment to school than their more 'normally' gender-typed peers. Of course, these results represent an extreme segment of the population of boys and girls. Thus it could be argued that a comparison to masculinity may more appropriately be drawn with hyper-masculinity, which is a distinct construct from traditional masculinity ideology. However, using data from the present sample, Santos et al. (2013) recently followed a sample of ethnically diverse males from the 7th to 8th grade (approximately ages 12-14) and found that their adherence to male-typed behaviors of physical toughness and emotional stoicism predicted lower achievement scores in mathematics. Their analyses did not rely on a distinction between extreme and non-extreme boys, suggesting that examinations of masculinity and school related outcomes need not be constrained to an exclusive focus on hyper-masculinity.

In another study, Burke (1989) conducted a cross-sectional examination of the associations between gender identity (measured on a continuum of femininity to masculinity) and the academic performances of a sample of 6th, 7th, and 8th grade students (approximately ages 11-14). He found that the students' self-reported gender identity scores predicted significant proportions of variance in their GPAs in all five subject areas examined, including math, science, social studies, foreign language, and language arts. Specifically, the more masculine (and therefore the less feminine) that students reported themselves to be, the lower their GPAs. These associations held after controlling for sex and other important demographic variables. Interestingly, the effect sizes for these

relations did not vary by subject area. Burke then reversed his analyses to predict GPA from sex while controlling for gender identity. Sex still predicted GPA in all subject areas after controlling for gender identity, showing that being female was associated with earning higher grades. Nevertheless, controlling for gender identity reduced girls' GPA advantage in every subject area by between 25 to 40 percent (with the exception of foreign language, which was reduced by only 3 percent). These results, along with the results regarding gender typicality and male-typed behaviors, provide empirical evidence that the gender gap in education can be at least partly explained by how boys and girls understand and enact traditional gender roles of masculinity.

Qualitative evidence also suggests that traditional masculinity may be associated with diminished school outcomes. Recently, several qualitative studies were conducted that examined the social dynamics of males' peer groups in school settings (Martino, 1999; Jackson, 2006; Hodgetts, 2008; Jackson & Dempster, 2009). These studies comprised a series of in-depth interviews with male students from secondary and postsecondary schools. The interviews showed that within male peer groups, identifiable social hierarchies frequently materialized around the notion of being masculine, or manly. There was usually a single, dominant form of masculinity that emerged in these peer groups, referred to by the authors as a hegemonic masculinity. Inherent to these hegemonic masculinities was the presence of specific narratives that prescribed the limits of one's masculinity. Many of the male students reported expending a great deal of energy to live in accordance with these narratives so as to maintain their position in the dominant peer group. Those students who were unable to measure up to the prescribed masculine criteria of their peer groups were often marginalized. Interestingly, even many

of these outsider boys felt the need to establish at least a subordinate form of masculinity. In short, these interviews revealed that many boys experience great social pressures in trying to measure up to a socially prescribed masculinity.

Relevant to the current discussion on masculinity and school outcomes, and unfortunately for these boys, one of the commonly acknowledged tenets of these socially prescribed masculinities was that working hard in school is something that girls do, or that is stereotypically feminine (Martino, 1999; Jackson, 2006; Jackson & Dempster, 2008). Jackson and Dempster (2009) suggested that a result of this perception was the emergence of two narratives about schoolwork within male peer groups: the 'uncool to work' narrative and the 'effortless achievement' narrative. Due to the 'uncool to work' narrative, many boys reported receiving social sanctions for behaviors like sitting in the front of class, taking copious notes, or spending long hours studying (Jackson & Dempster, 2009). The potential for acquiring labels like 'geek,' or 'boring' intimidated the boys, who either reported doing their school work in private, working less, or not working at all (Martino, 1999; Jackson & Dempster, 2009). The 'effortless achievement' narrative implied inherent differences between males' and females' approaches to school such that female students were well organized and concerned about their grades whereas males were laid back about their school work. Interestingly, according to this narrative, the boys devalued the "female" approach to school, dismissing it as unnecessarily hard working and overachieving, while esteeming the laid-back "male" as representing a more well-balanced lifestyle. Furthermore, male students sometimes claimed that their more laid-back approach qualified their achievement in

school as more authentic than females' because their minimal effort implied greater inherent intelligence.

Results from these interviews suggest the presence of socially-created and peer-enforced masculinities in male peer groups that actually dissuade qualities of diligence and hard work that are essential for success in school. When these findings are considered alongside the former empirical findings linking gender identity and gender typed-behaviors with school adjustment and performance, there is strong justification for an empirical examination of students' endorsement of and adherence to traditional masculinity norms and school related variables. Therefore, the primary goal of this study is to investigate the associations between masculinity and two important indices of school adjustment: attitudes toward school and school engagement.

Engagement with School

Assuming the broader existence of narratives about school that downplay the importance of hard work and personal investment with school activities, and assuming that individuals accommodate these narratives to varying degrees, one may expect to observe changes in students' actual engagement with school as a function thereof. That is, traditional masculinity is likely to be negatively associated with an individual's ability to sufficiently engage with school because of the negative messages toward school that it entails. Indeed, adolescent males report lower levels of school engagement than adolescent females (Ueno & McWilliams, 2010; Li & Lerner, 2011) and also report decreasing levels of engagement over time (Li & Lerner, 2011; Upadaya & Salmela-Aro, 2013). Of course, these findings only represent sex differences in school engagement, but provide further support for a possible link with traditional masculinity.

School engagement has attracted a large amount of scholarly attention of late (Fredricks, Blumenfeld, & Paris, 2004) largely because of an overall consensus among scholars that this construct has major implications for academic success. Two of the more heavily researched correlates of school engagement are academic achievement and school dropout (Fredricks et al., 2004). Across gender and ethnic groups, school engagement positively predicts achievement on standardized tests (Connell, Spencer, & Aber, 1994; Marks, 2000) and is linked to better grades (Li & Lerner, 2011; Wang & Eccles, 2012). Meanwhile, low or unstable levels of school engagement correspond with an increased risk of dropout (Janosz, Archambault, Morizot, & Pagani, 2008; Archimbault, Janosz, Fallu, & Pagani, 2009). School engagement is also linked to other behavioral and psychological indices of adjustment, such that it is negatively associated with delinquency and substance use (Hirschfield & Gasper, 2011; Li & Lerner, 2011) and depressive symptoms (Li & Lerner, 2011; Shochet, Dadds, Ham, & Mantague, 2006) and positively associated with general life satisfaction (Lewis, Huebner, Malone, & Valois, 2011).

Importantly, the supposition of a negative link between traditional masculinity and school engagement is consistent with the SRS paradigm (Pleck, 1981). As mentioned, the SRS paradigm specifies that the accommodation of masculinity norms produces a dysfunction strain, meaning that the inherently negative nature of these norms is likely to generate negative outcomes (Pleck, 1981; Pleck et al., 1993; Levant et al., 2006). Applied to school engagement, the notion of dysfunction strain would suggest that the actual dimensions of traditional masculinity undermine participation in and commitment to school, much like the previously mentioned research on masculine

narratives about school. In other words, the SRS paradigm supports the notion that the tenets inherent to a traditional masculinity might be inconsistent with the qualities necessary for engagement with school. There are at least two masculinity norms that may be relevant to this discussion: emotional stoicism norms and physical toughness norms.

Emotional stoicism and school engagement. Emotional stoicism refers to the social expectation for males to place personal restrictions on their own emotions, particularly those emotions that could convey weakness (Jansz, 2000). However, placing restrictions on one's own emotions is an unhealthy practice as it has been linked to clinical and subclinical levels of alexithymia (Levant et al., 2003), a sort of emotional illiteracy in which the individual struggles to identify and express emotions in the self (Sifneos, 1973). This lack of emotional proficiency may have negative implications for school engagement, which is a largely emotional experience. School engagement consists of three components, one of which is emotional engagement, or an individual's positive affective dispositions toward academic activities (Fredricks, 2011; Upadaya & Salmela-Aro, 2013, Fredricks et al., 2004). Emotional engagement has been related to academic outcomes, such as increased academic performance (Wang & Eccles, 2012; Dotterer & Lowe, 2012; Li & Lerner, 2012) and motivation to pursue further education (Wang & Eccles, 2012). Students who are practiced at refusing themselves certain emotions may also be denying themselves these positive emotions about school, especially if school is viewed as a stereotypically feminine undertaking. Thus, these students may be hindering their own abilities to function competently in their roles as students.

Physical toughness and school engagement. Traditional masculinity also promotes the expression of dominance and status through physical toughness and aggression. However, in the context of the school setting, posturing as tough and behaving aggressively toward one's peers may put a student at risk for diminished academic well-being. Receiving emotional support from peers is positively linked to school engagement (Shin, Daly, & Verya, 2007; Garcia-Reid, 2007), while having conflict with peers (Ladd, Kochenderfer, & Coleman, 1996) and being physically aggressive toward peers (Perdue, Manzeske, & Estell, 2009) are negatively related to school engagement. Indeed, students who associate in aggressive peer groups are more at risk for future school dropout than students in non-aggressive peer groups (Farmer et al., 2003). Therefore, students who endorse and/or adhere to norms of physical toughness and aggression may have somewhat more troubled relationships and interactions with their peers, driving greater distance between themselves and others who could otherwise be a source of social support for academic success.

Measurement issues regarding school engagement

Despite a large and growing body of research on school engagement, and despite the evidence that engagement may vary as a function of masculinity, it is important to also recognize and address the challenges associated with research on school engagement. In their landmark review of the school engagement literature, Fredricks et al. (2004) were critical that the concept of school engagement is "everything to everybody" (p. 84). That is, researchers often operationalize engagement in very different ways according to their interests. For example, school engagement could potentially refer to participation in school related activities (Finn, 1993), to inner

psychological investment in learning (Newmann, Wehlage, & Lamborn, 1992), to identification with school (Voelkl, 1997), or to several other related ideas. While all these conceptualizations have been useful in their own rights, the proliferation of operational definitions of school engagement has clouded the clarity (and quality) of the overall literature on school engagement. Furthermore, and partly due to this proliferation, there is a lack of established and agreed upon measures for school engagement.

Nevertheless, it is notable that despite these challenges scholars still seem to share a basic notion of involvement with school that they almost universally identify as "engagement." For this reason, Fredricks et al. (2004) encouraged the bringing together of these notions into a single, yet multidimensional construct of school engagement, which in its most basic sense is a student's participation in and investment with school. These authors suggested that school engagement consists of distinct cognitive (e.g., investment, motivation), emotional (e.g., enjoyment, boredom), and behavioral (e.g., concentration, participation) dimensions. They also suggested that school engagement can vary in duration and intensity, is malleable, and that it may arise from a variety of sources, such as social context, academic contexts, and personality characteristics. Taken together, school engagement is a relatively complex construct with the potential for nuanced patterns of development. Although such complexity should not be viewed as an inherent flaw of the construct, it does present various challenges for conducting research on school engagement. A discussion of these challenges is, unfortunately, beyond the confines of the discussion at hand. It suffices to say that any formal examination of

school engagement should identify, as precisely as possible, the manner in which school engagement is operationalized and measured.

Therefore, I briefly identify and discuss the current study's approach to school engagement. For the purposes of this study, school engagement is conceptualized based on Czikszentmihalyi's (1990) Flow Theory. 'Flow' is defined as a state of absorption in a given task in which interest, enjoyment, and concentration culminate together (Csikszentmihalyi & Csikszentmihalyi, 1991). While in a state of flow, individuals perform to their fullest capacities and perceive that the activity is worth doing on its own, independent of any other goals (Nakamura & Csikszentmihalyi, 2002). There are several advantages to using a Flow perspective to think about school engagement. First, the concept of flow incorporates aspects of the cognitive (e.g., interest), emotional (e.g., enjoyment), and behavioral (e.g., concentration) dimensions of engagement into a single concept. Many existing studies on school engagement examine single dimensions of engagement. While these approaches are essential to understanding the contributions of individual dimensions to school related outcomes, they cannot address the blending of dimensions and how this blending contributes to the same outcomes (Fredricks et al., 2004). The combining of the cognitive, emotional, and behavioral aspects of engagement together, as a Flow perspective would suggest, treats engagement as the multidimensional construct that it is. The second advantage to using a Flow perspective to think about school engagement is that it allows for the consideration that different contexts or activities (e.g., school subjects) may elicit different levels engagement. For example, according to a Flow perspective, a student's engagement in social studies activities may differ from his/her engagement in science activities based on his/her differing levels of

interest in the subject materials. This is especially important in a study of masculinity as students in middle and high school tend to exhibit stereotypically masculine or feminine subject interests (Kessels, 2005).

The study of school engagement from a Flow perspective has already been performed successfully. Shernoff and Csikszentmihalyi (2003) used the concepts from flow perspective to specify a dynamic and contextually-dependent concept of school engagement in a longitudinal study involving over 500 high school students. This conceptualization allowed the authors to identify the specific conditions and contexts under which students were most (and least) engaged with academic activities. Altogether, I anticipate that by approaching engagement from a Flow perspective I will be able to more fully capture the multidimensional nature of the concept and examine how the relation between masculinity and engagement may vary according to school subject.

Mediation by School Attitudes

A final consideration in this examination is that diminished engagement with school could be directly associated with traditional masculinity, but that this association also could be mediated by a more proximal factor: attitudes toward school. Two of these attitudes that have received scholarly attention include *school liking* and *school avoidance*. *School liking* refers to the degree to which a student reports enjoying the overall school experience and/or specific academic activities. *School avoidance* refers to the degree to which a student reports wanting to disengage with academic activities or circumvent the school setting. Based on the literature previously discussed, it is reasonable to expect that the endorsement of traditional masculinity would be related to

decreased levels of school liking and increased levels of school avoidance. Offering preliminary support for these associations are studies that have found sex differences in these attitudes. Specifically, girls report enjoying the academic aspects of their schooling, such as their teachers, lessons, and educational outings more than boys, who enjoy activities like clubs and sports more than girls (Lightbody, Siann, Stocks, & Walsh, 1996). Boys are also more likely than girls to report school avoidance behaviors (Murray, Waas, & Murray, 2008).

Research has focused on these attitudes because of their implications for academic success. In younger children, school liking is positively associated with adjustment to school (Ladd & Burgess, 2001), class participation, achievement (Ladd, Buhs, & Seid, 2000), and greater academic progress (Ladd, Kockenderfer, & Coleman, 1996). In older students, liking school is associated with higher educational expectations (Boesel, 2001) and may serve as a protective factor against problem behaviors such as delinquency and drug use (Jessor, Van den Bos, Venderryn, Costa, & Turbin, 1995). Furthermore, the concept of school liking has been considered a key dimension in other school related measures, including positive orientation toward school (Jessor et al., 1995), school connectedness (Resnick et al., 1997), school bonding (Hawkins, Guo, Hill, Battin-Pearson, & Abbott, 2001), and identification with school (Voelkl, 1996). School avoidance, on the other hand, is strongly related to an increased risk of dropout and lower academic achievement (DeVoe & Chandler, 2005; Nansel et al, 2001, Swanson, Valiente, & Lemery-Chalfant, 2012; Tuominen-Soini, Salmela-Aro, & Niemivirta, 2011). In sum, the attitudes that adolescents hold regarding school have important implications for students' success in school.

It would be helpful to determine if the association between masculinity and school engagement is at least partially mediated by the more proximal variables of school liking and school avoidance, as these would represent an internalization of negative narratives about school. As would be expected, evidence shows that school attitudes, in particular positive attitudes toward school, are associated with greater levels of engagement. In a series of recent studies, Ainley and Ainley (2011) found that enjoyment of physics lessons was positively related to expressed interest in learning and actual participation in learning. Furthermore, the positive and negative affective attitudes that a student holds toward school are considered by many scholars to be a key feature of school engagement called emotional engagement (Fredricks, Blumenfeld, & Paris, 2004; Fredricks 2011; Wang & Eccles, 2012), which is positively linked to academic performance (Wang, & Eccles, 2012; Dotterer & Lowe, 2012; Li & Lerner, 2011). Therefore, this study will examine the potential mediating role of school attitudes, particularly school liking and school avoidance attitudes, in the relation between masculinity and school engagement.

The Current Study

The goal of this study was to empirically test the associations suggested throughout this literature review. Specifically, the first major goal was to examine how masculinity varies by sex and ethnicity in a sample of middle school students, and to examine change in masculinity over a one year period. The second major goal was to examine the relations among masculinity, school engagement, and school attitudes of liking and avoidance in the same sample. This study also addresses at least two gaps in the literature. First, the majority of research on masculinity focuses on endorsement of male role norms and less on an individual's actual adherence to these norms. That is,

most research has examined how adolescents believe males should think and behave, but less attention is given to how adolescents personally adhere to these norms. This study will examine both the endorsement of male role norms and adolescents' adherence to these norms. Second, although the majority of masculinity research has focused on boys and men, adherence to and endorsement of masculinity norms is not unique to males. This study will test the aforementioned suppositions among boys and girls. Based on the literature reviewed above, I derived four research questions.

