

Yale University

EliScholar – A Digital Platform for Scholarly Publishing at Yale

Public Health Theses

School of Public Health

January 2015

The Effect Of Masculine Ideology On Sexual Communication And Sexual Self-Efficacy Among Expectant Adolescent Couples

Melanie K. Norton

Yale University, melaniek@snet.net

Follow this and additional works at: <http://elischolar.library.yale.edu/ysphtdl>

Recommended Citation

Norton, Melanie K., "The Effect Of Masculine Ideology On Sexual Communication And Sexual Self-Efficacy Among Expectant Adolescent Couples" (2015). *Public Health Theses*. 1212.

<http://elischolar.library.yale.edu/ysphtdl/1212>

This Open Access Thesis is brought to you for free and open access by the School of Public Health at EliScholar – A Digital Platform for Scholarly Publishing at Yale. It has been accepted for inclusion in Public Health Theses by an authorized administrator of EliScholar – A Digital Platform for Scholarly Publishing at Yale. For more information, please contact elischolar@yale.edu.

**The Effect of Masculine Ideology on Sexual Communication and Sexual Self-Efficacy
Among Expectant Adolescent Couples**

Melanie K. Norton

First Reader: Trace S. Kershaw

Second Reader: Megan V. Smith

May 1, 2015

ABSTRACT

This study examined the relationship between traditional masculine role norms (status, toughness, anti-femininity) and psychosocial mechanisms of sexual risk (sexual communication, sexual self-efficacy) among young, low-income, and minority parenting couples. Between 2007-2011, 296 pregnant adolescent females and their male partners were recruited from urban obstetrics clinics in Connecticut. Data regarding participants' beliefs in traditional masculine role norms, frequency of general sex communication and sexual risk communication, and sexual self-efficacy were collected via computer-assisted self-interviews. Generalized estimating equation (GEE) models were used to test for actor effects (whether a person's predictor influences the person's own outcome) and partner effects (whether a partner's predictor influences an actor's outcomes). Results revealed that higher status norms for actors were significantly associated with more actor sexual self-efficacy, higher actor toughness norms were associated with less actor sexual self-efficacy, and higher anti-femininity norms for actors were significantly associated with less actor general sex communication, sexual risk communication, and sexual self-efficacy. No partner effects were found. These results indicate a need for redefining masculine role norms through family-centered approaches in pregnant or parenting adolescent couples to increase sexual communication and sexual self-efficacy. Further research is needed to understand how partner masculine role norms may influence actor psychosocial outcomes in the context of a relationship and on subsequent sexual risk behavior.

Keywords: masculinity; sexual risk; sexual communication; sexual self-efficacy; adolescent parents

Table of Contents

Introduction	4
Methods	6
Study Sample and Procedures	6
Measures	8
Predictors.....	8
Outcomes.....	9
Covariates.....	10
Data Analysis	10
Results	11
Discussion	13
Status	13
Toughness	14
Anti-Femininity	14
Actor & Partner Effects	15
Strengths & Limitations	15
Research & Community Implications	16
Table 1: Characteristics of the Study Sample, by Gender	18
Table 2: Unadjusted Effects of Masculinity Norms on Sexual Communication and Sexual Self-Efficacy, by Actor/Partner	19
Table 3: Adjusted Effects of Masculinity Norms on Sexual Communication and Sexual Self-Efficacy, by Actor/Partner	20
References	21

Introduction

Although first conceived of as a biologically based personality trait, recent conceptualizations have defined masculinity as a dynamic social and cultural construction that dictates the standards by which men are expected to behave (Connell & Messerschmidt, 2005; Pleck, Sonenstein, & Ku, 1993; Terman & Miles, 1936). Men internalize and perpetuate masculine role norms, which are then reinforced by interpersonal and institutional experiences. Three distinct beliefs drive traditional masculine norms – status, toughness, and anti-femininity (EH Thompson & Pleck, 1986). Status norms hold that men must acquire skills to achieve status and the respect of others. Toughness norms hold that men should be mentally, emotionally, and physically tough and self-reliant. Finally, anti-femininity norms hold that men should avoid stereotypically feminine activities and occupations. To varying degrees, men both benefit from and are harmed by these traditional views of masculinity (Mankowski & Maton, 2010). Some qualities stereotypically associated with traditional masculinity are considered beneficial, while others have been linked to negative health outcomes (Levant, 2008; Mankowski & Maton, 2010).

Research indicates that traditional masculine norms may act as a barrier to men's help-seeking behavior and thus may negatively influence men's health status (Mahalik, Good, & Englar-Carlson, 2003). Studies have also demonstrated a relationship between masculine norms and risky sexual behaviors (Barker & Ricardo, 2005). Given the influence masculinity has on sexual risk, it is plausible that traditional masculine ideology may impact psychosocial mechanisms of sexual risk. Two important psychosocial mechanisms of sexual risk are sexual communication and sexual self-efficacy. Perceptions of male role norms are critical factors that could influence each partner's comfort and willingness to discuss sexual preferences and sexual risks with one another. For example, research suggests that gender-based power imbalances,

possibly related to views of masculine role norms, directly impact women's ability to negotiate condom use with their partners (Pulerwitz, Amaro, De Jong, Gortmaker, & Rudd, 2002).