Research question 1. The first research question was, *how does traditional masculinity vary by gender and ethnicity?* Based on previous findings that adult males endorse higher levels of traditional masculinity than adult females, (Levant et al., 1998; Levant, Richmond et al., 2003; Levant, Cuthbert et al., 2003), *Hypothesis 1a* states that male adolescents will endorse and adhere to masculinity norms at higher levels than female adolescents. Furthermore, based on findings (though admittedly mixed) that Latino adults endorse higher levels of traditional masculinity than European American adults (Levant, Richmond et al., 2003; Abreu, Goodyear, Campos, & Newcomb, 2000), *Hypothesis 1b* states that Latino adolescents will endorse higher levels of traditional masculinity than European American adolescents.

Research question 2. The second research question was *how does traditional masculinity change from 7th to 8th grade?* Based on the previous discussion of gender intensification, (Hill and Lynch, 1983), gender role flexibility (Halim et al., 2011), and the differential values placed on male- and female-typical behaviors, it is possible that boys will increasingly accommodate masculinity norms but that girls will decreasingly accommodate these norms during middle school. *Hypothesis 2a* states that adolescent

males will show a marked increase in their endorsement of and adherence to traditional masculinity norms during middle school. *Hypothesis 2b* states that adolescent females will show a marked decrease in their endorsement of and adherence to traditional masculinity norms during middle school.

Research question 3. The third research question asked, *does traditional masculinity predict engagement with school subjects, as well as attitudes of school liking and school avoidance?* Based on the reviewed literature suggesting that the dimensions of traditional masculinity are inherently contradictory to the characteristics necessary for success in school (see Jackson & Dempster, 2009), *Hypothesis 3a* states that traditional masculinity will negatively predict engagement with school subjects, positively predict school avoidance, and negatively predict school liking. Additionally, it is possible that these associations could be moderated by gender, ethnicity, and age. Although I state no specific hypotheses regarding the nature and direction of these potential moderators, this study will test whether gender, ethnicity, and age moderate existing relations between masculinity and the dependent variables of school liking, school avoidance, and school engagement.

Research question 4. The fourth research question asked, *is the relation between masculinity and engagement with school subjects mediated by attitudes of liking and avoidance?* Because positive affective attitudes toward school have been shown to predict engagement in learning (Ainley & Ainley, 2011) and higher levels of motivation to pursue further education (Wang & Eccles, 2012), it is reasonable to expect that lower levels of school liking and higher levels of school avoidance produced by masculinity may in turn effect the lower levels of engagement with school subjects. *Hypothesis 4*

states that the negative relations between masculinity and school engagement will be mediated by school liking and school avoidance attitudes (see Figure 1).

METHOD

This study drew upon data from a short-term longitudinal study aimed at investigating the correlates of mixed-sex vs. single-sex classes in middle school (Co-PIs Richard Fabes, Carol Martin, & Erin Pahlke). Funding for the study was provided by the T. Denny Sanford School of Social and Family Dynamics and by the Challenged Child Project, which is a Presidential Intellectual Fusion Initiative at Arizona State University.

Participants

Participants were 338 adolescents attending a large junior high school located in a middle-class metropolitan area in the southwestern United States. Slightly less than half of the students in the school (47%) qualified for free or reduced lunch (Arizona Department of Education, National School Lunch Program & School Breakfast Program, 2012). The sample was 54.1% male and the average age was 12.49 years (*SD* = .43). The sample was fairly ethnically diverse, including Latino (42.4%), White (33.2%), Asian-American (5.9%), African-American (2.1%), American Indian/Alaska Native (2.1%), other (0.6%), and multiethnic individual (11.9%). Of those who identified as Latino, 55% were born or had a parent born in Mexico. Notably, the majority of the sample self-identified as Latino, which is representative of the state of Arizona's population of K- 12 students, which is 42% Latino (Lopez, Minushkin, & Pew Latino Research Center, 2008).

The school was selected in collaboration with the school district because, in line with the aims of the larger project, it had both mixed- and single-sex classes. Data were

collected at two time points: once at the end of the seventh grade (Spring of 2010) and again at the end of the eighth grade (Spring of 2011). However, based on the theoretical assumption that a gendered classroom context might impact gender stereotyping and thereby produce confounding data (Liben & Bigler, 2006), students from single-sex classes the preceding year were dropped from the study at the second time point (n = 145). Thus, at the first wave of data collection, participants were 483 students. After the final wave of data collection, the sample consisted of 338 students, resulting in a substantial rate of attrition between time points (30%). Despite this attrition, there were no significant differences between the final sample and those who were dropped from the study in terms of ethnicity (χ^2 [6, N = 481] = 8.16, p = .227) or age (χ^2 [3, N = 421] = 5.04, p = .169). However, a Pearson chi-square test showed that females were more likely than males to attrite (χ^2 [1, N = 483] = 4.06, p = .044). Thus, whereas females made up 48.9% of the original sample, they only made up 45.9% of the final sample.

Procedure

At each of wave of data collection, approval was given by the school district and principal. Parents were informed of the study and were given the opportunity to refuse student consent (i.e., passive consent). Surveys were administered to students by research assistants during classes. Sixty minutes were allotted for the students to complete surveys and the research assistants remained present for the period in order to address student questions and concerns and to prevent data contamination via cross talk. The survey included measures about various gender constructs (e.g., stereotypes, identity) and various academic related constructs (e.g., engagement with school subjects, educational aspirations). Of interest to this study are measures assessing demographics,

endorsement of traditional masculinity norms, adherence to traditional masculinity norms, engagement with school subjects, and school liking and avoidance attitudes.

Measures

Demographic information. At the first time point, participants reported on demographic characteristics. They reported their sex (0 = male, 1 = female) and their age in years. Participants also reported their racial/ethnic background by selecting one of the following categories: White, Black, Mexican Background/Hispanic/Latino, Asian, American Indian or Alaska Native, other, and multiethnic. Data was also collected on participants who were born in Mexico or who had at least one parent born in Mexico. Total number of people in the household was used as a proxy for socioeconomic status, with higher numbers of people indicating crowding and therefore serving as a proxy indicator of lower socioeconomic status (Hardiman et al., 2007).

Endorsement of Masculinity Norms. At both time points, the participants completed an adapted version of the Adolescent Masculinity Ideology in Relationships Scale (AMIRS; Chu, Porche & Tolman, 2005), an 11-item measure assessing their endorsement of norms of traditional masculinity. This scale comprised two subscales that each represented distinct dimensions of traditional masculinity. The first subscale assessed endorsement of *physical toughness* norms (e.g., "*If a boy has a problem with someone, he should be willing to fight them"* and *"A boy cannot gain respect if he backs down from a fight;*" time 1 α = .87, time 2 α = .87). The second subscale assessed the participants' endorsement of *emotional stoicism* norms (e.g., "*A boy should not show his friends when he is feeling hurt"* and *"Even when something is bothering him, it is important for a boy to act like nothing is wrong around his friends*;" time 1 α = .74, time

2 α = .74). Items from both scales were scored on a four-point likert scoring system (*1 = strongly disagree; 4 = strongly agree*). Higher scores on both subscales indicated higher endorsement of traditional masculinity.

Adherence to Masculinity Norms. At both time points, the participants completed an 11-item measure assessing their personal adherence to traditionally masculinity norms. This measure was also adapted from the Adolescent Masculinity Ideology in Relationships Scale (AMIRS; Chu, Porche & Tolman, 2005) and was developed using exploratory and confirmatory factor analysis. The scale included two subscales representing distinct dimensions of masculinity. The first subscale assessed the participants' personal adherence to *physical toughness* norms (e.g., "*If I have a problem with someone I am willing to fight them*" and "*It is necessary for me to fight others in order to gain respect*;" time 1 α = .83, time 2 α = .84). The second scale assessed the participants' adherence to *emotional stoicism* norms (e.g., "*I do not let it show to my friends when my feelings are hurt"* and *"Even when something is bothering me, it's important to act like nothing is wrong around my friends;"* time 1 α = .77, time 2 α = .78). Items from both scales were scored on a four point likert-type scale (*1 = strongly disagree; 4 = strongly agree*). Higher scores indicated higher personal adherence to norms of traditional masculinity.

Engagement with School Subjects. Students' engagement with various school subjects was measured using an adapted version of the Experience Sampling Form (ESF; Csikszentmihalyi and Larson, 1987). The ESF was originally intended for use with the experience sampling method (ESM; Csikszentmihalyi and Larson, 1987), a momentary assessment technique which randomly prompts students throughout the day to stop their

current activity to report their levels of interest, concentration, or enjoyment (i.e., flow) for said activity. Because it was not the intent in this study to measure flow, but to assess engagement from a flow perspective, six of the items from the ESF were used as survey items to assess students' interest, concentration, and enjoyment in four core subject areas: language arts, mathematics, science, and social studies. Students filled out four measures, one for each subject. The stem "While you are doing (language arts/ mathematics/science/social studies) work" was followed by items such as "*How often do you feel excited?* and "*How often do you feel completely involved and 'into' the task?"* Items were scored on a seven point likert-type scale (*1=never, 4=half the time, 7=always)* and averaged for an overall engagement score for each specific subject, higher scores representing higher levels of engagement. Each scale displayed adequate reliability at both time points: Language arts time 1 α = .77, time 2 α = .73; Mathematics time 1 α = .83, time 2 α = .87; Science time 1 α = .80, time 2 α = .84; Social Studies time 1 α = .80, time 2 α = .85. A Total Engagement with School score was also computed in which engagement scores for all four subject areas were averaged, resulting in a Total Engagement with School Subjects score. This scale displayed adequate reliability at both time points: Total Engagement time 1 α =.87, time 2 α = .89.

School Liking and Avoidance Attitudes. At both time points, students completed an abridged version of the School Liking and Avoidance Questionnaire (Ladd, Buhs, & Seid, 2000). School liking was measured with four items (e.g., "*Do you like being in school?"* and "*Are you happy when you're at school*?"; time 1 α =.70 and time 2 α=.84 , respectively). The items were scored on a four-point likert scale (*1 = Not at all, 4 = A lot*) allowing the students' scores to be averaged for an overall school liking score.

School avoidance was measured with four items (e.g., "*Do you wish you didn't have to go to school?*" and "*Would you like it if your parents let you stay home from school?*" time 1 α=.86, time 2 α=.83). Items were scored on a four-point likert scale (*1 = Not at all, 4 = A lot*), allowing the students' scores to be averaged for an overall school avoidance score.

Analytic Strategy

Preliminary analyses. Descriptive statistics were computed to obtain means, standard deviations, standard error of measurements, and confidence intervals for all variables of interest. Correlations were also computed for the key variables.

Analyses of (Co)variance. Hypotheses 1a and 1b stated that traditional masculinity would vary by gender and ethnicity, respectively. To test this hypothesis, I conducted two 3 x 2 (ethnicity x sex) multivariate analysis of covariance: one with both subscales of masculine norms as the dependent variables, and one with both subscales of adherence to masculine norms as the dependent variables. For each test, household size (a proxy for socioeconomic status) was entered as a covariate. Following each of these tests, I performed a univariate analysis of variance (ANOVA) on each main effect and simple effects comparisons (used as post hoc tests) in order to identify differences between mean scores. If an interaction effect between ethnicity and sex existed, I calculated the simple main effects to examine the specifics of those interactions.

Hypotheses 2a and 2b stated that males would report increases in their endorsement of and adherence to masculinity norms, while females would report decreases in their endorsement of and adherence to masculinity norms between the 7^{th} and 8^{th} grades. To test these hypotheses, I conducted mixed-model 2 x 2 (sex x grade)

ANOVA, each with time as the within subjects factor, sex as the between subjects factor, and the masculinity subscale of interest as the dependent variable.

Regression analyses. Hypotheses 3a stated that the endorsement of and adherence to traditional masculinity norms would negatively predict school liking, positively predict school avoidance, and negatively predict engagement with school subjects. To test these hypotheses, I conducted several hierarchical multiple regression analyses. The criterion variables of these separate analyses included total school engagement, engagement with science, engagement with mathematics, engagement with language arts, engagement with social studies, school liking attitudes, and school avoidance attitudes, all at Time 2. Each of these criterion variables was regressed twice, once onto the endorsement of masculinity norms subscales (physical toughness and emotional stoicism) at Time 1, and again onto the adherence to masculinity subscales at Time 1. All analyses controlled for sex, ethnicity, size of household (proxy for SES), and the criterion variable under analysis at Time 1. After these analyses were run, I examined interactions with sex and ethnicity in a final model. When interactions were significant, I ran follow up analyses.

Mediation analyses. Hypothesis 4 stated that the relation between traditional masculinity and engagement with school subjects would be mediated by school liking and school avoidance attitudes. To test for the potential mediating role of school liking and avoidance, I used a causal steps approach to mediation (Judd & Kenny, 1981; Barron and Kenny, 1986) with Preacher and Hayes' (2008) resampling strategies for assessing indirect effects. Therefore, I conducted regression analyses with the masculinity scales as the independent variables, school engagement as the dependent variable, the school liking

and school avoidance subscales as mediating variables, and household size, ethnicity, sex, and school engagement at Time 1 as control variables (see Figure 6 for the conceptual model). When evidence for mediation was present, I confirmed the significance of the indirect path with a bootstrapping method (obtained with 5000 bootstrap resamples) yielding bias-corrected confidence estimates (MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2004).

RESULTS

These analyses were conducted to address the goals of the study and produced the following results. I begin by examining descriptive information of the sample, including means, standard deviations, and correlations among the key variables. Then, I present evidence pertaining to the first goal of the study, which was to examine whether masculinity varies by sex and ethnicity and whether it changes from 7^{th} to 8^{th} grade. Finally, I present evidence to address the second goal of the study, which was to identify the associations between masculinity and school engagement and attitudes of school liking and avoidance. Additionally, I examine whether the associations between masculinity and school engagement were mediated by attitudes of liking and avoidance.

Descriptive Statistics

Means, standard deviations, standard errors of measurement, and 95% confidence intervals for the masculinity subscales are presented in Table 1. Overall, students scored around the midpoint (on a 1 to 4 scale) on the masculinity subscales at both time points, representing moderate scores (standard errors of measurement for the subscales at both time points were between .22 and .25 meaning that, with 95% confidence, participants' true scores on these measures are between 1.5 and 3.2, depending on the subscale).

Descriptive statistics for the dependent variables are presented in Table 2. Participants reported school engagement scores that were slightly below the midpoint (on a scale of 1 to 7) at both time points, (true scores most likely between 3.72 and 5.35), school liking scores that were slightly above the midpoint (on a scale of 1 to 4) at both time points (true scores most likely between 2.19 and 3.53), and school avoidance scores that were slightly above the midpoint (on a scale of 1 to 4) at both time points (true scores most likely between 1.73 and 3.42).

Correlations among the key variables are presented in Table 3. Notably, scores on all the masculinity subscales showed significant associations with scores on school liking, school avoidance, and the school engagement total score. These relations were all in the directions expected according to the study's hypotheses.

Goal 1: Variations in Masculinity by Sex and Ethnicity

The first goal of the study was to examine how masculinity varies by sex and ethnicity. To accomplish this goal, I conducted a series of MANCOVAs. The first of these was a 3 (ethnicity) x 2 (sex) MANCOVA with the endorsement of masculinity norms subscales at Time 1 as the dependent variables and household size (a proxy for socioeconomic status) as the covariate. A Levene's test did not provide evidence for inequality of error variances across groups on the physical toughness subscale, F (5, 273) = 1.02, *ns*, or the emotional stoicism subscale, F (5, 273) = 0.83, *ns*. For the endorsement of emotional stoicism, there was a main effect for sex, F (2, 271) = 8.76, $p < .001$, but not for ethnicity, F (4, 542) = 0.90, $p = .47$, or the interaction of ethnicity-by-sex, F (4, 542) = 1.75, $p = .14$. This main effect for sex had a small effect size ($\eta^2 = .06$) and showed that male students reported higher scores on the emotional stoicism subscale of

masculinity ideology (M = 2.73, SD = .50) than did female students (M = 2.49, SD = .49). There were no main effects or interactions for the endorsement of physical toughness.

Next, I conducted a 3 (ethnicity) x 2 (sex) MANCOVA with the adherence to masculinity norms subscales at Time 1 as the dependent variables and household size as the covariate. A Levene's test did not provide evidence for inequality of error variances across groups on the physical toughness subscale, F (5, 282) = 0.50, *ns*, or the emotional stoicism subscale, F (5, 282) = .94 *ns*. Results of the MANCOVA revealed that there was a main effect for sex, F (2, 280) = 30.37, $p < .001$, but not for ethnicity F (4, 560) = 0.85, p = .50, or the interaction of ethnicity-by-sex, F (4, 560) = 1.99, p = .10. The main effect for sex had a moderately-small effect size (η^2 = .18) and showed that, on the adherence to emotional stoicism subscale, males reported higher scores (M = 2.78, SD = .53) than females (M = 2.30, SD = .49), and on the adherence to physical toughness subscale males again reported higher scores (M = 1.92, SD = .59) than females (M = 1.70, SD = .59).

Goal 1 (cont'd): Developmental Change in Masculinity

In addition to examining variations in masculinity by sex and ethnicity, this study also sought to examine whether and how masculinity changes over time during middle school. I began by examining changes in the endorsement of masculinity norms with two mixed-model 2 (time) x 2 (sex) ANOVAs, with time as the within-subjects factor and sex as the between-subjects factor. The first of these included the endorsement of emotional stoicism norms as the dependent variable. Results indicated a significant main effect for time, F (1, 296) = 5.66, $p < .05$, showing a slight decrease in the endorsement of emotional stoicism over time. There was a marginally significant time-by-sex

interaction, F (1, 296) = 3.28, $p < .10$, with a weak effect size, $\eta^2 = .011$. Males reported relatively stable levels while females reported a slight decrease in the endorsement of emotional stoicism norms (see Figure 1; see Table 1 for means and standard deviations). I then ran a similar ANOVA with the endorsement of physical toughness norms as the dependent variable. Results showed no main effect for time, F (1, 296) = 0.53, *ns*. However, there was a significant time-by-sex interaction, F (1, 296) = 13.67, $p < .001$. The effect size for this interaction was weak, $\eta^2 = .044$, showing that males reported an increased endorsement of physical toughness norms from the 7th to 8th grade, while females reported a decreased endorsement of physical toughness norms (see Figure 2; see Table 1 for means and standard deviations).

Then, to examine change in the adherence to masculinity norms, I conducted two more mixed-model 2 (time) x 2 (sex) ANOVAs with the adherence to masculinity subscales as the dependent variables. For the adherence to emotional stoicism norms, results revealed no main effect for time, F (1, 310) = 0.12, *ns*, and no interaction effect for time-by-sex F (1, 310) = 0.43, *ns*. For the adherence to physical toughness norms, there was a marginally significant effect for time, F (1, 310) = 3.11, < .10, showing an increase in adherence to norms of physical toughness between time points. There was also a marginally significant time-by-sex interaction, F (1, 310) = 3.09, $p < .10$. The effect size of this interaction was weak, $\eta^2 = .01$, and showed that females reported stable levels while males increased in their adherence to physical toughness scale from the 7th to 8th grades (see Figure 3; see Table 1 for means and standard deviations).

Goal 2: Associations with School Engagement and Attitudes toward School

Associations with school engagement. The second goal of the study was to identify the associations between masculinity and school engagement and attitudes of school liking and school avoidance. To this end, I conducted a series of hierarchical multiple regression analyses. In the first of these analyses, I entered household size, ethnicity, sex, and school engagement at Time 1 as covariates. Then I entered the endorsement of masculinity subscales at Time 1 as predictors of school engagement at Time 2 (see Table 4, Model 2). The endorsement of emotional stoicism norms at Time 1 negatively predicted school engagement at Time 2, above and beyond the school engagement scores at Time 1 and the other controls. The endorsement of physical toughness norms was not associated with school engagement. The inclusion of the masculinity ideology subscales into the model accounted for an additional 1.5 % of the variance in school engagement scores, a marginally significant increase, $\Delta R^2 = .015$; $F(2, 271) = 2.60$, $p < .10$; total adjusted $R^{2 =} .202$. In a final step (Table 4, Model 3), I tested for interactions with ethnicity and sex. There were no masculinity-by-ethnicity or masculinity-by-sex interactions in the prediction of school engagement.

Then, I entered the adherence to masculinity subscales at Time 1 as predictors of school engagement at Time 2 (see Table 5). After controlling for household size, ethnicity, sex, and school engagement scores at Time 1, the adherence to norms of emotional stoicism at Time 1 negatively predicted school engagement scores at Time 2, above and beyond the control variables (Table 5, Model 2). There was no association between the adherence to physical toughness norms and school engagement. The inclusion of the masculinity subscales into the model accounted for an additional 2.5% of

the variance in school engagement scores, $\Delta R^2 = .025$; F (2, 280) = 4.50, $p < .05$; total adjusted $R^{2 =}$ .197. I then tested for interactions with ethnicity and sex (Table 5, Model 3). There was a significant emotional stoicism-by-sex interaction, $\beta = .68$, t (276) = -2.14, $p < .05$. However, the inclusion of the interaction terms did not account for an additional proportion of the variance in school engagement scores. Therefore, I did not run follow up analyses on the emotional stoicism-by-sex interaction.

Associations with engagement by specific subject. I then conducted an additional series of hierarchical regression analyses to examine how the associations between masculinity and school engagement might vary across specific school subjects. First, I conducted four regression analyses specifying the endorsement of masculinity norms subscales as predictors of school engagement in four subject areas: language arts, mathematics, science, and social studies (see Table 6). After controlling for household size, ethnicity, sex, and engagement in the subject under analysis at Time 1, the endorsement of masculinity norms at Time 1 only predicted engagement with science at Time 2. Specifically, the endorsement of emotional stoicism norms significantly predicted lower levels of engagement in science subjects, above and beyond the covariates. The endorsement of physical toughness norms was not associated with engagement with science. The inclusion of the masculinity ideology subscales into the model accounted for an additional 2.0 % of the variance in engagement with science scores, $\Delta R^2 = .02$, F (2, 263) = 2.99, $p = .05$; total adjusted $R^{2 =}$ .101. There were no significant interactions with sex or ethnicity and the masculinity subscales in the prediction of engagement in any of the school subjects.

I then conducted four similar regression analyses with the adherence to masculinity norms subscales as predictors of school engagement in the same four subject areas (see Table 7). The adherence to masculinity subscales at Time 1 significantly predicted engagement with language arts and mathematics at Time 2. Specifically, the adherence to norms of emotional stoicism, but not the adherence to physical toughness norms, negatively predicted engagement with language arts. The addition of the masculinity subscales into the model accounted for an additional 2.4 % of the variance in the engagement with language arts scores, $\Delta R^2 = .024$; F (2, 280) = 3.90, $p < .05$; total adjusted $R^{2 =}$ .107. There were no interactions with sex or ethnicity and the masculinity subscales in the prediction of language arts scores. In the model predicting engagement with mathematics, only the adherence to norms of emotional stoicism was negatively associated with engagement with mathematics scores. In this model, the addition of the masculinity subscales accounted for an additional 1.6 % of the variance in engagement with mathematics scores, a change that was marginally significant, $\Delta R^2 = .016$; F (2, 279) = 2.60, $p < .10$; total adjusted $R^{2 =}$ .128. Interactions with sex and ethnicity were tested but were not significant in these two models.

Associations between the adherence to masculinity subscales and engagement with science and social studies were not significant. However, significant interactions existed between ethnicity and sex in the prediction of engagement of social studies. Specifically, there was a significant emotional stoicism-by-sex interaction and a marginally significant emotional stoicism-by-ethnicity interaction. Non-significant interactions terms were dropped and the model was run again with just these interaction terms remaining (see Table 7). This final analysis showed that both interactions were

significant, such that that the negative relation between emotional stoicism and engagement in social studies was stronger for boys than for girls (see Figure 4) and stronger for non-Latino students than for Latino students (see Figure 5). The addition of the interaction terms into the model accounted for an additional 2.7 % of the variance in engagement with social studies scores, $\Delta R^2 = .027$; F (2, 268) = 4.22, $p < .05$; total adjusted $R^2 = .153$.

Associations with school liking and school avoidance. As stated, the second goal of the study also included the identification of associations between masculinity and school attitudes of liking and avoidance. To address these questions I conducted hierarchical regression analyses. First, I specified a regression model predicting attitudes of school liking at Time 2 from the endorsement of masculinity norms at Time 1 (see Table 8). After controlling for household size, ethnicity, sex, and school liking scores at Time 1, results indicated that the endorsement of physical toughness, but not the endorsement of emotional stoicism, was negatively associated with school liking. The inclusion of these subscales into this model accounted for an additional 2.1 % of the variance in school liking scores, $\Delta R^2 = .021$; F (2, 272) = 3.77, $p < .05$; total adjusted $R^2 = .238$. Interactions with sex and ethnicity were tested but were not significant.

I then specified another regression model predicting attitudes of school liking from the adherence to masculinity norms subscales, the controls being the same. The final model (see Table 9) showed that the adherence to physical toughness significantly predicted lower levels of school liking. Adherence to emotional stoicism was not significant. The inclusion of the adherence to masculinity subscales into the model accounted for an additional 2.7 % of the variance in school liking scores, $\Delta R^2 = .027$; F

(2, 280) = 4.88, $p < .01$; total adjusted $R^{2 =}$ .219. There were no interactions with sex or ethnicity in the prediction of school liking attitudes.

I then conducted similar regression analyses predicting school avoidance attitudes at Time 2 from scores on the masculinity subscales at Time 1. The first of these analyses specified the endorsement of masculinity norms subscales as independent variables (see Table 10). Controlling for household size, ethnicity, sex, and school avoidance scores at Time 1, results indicated that the inclusion of the masculinity ideology subscales into the model did not account for a significant amount of additional variance in school avoidance scores, $\Delta R^2 = .012$; F (2, 271) = 2.10, *ns*; Total Adjusted $R^{2 =}$ .225. Therefore, there were no significant associations between the endorsement of masculinity norms and school avoidance scores. Furthermore, there were no interactions with sex or ethnicity.

The second of these analyses specified the adherence to masculinity subscales as predictors of school avoidance attitudes, the controls remaining the same (see Table 11). Results indicated that the inclusion of these subscales into the model did not account for a significant amount of additional variance in school avoidance scores, $\Delta R^2 = .013$; F (2, 279) = 2.29, $p = .10$; Total Adjusted $R^{2 =}$ .204. Thus, like the endorsement of masculinity norms, the adherence to masculinity at Time 1 was not associated with school avoidance attitudes at Time 2. Furthermore, there were no significant interactions with sex or ethnicity.

Goal 2 (cont'd): Mediation by School Attitudes

Finally, this study sought to examine whether the relation between masculinity and school engagement was mediated by attitudes of school liking and school avoidance. According to the causal steps approach (Baron & Kenny, 1986), a total effect of the

independent variable on the dependent variable (the c-path) must be significant in order for a mediating relationship to be possible. Thus, in the current study mediation could only be tested when a masculinity subscale was associated with school engagement. In my previous analyses, only the emotional stoicism subscales of both the endorsement to masculinity measure and the adherence to masculine norms measure were significantly associated with school engagement. Therefore, I conducted two separate mediation analyses for each of the emotional stoicism subscales. In the first analysis, I entered the endorsement of emotional stoicism subscale at Time 1 as the independent variable (see Figure 7). Results showed that the endorsement of emotional stoicism at Time 1 was positively associated with school engagement at Time 2 (the c-path), B = -.24, t (278) = -2.28, $p < .05$. Looking first at the potential mediating role of school liking, results showed that the endorsement of emotional stoicism at Time 1 was marginally and negatively associated with school liking at Time 1 (the a-path), B = -.11, t (278) = -1.65, $p < .10$, and that school liking at Time 1 was positively associated with school engagement at Time 2 (the b-path), B = -.51, t (278) = -5.52, $p < .001$. Then, looking at the potential mediating role of school avoidance, results showed that the endorsement of emotional stoicism at Time 1 was not associated with school avoidance at Time 1, (a-path), B = -.13, t (287) = -1.65, *ns*, although school avoidance at time 1 was negatively associated with school engagement at Time 2 (the b-path), B = -.24, t (287) = -2.94, $p < .01$. This suggested that mediation through school avoidance was unlikely or impossible. Because the a- and b-paths were significant or marginally significant for school liking, I examined the bootstrapped bias-corrected 95% confidence interval of the indirect effect (the c'-path). These results failed to confirm the mediating role of school liking in the

association between the endorsement of emotional stoicism norms and school engagement (B = -.15; CI = -.16 to .02). Thus, neither school liking nor school avoidance can be said to mediate the effect of the endorsement of emotional stoicism on school engagement.

I then entered the adherence to masculinity norms as the independent variable (see Figure 8). Results showed that the adherence to emotional stoicism at Time 1 was negatively related to school engagement at Time 2 (c-path), B = -.28, *t* (287) = -2.89, *p* = .04. Looking first at the mediating role of school liking, results showed that the adherence to norms of emotional stoicism at Time 1 was negatively associated with school liking at Time 1 (a-path), B = -.16, *t* (287) = -2.47, *p* = .01, and that school liking at Time 1 was positively associated with school engagement at Time 2 (b-path), B = .53, *t* (287) = -5.76, *p* < .001. Then looking at the mediating role of school avoidance, results showed that the adherence to norms of emotional stoicism at Time 1 was positively associated with school avoidance at Time 1 (a-path), B = .15, *t* (287) = 2.02, *p* < .05, and that school avoidance at Time 1was negatively associated with school engagement at Time 2, B = -.23, *t* (287) = -2.87, *p* < .01. Because the a- and b- paths were significant, I examined the bootstrapped confidence intervals for the indirect effect (the c'- path). These results confirmed that both school liking (B = -.09; CI = -.18 to -.02) and school avoidance (B = .04; CI = -.09 to -.003) mediated the relationship between the adherence to emotional stoicism and school engagement. Additionally, the direct effect of the adherence to emotional stoicism and school engagement was only marginally significant when controlling for school liking and school avoidance, B = -.16, *t* (287) = -1.84, *p* < .10, suggesting full mediation.

DISCUSSION

This study examined the associations between traditional masculinity and school adjustment among a sample of 7th and 8th grade students. The goals of this study were two-fold: to examine how the endorsement of and adherence to traditional masculinity varies by sex and ethnicity and how it may change over time during middle school, and to investigate the associations among traditional masculinity, school engagement and attitudes toward school. This research was guided by the Sex Role Strain paradigm of masculinity (Pleck, 1981), which holds that societal expectations for appropriate male behavior can lead to a variety of negative outcomes for individuals who rigidly endorse and/or adhere to those expectations.

This study offers several contributions to the literature on the socialization of masculinity. First, this study examined both the endorsement of and adherence to traditional masculinity norms, whereas much of previous scholarship under the Sex Role Strain paradigm focuses predominantly on the endorsement of masculinity norms. Thus, this study is able to speak to individuals' actual conformity to said norms. Second, this study showed that there are identifiable developmental patterns in masculinity over a one-year period in early adolescence. From 7th to 8th grade, there were significant changes in adolescents' endorsement of and adherence to specific male role norms. Third, it is one of the first empirical studies to consider the role of masculinity in the lives of females. Specifically, this study addresses the degree to which early adolescent females endorse and adhere to traditional masculinity norms, how these patterns change over a one-year period, and how females' endorsement of and adherence to masculinity norms are associated with indices of school adjustment. Finally, this study found that the

endorsement of and adherence to certain masculinity norms are predictively associated with diminished school adjustment. Thus, this study suggests that the gender gap in education may be partly explained by the degree to which students endorse and/or adhere to traditional male role norms.

Describing Masculinity in Early Adolescence: Sex and Ethnic Group Differences

The present study examined sex differences in the endorsement of and adherence to two prevailing norms of traditional masculinity, namely physical toughness and emotional stoicism. Previous research documenting sex differences in masculinity utilized measures of trait masculinity and showed that adolescent boys are more masculine than their female counterparts (Galambos et al., 1990; Priess et al., 2009). In this, however, the reader should be reminded that trait masculinity refers to a series of personality traits or behaviors thought to be more socially acceptable for men than for women. Such a notion of masculinity is valid, but fails to get at a central concern of the Sex Role Strain paradigm, namely that it represents a cultural construction of the male role that is ultimately both dysfunctional and unrealizable (Pleck, 1981; Levant et al., 1995). I anticipated that early adolescent boys would endorse and adhere to the physical toughness and emotional stoicism norms of said masculinity more highly than their female counterparts. Results showed that the boys in this study endorsed higher levels of emotional stoicism, but not physical toughness, than the girls. Results also showed that boys adhered to masculinity norms of emotional stoicism and physical toughness more than girls. Research on adults has consistently shown that men endorse higher levels of traditional masculinity than women (Levant et al., 1998; Levant, Richmond, et al., 2003; Levant, Cuthbert et al., 2003). These findings provide evidence for this same general

trend among adolescents, and also suggest that these sex differences apply to both the endorsement of and adherence to masculinity norms.

Previous studies have also shown ethnic differences in the endorsement of traditional masculinity. Most consistently, this work shows that African American individuals endorse higher levels of traditional masculinity than Latino or White individuals (Levant et al., 1992; Pleck, Levant et al., 2003). Findings regarding Latinos relative to other ethnicities, however, are more mixed. Some studies using adult samples have found that Latino adults and European American adults endorse similar levels of traditional masculinity (Abreu et al., 2000). Other studies show that Latino adults endorse higher levels of traditional masculinity than European American adults (Levant et al., 2003b). I expected Latino adolescents to endorse and adhere to masculinity norms at higher levels than their European American counterparts, but this study's findings showed that these two groups actually reported similar levels of both endorsement and adherence to norms of physical toughness and emotional stoicism.

Developmental Change in Masculinity

Scholars have implied that developmental trends in masculinity may exist during adolescence (Marcell et al., 2011), although there have been few formal examinations of such trends among early adolescents. In this study, I examined developmental change in masculinity over a one-year period, expecting that boys would increase but girls would decrease in their endorsement of and adherence to masculinity norms. My findings offered some support for this hypothesis as males reported increases in the endorsement of physical toughness norms, but not emotional stoicism norms, between the 7^{th} and 8^{th} grades. Females reported decreases in their endorsement of both physical toughness and

emotional stoicism norms over the same time period. Boys showed a small increase in their adherence to physical toughness norms, but not in their adherence to emotional stoicism norms. Girls remained stable in their adherence to masculinity norms during middle school.

It is notable that the developmental changes detected in this study were borne out in a relatively short time span. This suggests that early adolescence may be a particularly sensitive period for the socialization of masculinity. This may be due to cognitive advances in adolescents' thinking about gender (see Galambos et al., 2009) coupled with the felt need to fit in amongst a more complex peer environment that is middle school (Hardy, Bukowski, & Sippola, 2002). Specifically, adolescents may become increasingly cognizant of the discrepant values assigned to male-typed versus female-typed behaviors and activities (Galambos et al., 2009; Ferree, 1990; Feinman, 1984). Therefore, boys may increasingly endorse and adhere to some masculinity norms, such as physical toughness norms, as they progressively come to perceive value in these norms for their social statuses. On the other hand, girls may be increasingly resistant of ideas that boys should behave in physically tough and emotionally restricted ways, but may not be any less likely to actually incorporate these norms in terms of their own behaviors over time. In other words, these girls may become increasingly cognizant that endorsing traditional masculinity norms diminishes their own social statuses, although they may not perceive that acting on these norms does the same. In fact, some girls may perceive a certain social utility in adhering to masculinity norms (see Halim et al., 2011).

Importantly, however, these findings also showed that although boys increased in their endorsement of and adherence to physical toughness norms, they remained stable in

their endorsement of and adherence to emotional stoicism norms. That boys reported stable levels of emotional stoicism is actually consistent with research on boys' friendships during early adolescence. Way (2011) conducted in depth interviews of early adolescent boys asking about their closes relationships. She found that the majority of boys in her sample reported having emotionally intimate relationships with other boys during early adolescence. She suggested that many boys resist masculinity norms of emotional restrictiveness during early adolescence as the boys in her sample were emotionally open and expressive with one another. During middle adolescence, however, her interviews revealed that many boys begin to feminize such emotional intimacy, endorsing the belief that such is abnormal for males, even unacceptable. Way's work suggests that although boys begin to feminize emotional experiences during middle and late adolescence, their emotional lives during early adolescence may be relatively unrestricted. It is no surprise, then, that the current study found no increase in boys' endorsement of or adherence to masculinity norms of emotional stoicism.

The present discussion about the development of masculinity naturally leads to a dialogue about the mechanisms that drive this development. It is generally assumed that masculinity is socially constructed and transmitted to the individual through various socialization processes (Pleck, 1981; see Way, 2011). However, there are few studies to my knowledge that formally investigate the actual socializing mechanisms by which individuals come to internalize these norms. Developmental scholarship can serve as a starting point in this line of inquiry, as researchers regularly document families, peers, media, and schools as key socializing agents of children's development of gender knowledge, stereotypes, and identities. For example, parents are known to channel

(Eisenberg, Wolchik, Hernandez, & Pasternack, 1985) and directly instruct (Parke & Buriel, 1998) their children's behaviors and activities to align with socially prescribed norms for their sex, and even unconsciously communicate gender stereotypes through subtle gender labeling and comparisons (Gelman, Taylor, & Nguyen, Leaper, & Bigler, 2004). Peer groups during early childhood are often sex segregated, fostering children's further stereotypes about the opposite sex, (Martin & Fabes, 2001), and peer groups in adolescence may add to individual's felt pressure to conform to appropriate gender scripts (Egan & Perry, 2001). Television content often contains stereotyped images and that may lead to more gender stereotyped activities and interests (Coyne, Linder, Rasmussen, Nelson, & Collier, 2014) and schools find children socializing in peer groups that are replete with gender stereotypes (Sadker & Zittleman, 2001). These are viable starting points for understanding the various social agents that may drive the socialization of masculinity. In addition to understanding the mechanisms that may drive the socialization of masculinity, research should examine the role of broader culture in the construction of traditional masculinity. Indeed, Way (2011) might contend that studying the mechanisms of masculinity socialization provides a "thin culture," rather than a "thick culture" explanation of masculinity. Whereas thin culture explanations might show that television shows portray stereotypic images of males and females, thick culture explanations would seek to understand why strength and heroism are necessarily associated with being male and why vulnerability is necessarily associated with being female. Understanding traditional masculinity to such a depth would require rigorous qualitative investigations that yield rich datasets. Such issues, the thin and the thick (Way, 2011), should be a focus of future work.

Associations with School Engagement and Attitudes toward School

The primary goal of this study was to identify the associations between masculinity and two important indices of school adjustment: attitudes toward school and school avoidance. I hypothesized that traditional masculinity would be negatively associated with school engagement, negatively associated with school liking, and positively associated with school avoidance. This hypothesis was mostly supported. The endorsement of and adherence to emotional stoicism norms predicted lower levels of school engagement. Furthermore, the relation between the adherence to emotional stoicism and school engagement was mediated by both school liking and school avoidance attitudes. When considering specific school subjects, the endorsement of emotional stoicism was related to lower levels of engagement in science, and the adherence to emotional stoicism norms was related to lower levels of engagement in language arts and sciences, and for boys, was related to lower levels of engagement in social studies. Regarding school attitudes, the endorsement of and adherence to physical toughness norms was negatively associated with school liking, but neither the endorsement of or adherence to masculinity norms was associated with school avoidance attitudes. Of importance is that the associations between masculinity and school outcomes were mostly the same for boys and girls.

Taken together, these findings suggest that the tenets undergirding traditional masculinity may run contrary to the characteristics necessary for success in school, for boys and girls alike. Specifically, endorsing and adhering to traditional masculinity norms of emotional stoicism and physical toughness may have negative implications for students' academic adjustment through undermining their engagement with school

subjects and the degree to which they enjoy going to school. There are several possible reasons for these associations. Emotional stoicism involves the deliberate restriction on one's own emotions, particularly those emotions that are thought to convey weakness and vulnerability (Jansz, 2000). In this way, emotional stoicism allows the individual to present himself/herself as strong, resilient, and invulnerable. However, students who endorse emotional stoicism norms or who actively restrict their emotions may be less likely to solicit help from teachers or counselors when they are challenged in school. Studies show that restrictive emotionality is associated with diminished psychological help seeking (Addis & Mahalik, 2003). Individuals who endorse emotional stoicism are typically less open to communicating their struggles with others, including helping professionals, as such could bespeak personal vulnerability (Jansz, 2000). Within the school context, students who actively endorse and/or adhere to emotional stoicism norms may not be comfortable seeking help from teachers or counselors when challenges arise because of a similar fear that such would convey personal weakness. However, support from teachers is repeatedly shown to be a key factor in student engagement with school (Skinner & Belmont, 1993; Ryan & Patrick, 2001). For example, Klem and Connel (2004) reported that middle school students who perceived little to no support from their teachers are nearly 70% more likely to report risky levels of disengagement from school than their peers who perceive receiving teacher support. Indeed, boys and girls who are less disposed to approach teachers for help may effectively isolate themselves from this important source of support, and thereby experience diminishing engagement with school. Future work should examine how masculinity, and emotional stoicism in particular, is associated with the quality of student-teacher interactions and the tendency

to solicit help from those teachers. Were this explanation to receive support, it would be doubly concerning for students who bring with them extant personal challenges and struggles, such as psychological problems or problems at home. These students are already less likely to succeed in school (Fröjd et al, 2008), and in addition to being less likely to seek teacher support in their academics, they may also be less likely to seek help for their personal challenges from school counselors, compounding their risks for academic struggles.

Another possible explanation for the negative association between emotional stoicism and school engagement has to do with the actual rejection of positive school-related emotions. The scholarly consensus on school engagement is that it consists of three core types of engagement, one of which is emotional engagement (Fredricks et al., 2004). Emotional engagement is an individual's affective attitudes and investment with school activities (Fredricks, 2011; Upadaya & Salmela-Aro, 2013, Fredricks et al., 2004), and it contributes to academic adjustment, such as performance (Wang & Eccles, 2012; Dotterer & Lowe, 2012; Li & Lerner, 2012) and motivation to pursue further education (Wang & Eccles, 2012). Students who accommodate a socially prescribed emotional stoicism may effectively deny themselves these positive emotional experiences with school, especially if they also view school work as being stereotypically feminine (Jackson & Dempster, 2009). Fischer and Good (as cited in Good, Roberston, Fitzgerald, Stevens, & Bartels, 1996) have stated, "Emotions are a valuable source of information about the self, others, and the world. [Those] seeking to function competently in a variety of roles will want to access this information" (p. 48). Positive emotions toward the school experience are valuable sources of information for the student, and boys and

girls who refuse themselves these emotions are, in effect, refusing themselves information that could otherwise contribute to their investment with the school experience.

Physical toughness norms of masculinity may also undermine girls' and boys' school success through its association with school attitudes. Specifically, findings showed that the endorsement of and adherence to physical toughness norms, (but not emotional stoicism norms) was negatively associated with school liking. This relationship may be accounted for through the influence of physical toughness and aggression on students' peer relationships, which in turn may influence how they feel about school. Research shows that having conflict with peers is negatively related to academic outcomes such as motivation and performance (Ladd, Kochednerfer, & Coleman, 1998; Wentzel, 1998; Putallaz et al., 2007; Cillessen & Mayeaux, 2007). Students that endorse or act upon norms of physical toughness may experience more conflict with their peers (see Pleck et al., 1993), which in turn may lead to less positive attitudes toward school. However, it is also notable that our findings provided no evidence for a link between physical toughness and actual engagement with school. Additional research is needed to identify precisely why physical toughness norms are related to attitudes toward school, but not necessarily to school engagement. It is possible that students' displays of physical toughness may elicit more social support from certain kinds of peers. Indeed, the purpose of masculinity norms of physical toughness is to establish and maintain one's social status in the peer hierarchy, and research has shown that although aggressive children are not as well-liked among their peers more broadly (Cillessen & Rose, 2005; Zimmer-Gembeck, Pronk, Goodwin, Mastro, & Crick, 2012),

that they nevertheless are popular among certain types of peers, particularly those children who are also characterized as aggressive (Rodkin, Farmer, Pearl, & Acker, 2006). Therefore, students who endorse or adhere to physical toughness norms may have more conflict with many of their peers, leading to more negative attitudes toward school, yet still have a support base among their closer peers that may protect them against the effects of conflict on actual school engagement. Although not explored in the current study, this pattern would highlight the role that the peer group plays in how masculinity influences the individual's social and academic well-being. That is, the role of masculinity in adolescents' well-being may be adaptive in some ways and/or maladaptive in others, depending on adolescents' chosen peer groups. For some time now, scholars have pointed out that masculinity during adolescence is endorsed and enacted primarily in the context of social relationships (see Chu, Porche, & Tolman, 2005). As such, there is a need for scholarship to consider these contexts as moderators in the study of masculinity and its various correlates.

Finally, the lack of interactions with sex in the prediction of school outcomes also warrants discussion. There were very few interactions with masculinity and sex in the prediction of school engagement and school liking. This suggests that the associations between masculinity and school engagement and school liking are as relevant to girls as they are to boys. These findings are consistent with Burke's (1989) study on gender identity and school performance, in which he found that a masculine gender identity predicted lower GPA in all subject areas for boys and girls alike. The results from these studies together suggest that the influence of masculinity on academic adjustment may operate similarly, regardless of adolescents' sex. More broadly, these findings have

implications for scholarship on masculinity as a whole, which, for years, has made males its primary focus. For boys and men, traditional masculinity is associated with diminished mental health (Arrindell et al., 2003), increased problem behaviors (Pleck et al., 1993), and even troubled relationships (Burn & Ward, 2005). Given the significance of these findings for health and well-being, it follows that if females' accommodations of masculinity norms influence them in similar ways as they do boys, masculinity scholarship is obligated to expand its focus to consider of the well-being of females. Indeed, Nguyen and colleagues (2014) found that adherence to traditional masculinity norms was associated with more depressive symptoms, lower quality friendships, and lower self-esteem for both adolescent girls and boys. Furthermore, they found that the association between adherence to masculinity norms and depressive symptoms was actually greater for girls. The inclusion of females into masculinity scholarship is especially relevant in a time when girls are increasingly perceiving greater value and utility of the male role for themselves (Halim et al., 2011), as evidenced by their growing interest in masculine-typed activities and behaviors as early as elementary school (Bailey et al., 2002; Paechter & Clark, 2007). Therefore, frameworks that specifically address the correlates of male gender role socialization, such as the SRS paradigm, are in an opportune position to examine the function of masculinity in the lives of females. This is a priority for future research.

Implications for Practice

The findings from this study also have implications for practice. First is that adherence to and endorsement of masculinity norms are relevant for the development of school-based interventions that focus on decreasing dropout and/or promoting school

completion. These interventions, which are mostly delivered during middle and high school, seek to promote changes at the student and school levels that will increase engagement, attendance, and even social and behavioral adjustment (Lehr, Hansen, Sinclair, & Christenson, 2003). Our findings suggest that these intervention efforts may be enhanced by fostering resistance to norms of masculinity that undermine school and/or social adjustment. Our findings also provide evidence that said interventions at the middle school level may be particularly effective as early adolescence may be a sensitive time for the socialization of masculinity. Indeed, schools are key contexts for gender socialization (Zittleman, 2007). Therefore, interventions at the school level are ideally positioned to contest gender norms, such as the emotional stoicism and physical toughness norms of a traditional masculinity that undermine engagement or otherwise impede their chances for success in school.

Limitations

The findings of this study should only be interpreted with a concurrent regard to its limitations. First among these is that the data were short-term longitudinal. The longitudinal nature of the data allowed me to identify developmental patterns in masculinity during early adolescence and offer a stronger theoretical case for a causal relationship between masculinity and school outcomes. However, longitudinal data that spans a larger time frame is ultimately needed to gain a better understanding of the long-term developmental course of masculinity. Such data would be well-equipped to examine why boys' and girls' respective developmental trajectories regarding masculinity begin to emerge and widen (see Galambos, 2004), as this may have important implications for the cross-sex friendships and romantic relationships that begin

to form during this period (Connolly, 2004). Furthermore, it would allow for the examination of associations between masculinity and school outcomes over a longer age range. In addition to capturing a broader age range, future work should also test directional effects to assess whether the data support this study's proposed theoretical direction, namely that masculinity leads to less positive attitudes toward school and lower levels of school engagement. This was not a focus of the current study, but data spanning a broader range would be apt to addressing such questions.

Another limitation of this study is that I only examine two dimensions of a truly multidimensional construct of masculinity (Levant et al., 2010). Other norms of traditional masculinity include the avoidance of femininity and status and achievement seeking (Brannon, 1976; Levant et al., 2010). Regarding this study's primary question about masculinity and school adjustment, these norms are particularly relevant. For example, if school work is viewed by students as a stereotypically feminine activity (Jackson & Dempster, 2009), we can reasonably expect that the avoidance of femininity dimension of masculinity would also negatively predict the likes of school engagement and attitudes toward school. On the other hand, the achievement and status seeking dimensions of masculinity may actually facilitate school adjustment. For example, Choi (2004) found that masculinity norms emphasizing agency and instrumentality are positively associated with college students' general and academic self-efficacy (Choi, 2004).

Finally, the current study utilized a sample of low- to middle-class students from a metropolitan area in the Southwestern United States. The sample was representative of said area, as it comprised primarily Latino students with a sizable minority of European

American students. On one hand, this is a strength of the study as the majority of masculinity scholarship speaks to the experience of European American men and boys. However, this study also only represents a single geographic area and does not adequately represent students of other ethnic backgrounds, such as African-Americans or Asian-Americans. The inclusion of various geographic areas and multiple ethnic groups is especially relevant to the study of masculinity because geographic cultural variations in masculinity pervade the scholarly literature (see Levant et al., 1998). That is, there are not only ethnic differences in the endorsement of traditional masculinity, but there are also variations among ethnicities based on geographic residence (Levant et al., 2003a). Thus, it is important to acknowledge that the findings from this study could vary depending on which ethnic group is being studied, as well as the geographic location in which they reside. Although this study found no mean differences in masculinity between Latino and non-Latino students, and very few ethnicity-by-masculinity interactions in the prediction of school outcomes, future research should ask these questions while properly representing other ethnic groups.

Conclusion

This study represents several original contributions to research on masculinity. The Sex Role Strain paradigm (Pleck, 1981) is primarily focused on the implications of masculinity for the mental health of men and boys. As this study shows, however, there is great potential for the broadening of masculinity scholarship that would contribute to a more comprehensive narrative of male gender role socialization. Specifically, this study shows that the accommodation of masculinity norms is negatively associated with school engagement and attitudes toward school. Furthermore, this study was one of the first of

its kind to document developmental fluctuations in masculinity during early adolescence over a one-year period, suggesting that early adolescence may be a particularly sensitive time for the socialization of masculinity. Finally, this study was also one of the first to examine the relevance of traditional masculinity for females by showing that the associations between school outcomes and masculinity were nearly identical for boys and for girls.

REFERENCES

Abreu, J. M., Goodyear, R. K., Campos, A., & Newcomb, M. D. (2000). Ethnic belonging and traditional masculinity ideology among African Americans, European Americans, and Latinos. *Psychology of Men & Masculinity, 1*(2), 75-86.

Addis, M. E., & Mahalik, J. R. (2003). Men, masculinity, and the contexts of help seeking. *American Psychologist*, *58*(1), 5-14.

Ainley, M. & Ainley, J. (2011). Student engagement with science in early adolescence: The contribution of enjoyment to students' continuing interest in learning about science. *Contemporary Educational Psychology, 36*(1), 4-12.

Arizona Department of Education, National School Lunch Program and School Breakfast Program, (2012). *Child nutrition programs: Percentage of free and reduced reports.* Retrieved from http://www.azed.gov/health-nutrition/frpercentages/.

Arrindell, W.A., Kolk, A.M., & Martin, K., Kwee, M.G.T., & Booms, O.H. (2003). Masculine gender role stress: A potential predictor of phobic and obsessive-compulsive behavior. *Journal of Behavior Therapy and Experimental Psychiatry, 34,* 251-267.

Bailey, J. M., Bechtold, K. T., & Berenbaum, S. A. (2002). Who are tomboys and why should we study them? *Archives of Sexual Behavior*, *31*(4), 333-341.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173-1182.

Barron, J.M. (2010). Masculinity ideology, gender role strain, and identity styles in male college students. *Dissertation Abstracts International, Section B: The Sciences and Engineering, 70*(10-B), 6538.

Bem, S. (1974). The measurement of psychological androgyny. *Journal of Clinical Consulting Psychology, 42,* 155-162.

Berger, J. M., Levant, R., McMillan, K. K., Kelleher, W., & Sellers, A. (2005). Impact of gender role conflict, traditional masculinity ideology, alexithymia, and age on men's attitudes toward psychological help seeking. *Psychology of Men & Masculinity*, *6*(1), 73-78.

Blazina, C., Eddins, R., Burridge, A., & Settle, A.G. (2007). The relationships between masculinity ideology, loneliness, and separation-individuation difficulties. *The Journal of Men's Studies, 15,* 101-109.

Blazina, C., & Watkins Jr, C. E. (1996). Masculine gender role conflict: Effects on college men's psychological well-being, chemical substance usage, and attitudes towards help-seeking. *Journal of Counseling Psychology, 43*(4), 461-465.

Boesel, D. (2001). Student attitudes toward high school and educational expectations. Paper prepared for the annual meeting of the American Educational Research Association, Seattle, April, 2001. *Retrieved from http://files.eric.ed.gov/fulltext/ED450333.pdf*

Bosson, J. K., Taylor, J. N., & Prewitt-Freilino, J. L. (2006). Gender role violations and identity misclassification: The roles of audience and actor variables. *Sex Roles, 55*(1-2), 13-24.

Boulton, M.J., Jacqui, D., Boulton, L. (2011). Predicting children's liking of school from their peer relationships. *Social Psychology of Education, 14*(4), 489-501.

Brannon, R. (1976). The male sex role: Our culture's blueprint of manhood and what it's done for us lately. In D.S. David & R. Brannon (Eds.) *The forty-nine percent majority: The male sex role,* (pp.1-45). Reading, MA: Addison-Wesley.

Brooks, G. R., & Silverstein, L. B. (1995). Understanding the dark side of masculinity: An interactive systems model. In R. Levant and W. Pollack (Eds.) *A new psychology of men,* (pp. 280-333). New York, NY: Basic Books.

Buchmann, C., DiPrete, T. A., & McDaniel, A. (2008). Gender inequalities in education. *Annual Review of Sociology, 34,* 319-337.

Burke, P. J. (1989). Gender identity, sex, and school performance. *Social Psychology Quarterly, 52* (2), 159-169.

Burn, S. M., & Ward, A. Z. (2005). Men's conformity to traditional masculinity and relationship satisfaction. *Psychology of Men & Masculinity, 6*(4), 254-263.

Catalyst (2013). *Women in law in the U.S.* Retrieved from http://www.catalyst.org/-knowledge/women-law-us.

Catsambis, S. (2005). The gender gap in mathematics: Merely a step function? In A.M. Gallagher & J.C. Kaufman (Eds.) *Gender differences in mathematics: An integrative psychological approach* (pp 220-245). Cambridge, UK: Cambridge University Press.

Choi, N. (2004). Sex role group differences in specific, academic, and general self-efficacy. *The Journal of Psychology, 138*(2), 149-159.

Cillessen, A. H., & Mayeux, L. (2007). Expectations and perceptions at school transitions: The role of peer status and aggression. *Journal of School Psychology, 45*(5), 567-586.

Cillessen, A. H., & Rose, A. J. (2005). Understanding popularity in the peer system. *Current Directions in Psychological Science*, *14*(2), 102-105.

Connolly, J., Craig, W., Goldberg, A., & Pepler, D. (2004). Mixed-Gender Groups, Dating, and Romantic Relationships in Early Adolescence. *Journal of Research on Adolescence*, *14*(2), 185-207.

Coyne, S.M., Linder, J.R., Rasmussen, E.E., Nelson, D.A., & Collier, K.M. (2014). It's a bird! It's a plane! It's a gender stereotype!: Longitudinal associations between superhero viewing and gender stereotyped play. *Sex Roles, 70*, 416 – 430.

Chu, J. Y., Porche, M. V., & Tolman, D. L. (2005). The adolescent masculinity ideology in relationship scale. *Men and Masculinities, 8*(1), 93-115.

Connell, R.W. (1995). *Masculinities.* Cambridge, UK: Polity Press.

Connell, J. P., Spencer, M. B., & Aber, J. L. (1994). Educational risk and resilience in African-American youth: Context, self, action, and outcomes in school. *Child Development*, *65*(2), 493-506.

Counroyer, R. J., & Mahalik, J. R. (1995). Cross-sectional study of gender role conflict examining college-aged and middle-aged men. *Journal of Counseling Psychology, 42*(1), 11.

Crouter, A. C., Manke, B. A., & McHale, S. M. (1995). The family context of gender intensification in early adolescence. *Child Development*, *66*(*2*), 317-329.

Crouter, A. C., Whiteman, S. D., McHale, S. M., & Osgood, D. W. (2007). Development of gender attitude traditionality across middle childhood and adolescence. *Child Development*, *78*(3), 911-926.

Csikszentmihalyi, M., & Larson, R. (1987). Validity and reliability of the experience-sampling method. *The Journal of Nervous and Mental Disease*, *175*(9), 526-536.

Csikszentmihalyi, M., & Csikszentmihalyi, M. (1991). *Flow: The psychology of optimal experience* (Vol. 41). New York, NY: Harper Perennial.

DeVoe, J.F., & Chandler, K. (2005). *Student reports of bullying: Results from the 2001 school crime supplement to the national crime victimization survey* (NCES 2005-310). U.S. Department of Education, National Center for Educational Statistics. Washington, DC: Government Printing Office.

DiPrete, T.A., & Buchmann, C. (2013). *The rise of women: The growing gender gap in education and what it means for American schools.* New York, NY: Russell Sage Foundation.

Dotterer, A.M., & Lowe, K. (2012). Classroom context, school engagement, and academic achievement in early adolescence. *Journal of Youth and Adolescence, 40,* 1649-1660.

Eisenberg, N., Wolchik, S. A., Hernandez, R., & Pasternack, J. F. (1985). Parental socialization of young children's play: A short-term longitudinal study. *Child Development, 56*(6), 1506-1513.

Egan, S. K., & Perry, D. G. (2001). Gender identity: a multidimensional analysis with implications for psychosocial adjustment. *Developmental Psychology, 37*(4), 451 - 463.

Else-Quest, N. M., Hyde, J. S., Goldsmith, H. H., & Van Hulle, C. A. (2006). Gender differences in temperament: A meta-analysis. *Psychological Bulletin, 132,* 33-72.

Farmer, T. W., Estell, D. B., Leung, M. C., Trott, H., Bishop, J., & Cairns, B. D. (2003). Individual characteristics, early adolescent peer affiliations, and school dropout: An examination of aggressive and popular group types. *Journal of School Psychology, 41*(3), 217-232.

Feinman, S. (1981). Why is cross-sex-role behavior more approved for girls than for boys? A status characteristic approach. *Sex Roles, 7*(3), 289-300.

Feinman, S. (1984). A status theory of the evaluation of sex-role and age-role behavior. *Sex Roles, 10*(5-6), 445-456.

Finn, J. D. (1993). School engagement and students at risk. Washington, DC: National Center for Education Statistics.

Fischer, A. R., & Good, G. E. (1997). Men and psychotherapy: An investigation of alexithymia, intimacy, and masculine gender roles. *Psychotherapy: Theory, Research, Practice, Training, 34*(2), 160-170.

Fredricks, J.A., Blumenfeld, P.C., & Paris, A.H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74,* 59-109.

Fredricks, J.A. (2011). Engagement in school and out-of-school contexts: A multidimensional view of engagement. *Theory into Practice, 50,* 327-335.

Freeman, C.E. (2004). *Trends in Educational Equity for Girls and Women.* Washington, DC: National Center for Educational Statistics.

Fröjd, S. A., Nissinen, E. S., Pelkonen, M. U., Marttunen, M. J., Koivisto, A. M., & Kaltiala-Heino, R. (2008). Depression and school performance in middle adolescent boys and girls. *Journal of Adolescence, 31*(4), 485-498.

Galambos, N. L., Almeida, D. M., & Petersen, A. C. (1990). Masculinity, femininity, and sex role attitudes in early adolescence: Exploring gender intensification. *Child Development, 61*(6), 1905-1914.

Galambos, N. L. (2004). Gender and gender role development in adolescence. In R.M. Lerner and L. Steinberg (Eds.), *Handbook of adolescent psychology, 2nd ed.*, (pp. 233-262). Hoboken, NJ: Wiley & Sons.

Galambos, N. L., Berenbaum, S. A., & McHale, S. M. (2009). Gender development in adolescence. In R. Lerner and L. Steinberg (Eds.) *Handbook of Adolescent Psychology, 3rd ed*., Vol. 1... Hoboken, NJ: Wiley & Sons.

Garcia-Reid, P. (2007). Examining social capital as a mechanism for improving school engagement among low income Hispanic girls. *Youth & Society, 39*(2), 164-181.

Gelman, S. A., Taylor, M. G., Nguyen, S. P., Leaper, C., & Bigler, R. S. (2004). Mother-child conversations about gender: Understanding the acquisition of essentialist beliefs. *Monographs of the society for research in child development*, i-142.

Gilmore, D.D. (1990). *Manhood in the making: Cultural concepts of masculinity.* New Haven: Yale University Press.

Goldin C., Katz, L.F., Kuziemoko, I. (2006). The homecoming of American college women: the reversal of the college gender gap. *Economic Perspectives, 20*(4), 133-156.

Good, G. E., Robertson, J. M., Fitzgerald, L. F., Stevens, M., & Bartels, K. M. (1996). The relation between masculine role conflict and psychological distress in male university counseling center clients. *Journal of Counseling & Development*, *75*(1), 44-49.

Halim, M.L., Ruble, D.N., & Amodio, D.M. (2011). From pink frilly dresses to 'one of the boys': A social-cognitive analysis of gender identity development and gender bias. *Social and Personality Psychology Compass, 5*(11), 933-949.

Hardiman, D., Lynch, C., Marge, M., Steffen, B.L., Vandenbroucke, D. A., & Yao, Y. G. D. (2007). *Worst case housing needs 2007: A report to Congress*. Retrieved from http://www.huduser.org/portal/publications/affhsg/wc_HsgNeeds07.html

Hardy, C.L., Bukowski, W.M., & Sippola, L.K. (2002). Stability and change in peer relationships during the transition to middle-level school. *The Journal of Early Adolescence, 22*(2), 117-142.

Hawkins, J. D., Guo, J., Hill, K. G., Battin-Pearson, S., & Abbott, R. D. (2001). Long-term effects of the Seattle Social Development Intervention on school bonding trajectories. *Applied Developmental Science, 5*(4), 225-236.

Hayashi, S. (1999). Masculinity and mental health: The relationship between men's attitudes toward male gender roles and mental health indices: Anxiety, depression, affect regulation, and self-esteem. *JASS Proceedings, 11*(1), 2-13.

Hayes, J. A., & Mahalik, J. R. (2000). Gender role conflict and psychological distress in male counseling center clients. *Psychology of Men & Masculinity*, *1*(2), 116-125.

Hill, J. P., & Lynch, M. E. (1983). The intensification of gender-related role expectations during early adolescence. In J. Brooks-Gunn and A.C. Peterson (Eds.), *Girls at puberty*, (pp. 201-228). Springer US.

Hirschfield, P. J., & Gasper, J. (2011). The relationship between school engagement and delinquency in late childhood and early adolescence. *Journal of Youth and Adolescence*, *40*(1), 3-22.

Hodgetts, K. (2008). Underperformance or 'getting it right'? Constructions of gender and achievement in the Australian inquiry into boys' education. *British Journal of Sociology of Education*, *29*(5), 465-477.

Jackson, C., 2006. *'Lads' and 'ladettes' in school: gender and a fear of failure.* Maidenhead, England: Open University Press.

Jackson, C., & Dempster, S. (2009). 'I sat back on my computer… with a bottle of whisky next to me': constructing 'cool' masculinity through 'effortless' achievement in secondary and higher education. *Journal of Gender Studies*, *18*(4), 341-356.

Jakupcak, M. Lisak, D., & Roemer, L. (2002). The role of masculine ideology and masculine gender role stress in men's perpetration of aggression and violence in relationships. *Journal of Men and Masculinity, 3,* 97-106.

Janosz, M., Archambault, I., Morizot, J., & Pagani, L. S. (2008). School engagement trajectories and their differential predictive relations to dropout. *Journal of Social Issues*, *64*(1), 21-40.

Jansz, J. (2000). Masculine identity and restrictive emotionality. In A. H. Fischer (Ed.) *Gender and Emotion: Social Psychological Perspectives* (pp. 166-168). Cambridge, UK: Cambridge University Press.

Jessor, R., Van Den Bos, J., Venderryn, J., Costa, F.M., & Turbin, M.S. (1995). Protective factors in adolescent problem behavior: Moderator effects and developmental change. *Developmental Psychology, 31*(6), 923-933.

Judd, C. M., & Kenny, D. A. (1981). Process analysis estimating mediation in treatment evaluations. *Evaluation review*, *5*(5), 602-619.

Kaiser Family Foundation (2011). *Distribution of medical school graduates by gender.* Retrieved from http://kff.org/other/state-indicator/medical-school-graduates-by-gender/.

Katz, P. A., & Ksansnak, K. R. (1994). Developmental aspects of gender role flexibility and traditionality in middle childhood and adolescence. *Developmental Psychology, 30*(2), 272-282.

Kessels, U. (2005). Fitting into the stereotype: How gender-stereotyped perceptions of prototypic peers relate to liking for school subjects. *European Journal of Psychology of Education*, *20*(3), 309-323.

Kimmel, M. S., & Mahler, M. (2003). Adolescent masculinity, homophobia, and violence random school shootings, 1982-2001. *American behavioral scientist, 46*(10), 1439-1458.

Kimmel, M.S. (2008). *Guyland: The perilous world where boys become men.* New York, NY: HarperCollins.

Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health, 74*(7), 262-273.

Ladd, G.W., Kochenderfer, B.J., & Coleman, C.C. (1996). Friendship quality as a predictor of young children's early school adjustment. *Child Development, 67,* 1103-1118.

Ladd, G. W., Buhs, E. S., & Seid, M. (2000). Children's initial sentiments about kindergarten: Is school liking an antecedent of early classroom participation and achievement? *Merrill-Palmer Quarterly, 46,* 255-279.

Ladd, G.W., & Burgess, K.B. (2001). Do relational risks and protective factors moderate the linkages between childhood aggression and early psychological and school adjustment? *Child Development, 72,* 1579-1601.

Lehr, C. A., Hansen, A., Sinclair, M. F., & Christenson, S. L. (2003). Moving Beyond Dropout towards School Completion: An Integrative Review of Data-Based Interventions. *School Psychology Review*, *32*(3), 342-364.

Levant, R. F., Hirsch, L. S., Celentano, E., & Cozza, T. M. (1992). The male role: An investigation of contemporary norms. *Journal of Mental Health Counseling, 14(3),* 325-337.

Levant, R.F., & Pollack, W.S. (1995). *A New Psychology of Men.* New York, NY: Basic Books.

Levant, R. F., & Majors, R. G. (1997). An investigation into variations in the construction of the male gender role among young African American and European American women and men. *Journal of Gender, Culture and Health*, *2*(1), 33-43.

Levant, R. F., Majors, R. G., & Kelley, M. L. (1998). Masculinity ideology among young African American and European American women and men in different regions of the United States. *Cultural Diversity and Mental Health*, *4*(3), 227-236.

Levant, R. F., Cuthbert, A., Richmond, K., Sellers, A., Matveev, A., Mitina, O., Sokolovsky, M., & Heesacker, M. (2003). Masculinity ideology among Russian and US young men and women and its relationships to unhealthy lifestyles habits among young Russian men. *Psychology of Men & Masculinity*, *4*(1), 26-36.

Levant, R. F., Richmond, K., Majors, R. G., Inclan, J. E., Rossello, J. M., Heesacker, M., Sellers, A. (2003). A multicultural investigation of masculinity ideology and alexithymia. *Psychology of Men and Masculinity*, *4,* 97-99.

Levant, R. F., Rankin, T. J., Williams, C. M., Hasan, N. T., & Smalley, K. B. (2010). Evaluation of the factor structure and construct validity of scores on the Male Role Norms Inventory—Revised (MRNI-R). *Psychology of Men & Masculinity*, *11*(1), 25-37.

Lewis, A. D., Huebner, E. S., Malone, P. S., & Valois, R. F. (2011). Life satisfaction and student engagement in adolescents. *Journal of Youth and Adolescence*, *40*(3), 249-262.

Li, Y, & Lerner, R.M. (2011). Trajectories of school engagement during adolescence: Implications for grades, depression, delinquency, and substance use. *Developmental Psychology, 47,* 233-247.

Lightbody, P., Siann, G., Stocks, R., & Walsh, D. (1996). Motivation and attribution at secondary school: the role of gender. *Educational Studies, 22*(1), 13-25.

Locke, B. D., & Mahalik, J. R. (2005). Examining Masculinity Norms, Problem Drinking, and Athletic Involvement as Predictors of Sexual Aggression in College Men. *Journal of Counseling Psychology*, *52*(3), 279-284.

Mahalik, J. R., Locke, B. D., Ludlow, L. H., Diemer, M. A., Scott, R. P., Gottfried, M., & Freitas, G. (2003). Development of the Conformity to Masculine Norms Inventory. *Psychology of Men & Masculinity*, *4*(1), 3.

MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, *39*(1), 99-128.

Marks, G. N. (2008). Accounting for the gender gaps in student performance in reading and mathematics: evidence from 31 countries. *Oxford Review of Education, 34*(1), 89-109.

Marks, H. M. (2000). Student engagement in instructional activity: Patterns in the elementary, middle, and high school years. *American Educational Research Journal, 37*(1), 153-184.

Martin, C. L., & Halverson Jr, C. F. (1981). A schematic processing model of sex typing and stereotyping in children. *Child development, 52,* 1119-1134.

Martin, C. L., & Fabes, R. A. (2001). The stability and consequences of young children's same-sex peer interactions. *Developmental Psychology, 37*(3), 431.

Martin, C.L., Andrews, N.C.Z., England, D.E., Zosuls, K., & Ruble, D.N. (Under review) Androgyny revisited: The development and consequences of a dual-identity view of gender typicality. *Manuscript submitted for publication.*

Martino, W. (1999). 'Cool boys', 'party animals', 'squids' and 'poofters': interrogating the dynamics and politics of adolescent masculinities in school. *British Journal of Sociology of Education, 20*(2), 239-263.

Mead, M. (1935). *Sex and temperament in three primitive societies.* New York, NY: Morrow.

Murnen, S. K., Wright, C., & Kaluzny, G. (2002). If "boys will be boys," then girls will be victims? A meta-analytic review of the research that relates masculine ideology to sexual aggression. *Sex Roles, 46*(11-12), 359-375.

Murray, C., Waas, G. A., & Murray, K. M. (2008). Child race and gender as moderators of the association between teacher–child relationships and school adjustment. *Psychology in the Schools, 45*(6), 562-578.

Nakamura, J., & Csikszentmihalyi, M. (2002). The concept of flow. In C.R. Snyder (Ed.) *Handbook of positive psychology,* (pp. 89-105). New York, NY: Oxford University Press.

Nansel, T.R., Overpeck, M.D., Pilla, R.S., Ruan, W.J., Simons-Morton, B., & Cheidt, P.C. (2001). Bullying behaviors among U.S. youth: Prevalence and association with psychological adjustment. *Journal of the American Medical Association, 285,* 2094-2100.

National Center for Education Statistics (2013). *Digest of Education Statistics.* Retrieved from http://nces.ed.gov/programs/digest/2013menu_tables.asp

Newmann, F., Wehlage, G. G., & Lamborn, S. D. (1992). The significance and sources of student engagement. In F. Newmann (Ed.), *Student engagement and achievement in American secondary schools,* (pp. 11–39). New York: Teachers College Press.

Nguyen, K., Katz, J., Orland, J., & Way, N. (2014). Adolescent girls' and boys' adherence to norms of masculinity and its association with psychological and social well-being. *Poster presented at the 2014 Gender Development Research Conference, San Francisco, CA.*

O'Neil, J. M., Helms, B. J., Gable, R. K., David, L., & Wrightsman, L. S. (1986). Gender-role conflict scale: College men's fear of femininity. *Sex Roles, 14(5-6),* 335-350.

Paechter, C., & Clark, S. (2007, August). Who are tomboys and how do we recognize them?. W*omen's Studies International Forum, 30* (4), 342-354.

Parke, R.D., & Buriel, R. (1998). Socialization in the family: Ethnic and ecological perspectives. In W. Damon and R.M. Lerner (Eds.), *Child and Adolescent Development: An Advanced Course,* (pp. 96-128). Hoboken, NJ: Wiley.

Perdue, N. H., Manzeske, D. P., & Estell, D. B. (2009). Early predictors of school engagement: Exploring the role of peer relationships. *Psychology in the Schools, 46*(10), 1084-1097.

Perkins, R., Kleiner, B., Roy, S., & Brown, J. (2004). *The High School Transcript Study: A decade of change in curricula and achievement, 1990-2000.* Washington, DC: NCES.

PEW Latino Research Center, (2008). *Latinos see their situation in U.S. deteriorating: Oppose key immigration enforcement measures.* Retrieved from http://pewLatino.org/files/reports/93.pdf

PEW Latino Research Center, (2011). *Mapping the Latino Population, By State, County, and City.* Retrieved from http://www.pewLatino.org/2013/08/29/mapping-the-latino-population-by-state-county-and-city/

Pollack, W. S. (1998). *Real boys: Rescuing our sons from the myths of boyhood.* New York: Random House.

Pleck, J. H. (1981). *The myth of masculinity*. Cambridge, MA: MIT Press.

Pleck, J. H., Sonenstein, F.L., & Ku, L.C. (1993). Masculinity ideology: Its impact on adolescent males' heterosexual relationships. *Journal of Social Issues, 49*(3), 11-29.

Pleck, J. H., Sonenstein, F. L., & Ku, L. C. (1993). Masculinity ideology and its correlates. In S. Oskamp and M. Costanzo (Eds.), *Gender issues in social psychology* (pp.85-110). Newbury Park, CA: Sage Publications.

Pleck, J. H., Sonenstein, F. L., & Ku, L. C. (1994). Attitudes toward male roles among adolescent males: A discriminant validity analysis. *Sex Roles, 30*(7-8), 481-501.

Pleck, J.H. (1995). The gender role strain paradigm: An update. In R.F. Levant & W.S. Pollack (Eds.), *A new psychology of men,* pp. 11-32. New York, NY: Basic Books.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879-891.

Priess, H. A., Lindberg, S. M., & Hyde, J. S. (2009). Adolescent Gender-Role Identity and Mental Health: Gender Intensification Revisited. *Child Development, 80*(5), 1531-1544.

Putallaz, M., Grimes, C. L., Foster, K. J., Kupersmidt, J. B., Coie, J. D., & Dearing, K. (2007). Overt and relational aggression and victimization: Multiple perspectives within the school setting. *Journal of School Psychology*, *45*(5), 523-547.

Rashid T., Yasin, M., & Massoth, N. (2000). Pakistani males: an example of traditional masculine socialization. *Society for the Psychological Study of Men and Masculinity Bulletin, 5*(3), 25-26.

Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., ... & Udry, J. R. (1997). Protecting adolescents from harm: findings from the National Longitudinal Study on Adolescent Health. *The Journal of the American Medical Association, 278*(10), 823-832.

Rodkin, P. C., Farmer, T. W., Pearl, R., & Acker, R. V. (2006). They're cool: Social status and peer group supports for aggressive boys and girls. *Social Development*, *15*(2), 175-204.

Ruble, D. N., Martin, C. L., & Berenbaum, S. A. (2006). Gender development. In W. Damon & R. M. Lerner (Series Eds.) & N. Eisenberg(Vol. Ed.), *Handbook of Child Psychology, vol. 3. Social, Emotional, and Personality development* (6th ed., pp. 858–932). Hoboken, NJ: John Wiley & Sons.

Ryan, A. M., & Patrick, H. (2001). The classroom social environment and changes in adolescents' motivation and engagement during middle school. *American Educational Research Journal*, *38*(2), 437-460.

Santos, C., Galligan, K., Pahlke, E., & Fabes, R. (2103). Gender-typed behaviors, achievement and adjustment among racially and ethnically diverse boys during early adolescence. *American Journal of Orthopsychiatry, 83*(2-3), 252-264.

Sadker, D., & Zittleman, K. (2001). Gender bias: From colonial America to today's classrooms. In J. Banks and C. McGee Banks (Eds.), *Multicultural education: Issues and perspectives*, pp. 125-151. Hoboken, NJ: Wiley.

Shernoff, D. J., Csikszentmihalyi, M., Schneider, B., & Shernoff, E. S. (2003). Student engagement in high school classrooms from the perspective of flow theory. *School Psychology Quarterly*, *18*(2), 158-176.

Shin, R., Daly, B., & Vera, E. (2007). The relationships of peer norms, ethnic identity, and peer support to school engagement in urban youth. *Professional School Counseling*, *10*(4), 379-388.

Shochet, U., Dadds, M.R., Ham, D., & Montague, R. (2006). School connectedness is an underemphasized parameter in adolescent mental health: results of a community prediction study. *Journal of Clinical Child and Adolescent Psychology, 35,* 170-179.

Sifneos, P. E. (1973). The prevalence of 'alexithymic' characteristics in psychosomatic patients. *Psychotherapy and Psychosomatics*, *22*(2-6), 255-262.

Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of educational psychology*, *85*(4), 571.

Snyder, T.D., & Dillow, S.A. (2007). *Digest of educational statistics, 2006.* Washington, DC: National Center for Educational Statistics.

Spence, J. T., & Helmreich, R. L. (1978). *Masculinity & femininity: Their psychological dimensions, correlates, and antecedents*. Austin, TX: University of Texas Press.

Swanson, J., Valiente, C., & Lemery-Chalfant, K. (2012). Predicting academic achievement from cumulative home risk: The mediating roles of effortful control, academic relationships, and school avoidance. *Merrill-Palmer Quarterly 58*(3), 375-408.

Truman, D. M., Tokar, D. M., & Fischer, A. R. (1996). Dimensions of masculinity: Relations to date rape supportive attitudes and sexual aggression in dating situations. *Journal of Counseling & Development*, *74*(6), 555-562.

Tuominen-Soini, H., Salmela-Aro, K, & Niemivirta, M. (2011). Stability and change in achievement goal orientations: A person-centered approach. *Contemporary Educational Psychology, 36,* 82-100.

Ueno, K., & McWilliams, S. (2010). Gender-typed behaviors and school adjustment. *Sex Roles*, *63*(7-8), 580-591.

Upadaya, K., Salmela-Aro, K. (2013). Development of school engagement in association with academic success and wellbeing in varying social contexts: A review of empirical research. *European Psychologist, 18,* 136-147.

Valiente, C. Lemery-Chalfant, K., & Castro, K.S. (2007). Children's effortful control and academic competence: Mediation through school liking. *Merrill-Palmer Quarterly, 53*(1), 1-25.

Voelkl, K. E. (1997). Identification with school. *American Journal of Education, 105*, 204–319.

Wade, J.C., & Brittan & Powell, C. (2001). Men's attitudes toward race and gender equity: The importance of masculinity ideology, gender related traits, and reference group identity dependence. *Psychology of men and Masculinity, 2,* 45-50.

Wang, M. & Eccles, J.S. (2012). Adolescent behavioral, emotional, and cognitive engagement trajectories in school and their differential relations to educational success. *Journal of Research on Adolescence, 22,* 31-39.

Way, N., Santos, C.E., & Cordero, A. (2011). "Sometimes you need to spill your heart out to somebody": Close friendships among Latino adolescent boys. In N. Cabrera, F. Villaruel, & H. Fitzgerald (Eds.), *Latina and Latino Children's Mental Health.* Santa Barbara, CA: Praeger.

Way, N. (2011). *Deep Secrets: Boys' Friendships and the Crisis of Connection.* Cambridge, MA: Harvard University Press.

Wentzel, K. R. (1998). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of Educational Psychology, 90*(2), 202 - 209.

Wu, R., Levant, R. F., & Sellers, A. (2001). The Influences of Sex and Social Development on the Masculinity Ideology of Chinese Undergraduate Students. *Psychological Science Shanghai, 24*(3), 365-366.

Zimmer-Gembeck, M. J., Pronk, R. E., Goodwin, B., Mastro, S., & Crick, N. R. (2013). Connected and isolated victims of relational aggression: Associations with peer group status and differences between girls and boys. *Sex Roles, 68*(5-6), 363-377.

Zittleman, K. R. (2007). Gender perceptions of middle schoolers: the good and the bad. *Middle Grades Research Journal, 2*(2), 65-97.

Table 1

Means, standard deviations, standard errors of measurement, and 95% CI's for masculinity subscales

	7th Grade		8th Grade	
Masculinity Subscale	Males	Females	Males	Females
End-Phys. Toughness				
M	2.06	2.04	2.18	1.90
SD	0.68	0.62	0.64	0.63
SEM	.25	.22	.23	.23
95% CI +/-	.49	.43	.45	.45
End-Emotional Stoic.				
M	2.73	2.51	2.71	2.41
SD	.50	0.49	0.48	0.45
SEM	.25	.25	.24	.23
95% CI +/-	.49	.49	.47	.45
Adh-Phys. Toughness				
M	1.92	1.70	2.03	1.69
SD	0.59	0.59	0.57	0.63
SEM	.24	.24	.23	.25
95% CI +/-	.47	.47	.45	.49
Adh-Emotional Stoic.				
M	2.79	2.30	2.77	2.32
SD	0.53	0.49	0.51	.52
SEM	.25	.23	.24	.24
95% CI +/-	.49	.45	.47	.47

Note. SEM = Standard error of measurement; CI = Confidence interval; End-Phys. Toughness = Endorsement of Masculinity Norms Physical Toughness subscale; End-Emotional Stoic. = Endorsement of Masculinity Norms Emotional Stoicism subscale; Adh-Phys. Toughness = Adherence to Masculinity Norms Physical Toughness subscale; Adh-Emotional Stoic. = Adherence to Masculinity Norms Emotional Stoicism subscale. All masculinity subscales have a 1-4 range.

Table 2

Means, standard deviations, standard errors of measurement, and 95% CI for dependent variables

Variable	7th Grade Males	7th Grade Females	8th Grade Males	8th Grade Females
School Liking				
M	2.80	2.88	2.89	3.08
SD	0.56	0.60	0.68	0.57
SEM	.31	.33	.27	.23
95% CI +/-	.61	.65	.53	.45
School Avoidance				
M	2.44	2.30	2.91	2.76
SD	0.77	0.78	0.63	0.73
SEM	.29	.29	.26	.30
95% CI +/-	.57	.57	.51	.59
Engagement – Total [a]				
M	4.62	4.46	4.37	4.29
SD	1.03	1.00	0.96	0.88
SEM	.37	.36	.32	.29
95% CI +/-	.73	.71	.63	.57
Engagement–LangArts				
M	4.17	4.32	4.29	4.43
SD	1.28	1.40	1.02	1.10
SEM	.61	.67	.53	.57
95% CI +/-	1.20	1.31	1.04	1.12
Engagement - Math				
M	4.76	4.43	4.26	4.38
SD	1.39	1.39	1.45	1.46
SEM	.57	.57	.52	.53
95% CI +/-	1.12	1.12	1.02	1.04
Engagement – Social Studies				
M	4.66	4.19	4.46	4.02
SD	1.31	1.32	1.30	1.33
SEM	.59	.59	.50	.52
95% CI +/-	1.16	1.16	.98	1.02
Engagement – Science				
M	4.89	4.92	4.48	4.32
SD	1.22	1.25	1.25	1.29
SEM	.55	.56	.50	.52
95% CI +/-	1.08	1.10	.98	1.02

Note. [a] Engagement Total is the combined average of engagement scores across the four specific subjects. All engagement scales have a 1-7 range. School liking and school avoidance scales have a 1-4 range.

Table 3
Correlations among the key variables

Variable	End. PhysT	End. EmSto	Adh PhysT	Adh EmSto	Schl Liking	Schl Avoid	Eng-Total	Eng. - Lang.	Eng. – Math	Eng.- Sci	Eng. - Soc
End. – PhysT	--										
End. – EmSto	.43***	--									
Adh. – PhysT	.70***	.38***	--								
Adh. –EmSto	.27***	.63***	.33***	--							
Schl Liking	-.19**	-.22**	-.20***	-.25***	--						
Schl Avoid	.17**	.19**	.14*	.20***	-.58***	--					
Eng-Total	-.16**	-.21***	-.16**	-.19**	.56***	-.45***	--				
Eng – Lang.	-.08	-.15**	-.12*	-.18**	.41***	-.33***	.72***	--			
Eng – Math	-.10	-.14*	-.14*	-.20**	.48***	-.36***	.71**	.34**	--		
Eng – Sci.	-.12*	-.18**	-.10	-.13*	.40***	-.33**	.71**	.44***	.27***	--	
Eng – Soc.	-.14*	-.12*	-.09	-.05	.33**	-.26***	.74***	.42***	.34***	.37***	--
Household	.11	.03	.05	.02	-.04	.08	-.07	-.03	<.01	-.11	-.07

*** p < .001; ** p < .01; * p < .05

Note. End. – PhysTgh = Endorsement of Physical Toughness; End. – EmStoic = Endorsement of Emotional Stoicism; Adh. – PhysTgh = Adherence to Physical Toughness; Adh. – EmSToic = Adherence to Emotional Stoicism; Eng. – Total = School Engagement Total Score; Eng. – Lang = Engagement in Language Arts; Eng. – Math = Engagement in Mathematics; Eng. – Sci – Engagement with Science; Eng – Soc = Engagement with Social Studies; Household = number of people in the household (proxy for socioeconomic status)

Table 4

Regression coefficients predicting school engagement at Time 2 from endorsement of masculinity subscales at Time 1 and control variables

	Model 1			Model 2			Model 3		
Variable	B	SE B	β	B	SE B	β	B	SE B	β
Household Size	-1.41	.02	-.11*	-.04	.02	-.10^{+}	-.04	.02	-.11*
Ethnicity – Latino	1.25	.10	.05	.10	.10	.05	.12	.10	.06
Sex	-0.77	.10	.01	.09	.10	.05	1.28	.56	.69*
School Engagement – T1	.40	.05	.44**	.37	.05	.41**	.38	.05	.42**
Masculinity Subscales									
Emotional Stoicism				-.24	.11	-.13*	-.11	.20	-.06
Physical Toughness				<.01	.09	<.01	.14	.16	.10
Masculinity x sex/ethnicity									
ES x Sex							-.25	.25	.01
PT x Sex							-.26	.19	<.01
ES x Ethnicity							.01	.06	-.39
PT x Ethnicity							<.01	.06	-.32
ΔR^2		.190			.015			.018	
F for change in R^2		65.28**			2.60^{+}			1.55	
Total Adjusted R^2		.192			.202			.208	

$^{+}$p < .10, *p < .05, **p < .01

Note. T1 = Time 1; ES x Sex/Ethnicity = Emotional Stoicism-by-sex/ethnicity interaction; PT x Sex/Ethnicity = Physical Toughness-by-sex/ethnicity interaction.

Table 5

Regression coefficients predicting school engagement at Time 2 from adherence to masculinity subscales at Time 1 and control variables

	Model 1			Model 2			Model 3		
Variable	B	SE B	β	B	SE B	β	B	SE B	β
Household Size	-.04	.02	-.09	-.04	.02	-.09^{+}	-.04	.02	-.10^{+}
Ethnicity – Latino	.03	.10	.02	.05	.10	.03	.07	.10	.04
Sex	.04	.10	.02	.19	.11	.11^{+}	1.28	.53	.69*
School Engagement– T1	.39	.05	.43***	.35	.05	.39***	.37	.05	.40**
Masculinity Subscales									
Emotional Stoicism				-.26	.10	-.16**	-.01	.16	-.01
Physical Toughness				-.07	.09	-.05	-.09	.13	-.06
Masculinity x sex/ethnicity									
ES x Sex							-.44	.20	-.68*
PT x Sex							.01	.17	.01
ES x Ethnicity							-.08	.05	-.08
PT x Ethnicity							-.02	.05	-.03
ΔR^2		.179			.025			.02	
F for change in R^2		62.14**			4.50*			1.81	
Total Adjusted R^2		.177			.197			.207	

$^{+}$p < .10, *p < .05, **p < .01

Note. T1 = Time 1; ES x Sex/Ethnicity = Emotional Stoicism-by-sex/ethnicity interaction; PT x Sex/Ethnicity = Physical Toughness-by-sex/ethnicity interaction.

Table 6

Predicting engagement with specific subjects at Time 2 from the endorsement of masculinity subscales at Time 1 and control variables

	Language Arts			Mathematics			Science			Social Studies		
Variables	b	SE	β	*b*	*SE*	β	*b*	*SE*	β	*b*	*SE*	β
Model 1												
Household Size	-.02	.03	-.06	-.02	.03	-.03	-.07	.03	-.13*	-.07	.03	-.13*
Ethnicity	.22	.12	-.10^{+}	-.06	.17	-.02	.06	.15	.02	.23	.16	.09
Sex	-.12	.12	-.06	-.25	.16	-.09	.20	.15	.08	.42	.16	.16**
EngageSub1	.24	.04	.31**	.40	.06	.39**	.30	.06	.29**	.28	.06	.28**
ΔR^2		.093			.14			.083			.076	
F for change in R^2		28.40**			45.13**			24.58**			23.56**	
Model 2												
Household Size	-.02	.03	-.05	-.02	.03	-.03	-.07	.03	-.12*	-.07	.03	-.13*
Ethnicity	-.23	.12	.11^{+}	-.06	.17	-.02	.05	.15	.02	.24	.16	.09
Sex	-.07	.12	-.03	-.20	.17	-.07	.29	.15	.11^{+}	.49	.16	.18**
EngageSub1	.22	.05	.28**	.40	.06	-.38**	.27	.06	.26**	.26	.06	.27**
Masculinity –ES	-.21	.14	-.10	-.22	.18	-.08	-.41	.17	-.16*	-.25	.17	-.10
Masculinity –PT	-.07	.10	-.04	.05	.14	-.02	.05	.13	.03	-.06	.13	-.03
ΔR^2		.015			<.01			.02			.011	
F for change in R^2		2.29^{+}			0.70			2.99*			1.76	
Total Adjusted R^2		.104			.131			.101			.126	

$^{+}$p < .10, *p < .05, **p < .01

Note. EngageSub1 = School Engagement in subject under analysis at Time 1

Table 7

Predicting engagement with specific subjects at Time 2 from the adherence to masculinity subscales at Time 1 and control variables

	Language Arts			Mathematics			Science			Social Studies		
Variables	b	SE	β	b	SE	β	b	SE	β	b	SE	β
Model 1												
Household Size	-.02	.02	-.05	-.01	.03	-.02	-.06	.03	-.12*	-.07	.03	-.12*
Ethnicity	.21	.12	.10^{+}	-.11	.17	-.04	.1	.15	<.01	.147	.15	.07
Sex	-.09	.12	-.04	-.26	.16	-.09	.23	.15	.09	.44	.15	.17**
EngageSub1	.23	.04	.30**	.38	.06	.37***	.28	.06	.27**	.29	.06	.29*
ΔR^2		.09			.128			.075			.082	
F for change in R^2		28.37**			41.28**			22.22**			26.17**	
Model 2												
Household Size	-.02	.02	-.05	-.01	.03	-.02	-.07	.03	-.12*	-.07	.03	-.12*
Ethnicity	.22	.12	.11^{+}	-.09	.17	-.03	.02	.15	.01	.19	.15	.07
Sex	.06	.13	.03	-.07	.18	-.03	.38	.16	.15*	.55	.17	.21**
EngageSub1	.21	.04	.27	.36	.06	.35***	.25	.06	.25***	.28	.06	.28***
Masculinity –ES	-.26	.12	-.15*	-.33	.16	-.13*	-.28	.15	-.13^{+}	-.18	.15	-.08
Masculinity –PT	-.11	.10	-.06	-.07	.14	-.03	-.06	.13	-.03	-.07	.13	-.03
ΔR^2		.024			.016			.015			.007	
F for change in R^2		3.90*			2.60^{+}			2.24			1.09	
Total Adjusted R^2		.107			.128			.089			.132	

$^{+}$p < .10, *p < .05, **p < .01

Note. EngageSub1 = School Engagement in subject under analysis at Time 1

Table 8

Regression coefficients predicting school liking attitudes at Time 2 from endorsement of masculinity subscales at Time 1 and control variables

	Model 1			Model 2			Model 3		
Variable	B	SE B	β	B	SE B	β	B	SE B	β
Household Size	-.01	.01	-.02	<.01	.01	-.01	<.01	.01	-.01
Ethnicity – Latino	.17	.07	.13*	.19	.07	.15**	-.10	.07	.15**
Sex	-.15	.07	-.12*	-.13	.07	-.11*	.19	.37	-.08
School Liking – T1	.47	.06	.44**	.44	.06	.41**	.44	.06	.41**
Masculinity Subscales									
Emotional Stoicism				-.05	.08	-.04	-.03	.14	-.02
Physical Toughness				-.12	.06	-.13*	-.13	.11	-.13
Masculinity x sex/ethnicity									
ES x Sex							-.02	.17	-.06
PT x Sex							.01	.13	.02
ES x Ethnicity							.04	.04	.06
PT x Ethnicity							.02	.04	.02
ΔR^2		.187			.021			.005	
F for change in R^2		66.83**			3.77*			0.46	
Total Adjusted R^2		.223			.238			.232	

$^{+}$p < .10, *p < .05, **p < .01

Note. T1 = Time 1; ES x Sex/Ethnicity = Emotional Stoicism-by-sex/ethnicity interaction; PT x Sex/Ethnicity = Physical Toughness-by-sex/ethnicity interaction.

Table 9

Regression coefficients predicting school liking attitudes at Time 2 from adherence to masculinity subscales at Time 1 and control variables

	Model 1			Model 2			Model 3		
Variables	B	SE B	β	B	SE B	β	B	SE B	β
Household Size	-.01	.01	-.02	-.01	.01	-.02	<.01	.01	-.02
Ethnicity – Latino	.15	.07	.12*	.17	.07	.14**	.16	.07	.13*
Sex	-.15	.07	.12*	-.08	.07	-.07	-.46	.35	-.37
School Liking – T1	.44	.06	.41**	.40	.06	.38**	.40	.06	.38**
Masculinity Subscales									
Emotional Stoicism				-.09	.07	-.09	-.16	.11	-.15
Physical Toughness				-.13	.06	-.13*	-.16	.08	-.16^{+}
Masculinity x sex/ethnicity									
ES x Sex							.11	.14	.26
PT x Sex							.06	.12	.10
ES x Ethnicity							.01	.03	.01
PT x Ethnicity							.02	.03	.03
ΔR^2		.169			.027			.004	
F for change in R^2		60.12**			4.88**			0.37	
Total Adjusted R^2		.198			.219			.212	

$^{+}$p < .10, *p < .05, **p < .01

Note. T1 = Time 1; ES x Sex/Ethnicity = Emotional Stoicism-by-sex/ethnicity interaction; PT x Sex/Ethnicity = Physical Toughness-by-sex/ethnicity interaction.

Table 10

Regression coefficients predicting school avoidance attitudes at Time 2 from endorsement of masculinity subscales at Time 1 and control variables

	Model 1			Model 2			Model 3		
Variables	B	SE B	β	B	SE B	β	B	SE B	β
Household Size	.02	.02	.08	.02	.02	.08	.02	.02	.07
Ethnicity – Latino	-.04	.07	-.03	-.04	.07	-.03	-.04	.08	-.03
Sex	.08	.07	.06	.04	.07	.03	-.26	.40	-.19
School Avoidance – T1	.40	.05	.46**	.39	.05	.45**	.38	.05	.45
Masculinity Subscales									
Emotional Stoicism				.14	.08	.11^{+}	.03	.14	.02
Physical Toughness				.016	.06	.02	.06	.11	.05
Masculinity x sex/ethnicity									
ES x Sex							.15	.18	.33
PT x Sex							-.04	.14	-.07
ES x Ethnicity							-.05	.04	-.07
PT x Ethnicity							-.02	.04	-.02
ΔR^2		.205			.012			.01	
F for change in R^2		72.76**			2.10			0.94	
Total Adjusted R^2		.219			.225			.225	

$^{+}$p < .10, *p < .05, **p < .01

Note. T1 = Time 1; ES x Sex/Ethnicity = Emotional Stoicism-by-sex/ethnicity interaction; PT x Sex/Ethnicity = Physical Toughness-by-sex/ethnicity interaction.

Table 11

Regression coefficients predicting school avoidance attitudes at Time 2 from adherence to masculinity subscales at Time 1 and control variables

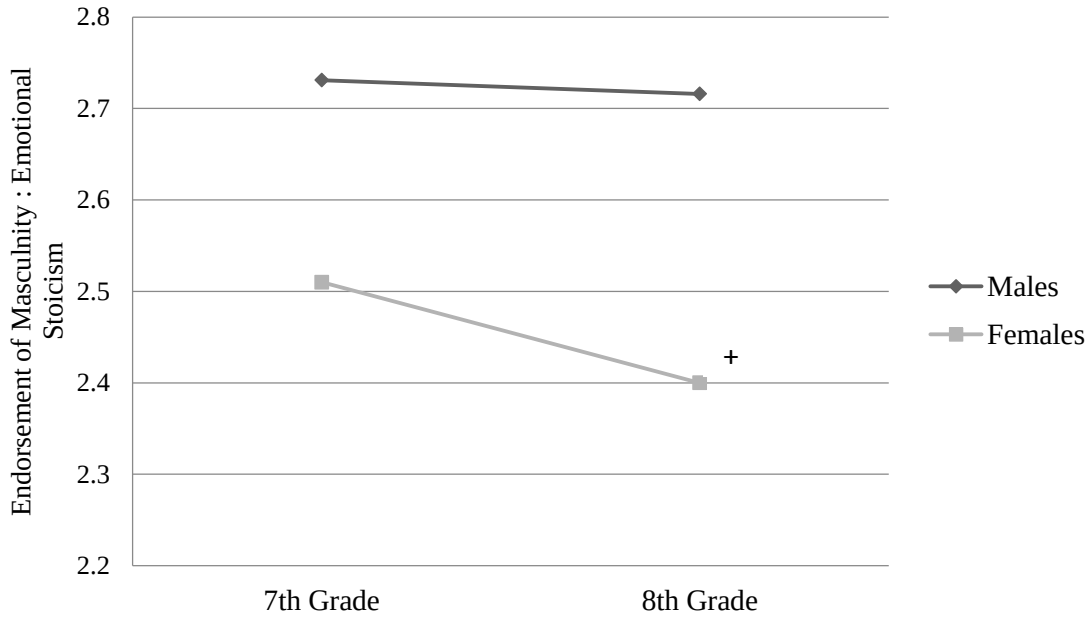
	Model 1			Model 2			Model 3		
Variables	B	SE B	β	B	SE B	β	B	SE B	β
Household Size	.02	.02	.09	.02	.02	.09^{+}	.02	.02	.09
Ethnicity – Latino	-.02	.07	-.01	-.03	.07	-.02	-.02	.07	-.01
Sex	.08	.07	.06	.01	.08	.01	.14	.39	.11
School Avoidance – T1	.38	.05	.44**	.37	.05	.43**	.36	.05	.43
Masculinity Subscales									
Emotional Stoicism				.14	.07	.12^{+}	.13	.11	.12
Physical Toughness				.03	.06	.03	.08	.10	.07
Masculinity x sex/ethnicity									
ES x Sex							.01	.15	.02
PT x Sex							-.10	.13	-.14
ES x Ethnicity							.06	.04	.08
PT x Ethnicity							-.05	.04	-.07
ΔR^2		.186			.013			.01	
F for change in R^2		65.99**			2.29^{+}			0.93	
Total Adjusted R^2		.197			.204			.203	

$^{+}$p < .10, *p < .05, **p < .01

Note. T1 = Time 1; ES x Sex/Ethnicity = Emotional Stoicism-by-sex/ethnicity interaction; PT x Sex/Ethnicity = Physical Toughness-by-sex/ethnicity interaction.

Figure 1

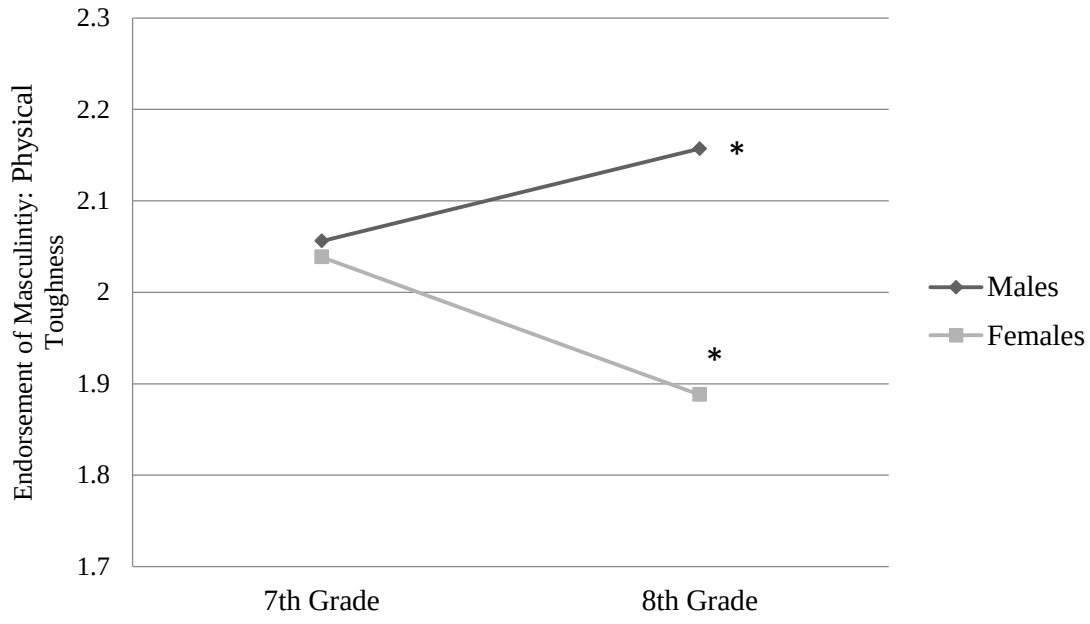
Change in endorsement of emotional stoicism between 7th and 8th grades



+ p < .10; * p < .05

Figure 2

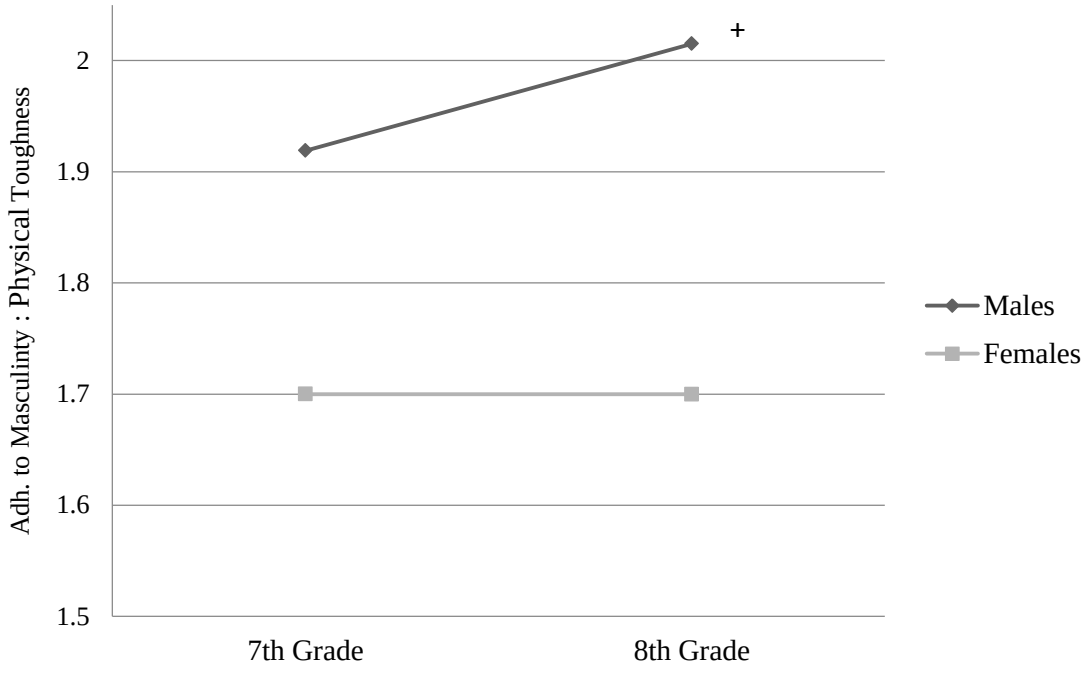
Change in endorsement of physical toughness between 7th and 8th grades



+ p < .10; * p < .05

Figure 3

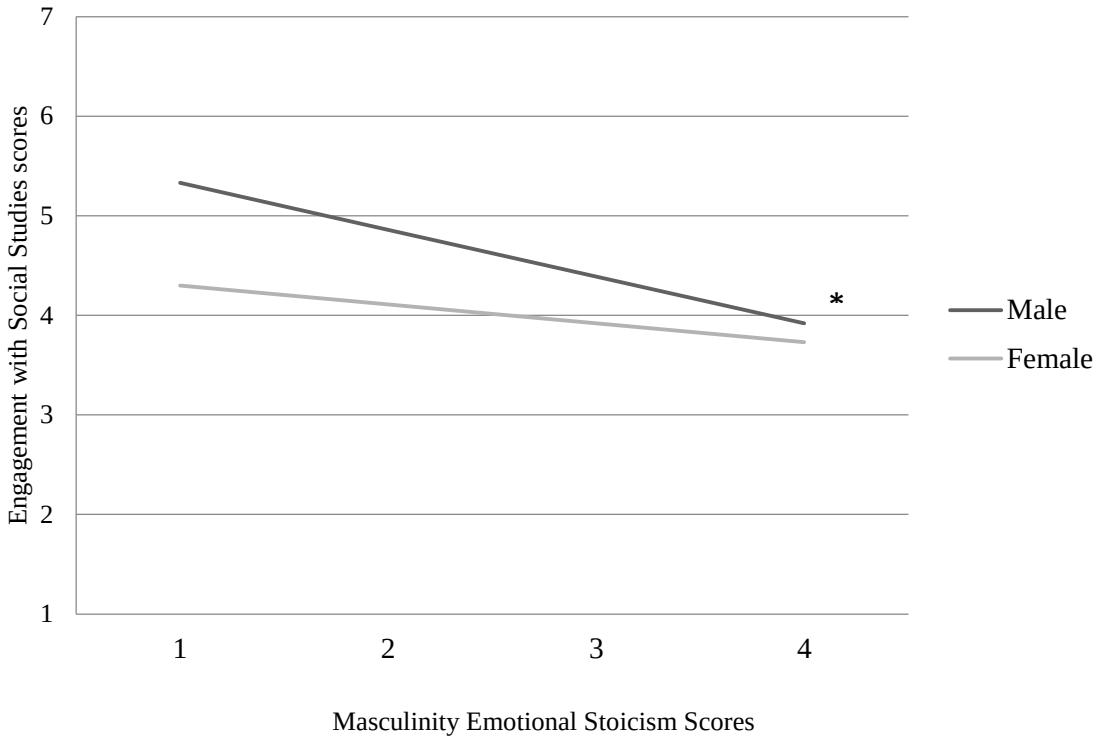
Change in adherence to physical toughness between 7th and 8th grades



+ p < .10; * p < .05

Figure 4

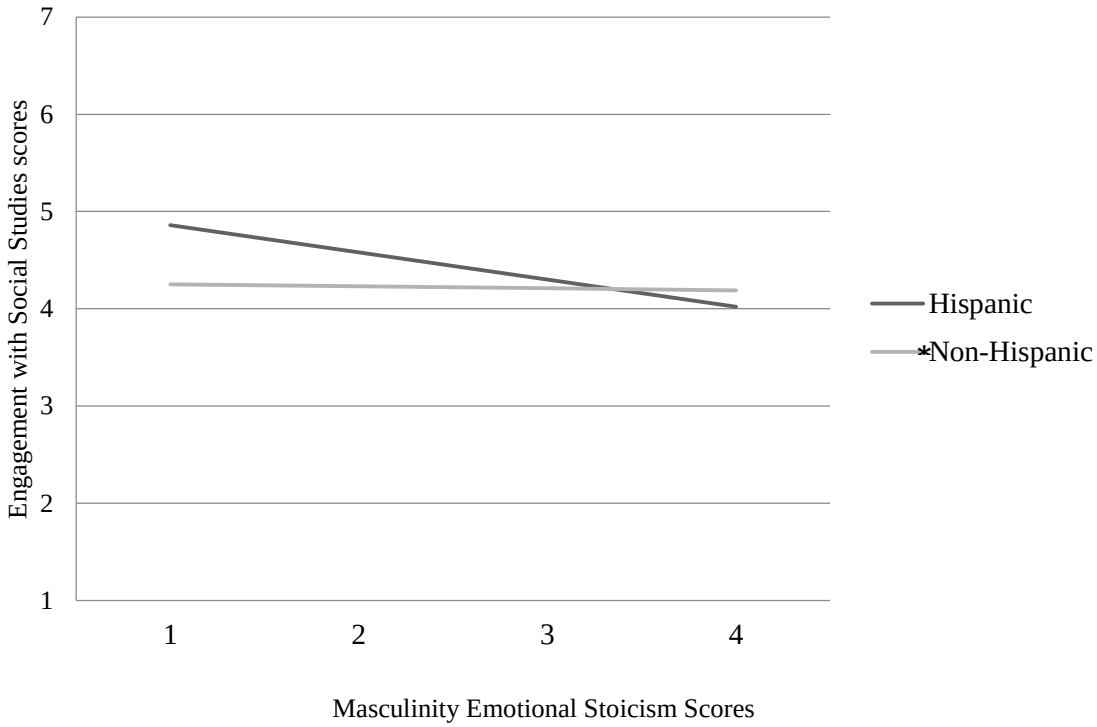
Emotional Stoicism-by-sex interaction predicting engagement with social studies scores at Time 2



+ p < .10; * p < .05

Figure 5

Emotional Stoicism-by-sex interaction predicting engagement with social studies scores at Time 2



+ p < .10; * p < .05

Figure 6

Conceptual figure representing the study's hypothesized mediation between masculinity and school engagement by attitudes toward school

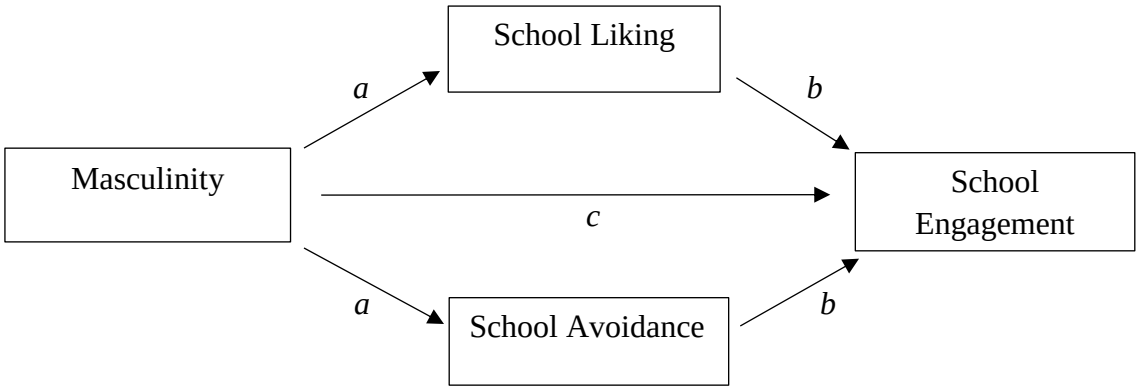
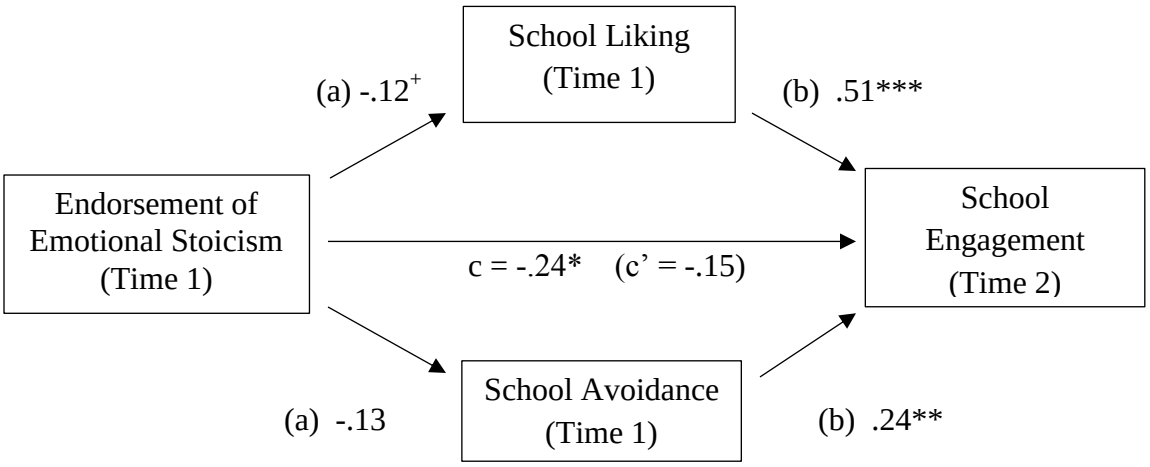


Figure 7

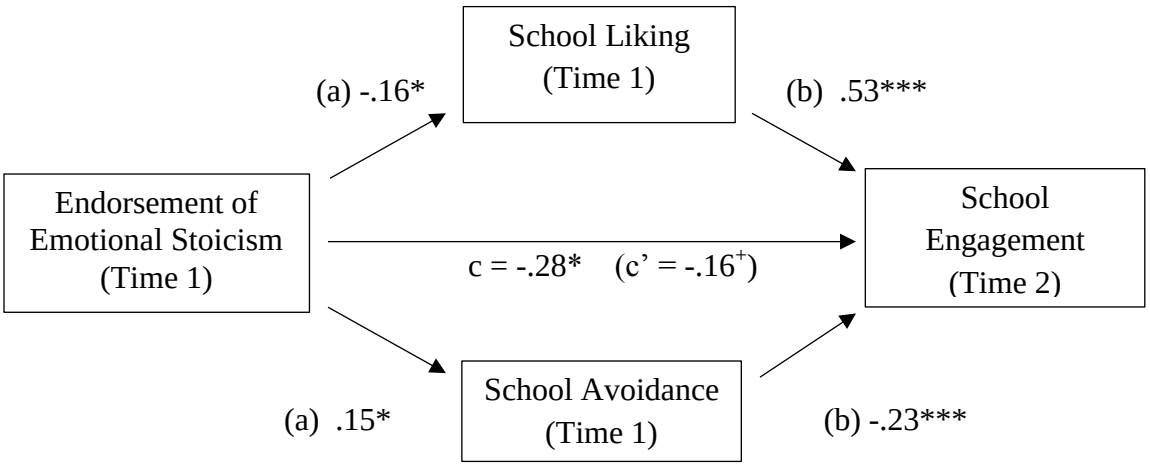
Mediation analysis showing the mediating role of school liking and school avoidance attitudes in the association between endorsement of emotional stoicism and school engagement.



+ p < .10; * p < .05; ** p < .01; *** p < .001
Note. Parentheses contain the coefficient for the final c'-path, or the indirect effect of masculinity on school engagement

Figure 8

Proposed mediating role of school liking and school avoidance attitudes in the association between adherence to emotional stoicism and school engagement.



+ p < .10; * p < .05; ** p < .01; *** p < .001

Note. Parentheses contain the coefficient for the final c'-path, or the indirect effect of masculinity on school engagement