Perceptions of male role norms could also influence sexual self-efficacy, given that partners' confidence in suggesting and using condoms could vary based on their perception of what is acceptable to suggest according to traditional gender roles.

Sexual risk communication and sexual self-efficacy are important predictors of protective sexual behaviors such as condom use in adolescents (Basen-Engquist & Parcel, 1992; Catania et al., 1989; Sales et al., 2012; Whitaker, Miller, May, & Levin, 1999). General sex communication may also be a predictor of safer sexual practices, as it opens up additional dialogue regarding sexual experiences. Thus, it is essential to understand what drives these psychosocial mechanisms in adolescent relationships and how traditional masculine role norms may be involved in adolescents' decisions to communicate about sex or their perception of their ability to use condoms with sexual partners.

Young, low-income and minority parents or expecting parents experience a number of compounding disadvantages often resulting in risky sexual behavior and poorer sexual health outcomes. First of all, adolescents and young adults have the highest rates of sexually transmitted infections (STIs) compared to all other age groups, with black and Hispanic adolescents accounting for a disproportionately high percentage of infections (Centers for Disease Control and Prevention, 2014). Pregnant and postpartum adolescents have a higher risk of sexually transmitted disease and are less likely to use condoms than their non-pregnant counterparts (Ickovics, Niccolai, Lewis, Kershaw, & Ethier, 2003; Niccolai, Ethier, Kershaw, Lewis, & Ickovics, 2003). Adolescent pregnancy is more common in low-income and minority populations and research shows it is particularly common for such risks to be perpetuated from generation to

generation within these vulnerable groups (Kershaw et al., 2014; Martin, Hamilton, Osterman, Curtin, & Matthews, 2013; Meade, Kershaw, & Ickovics, 2008; Penman-Aguilar, Carter, Snead, & Kourtis, 2013; Sipsma, Biello, Cole-Lewis, & Kershaw, 2010). Therefore, it is important to study these vulnerable populations to understand the psychosocial mechanisms at play leading to heightened sexual risk.

Much of the available literature primarily focuses on male views of masculinity related to male social and behavioral health outcomes. To our knowledge, few studies have looked at how both male and female ideas of masculinity norms impact psychosocial mechanisms of sexual risk. The present study aimed to determine how traditional views of masculinity of both males and females influence psychosocial outcomes in romantic relationships, both through individual and partner level effects (how an individual's own masculinity norms may influence their behavior and how a partner's masculinity norms may influence an individual's behavior). Specifically, this study assessed how traditional views of masculinity influence general sex communication, sexual risk communication, and sexual self-efficacy for both males and females in romantic relationships. We focused on minority and low-income couples because of the particular risks these vulnerable groups experience. This sets our study apart in the literature, as most previous studies examining couples have focused on those in therapeutic settings of white, middle-class backgrounds (Christensen, Russell, Miller, & Peterson, 1998).

Methods

Study Sample and Procedures

Data for this study come from a longitudinal study of pregnant and postpartum young females and their partners. Between July 2007 and February 2011, 296 pregnant adolescents and

their male partners (592 total participants) were recruited from obstetrics and gynecology clinics and from an ultrasound clinic in four university-affiliated hospitals in Connecticut. Potential participants were screened and, if eligible, research staff explained the study in detail. If the baby's father was not present at the time of screening, research staff asked for permission to contact the father to explain the study.

Inclusion criteria included (1) a female partner in the second or third trimester of pregnancy at time of baseline interview; (2) females: age 14-21 years; males: age at least 14 years, at time of the interview; (3) both members of the couple report being in a romantic relationship with each other; (4) both report being the biological parents of the unborn baby; (5) both agree to participate in the study; and (6) both are able to speak English or Spanish. Because this was a longitudinal study, we used an initial run-in period as part of eligibility criteria where participants were deemed ineligible if they could not be recontacted after screening and before their estimated due date.

The couples separately completed structured interviews via audio computer-assisted self-interviews. Participation was voluntary and confidential. All procedures were approved by the Yale University Human Investigation Committee and by institutional review boards at study clinics. Participants were reimbursed \$25 each for each assessment.

Of 413 eligible couples, 296 (72.2%) couples enrolled in the study. Couples who agreed to participate were of greater gestational age ($p = 0.03$). Participation did not vary by any other prescreened demographic characteristic (all $p > 0.05$).

Participants were interviewed in their third trimester of pregnancy ($M = 29$ weeks gestation) and at 6 months postpartum. Participants were followed and assessed regardless of relationship status and whether their partner dropped out of the study. The retention rate at the 6-

month postpartum assessment was 73% (434/592). Therefore, our final sample size for these analyses was 434. We compared the 434 included in the analyses with the 158 that were missing. Results showed that those included in the analyses ($n = 434$) did not differ from those not included in the analyses ($n = 158$) on any demographics or key study variables with the exception of race ($p < 0.05$). Results showed that individuals included in the analyses were more likely to be Hispanic and were less likely to be white than those not included in the analyses.

Measures

Predictors. Predictors were assessed during pregnancy at 24 or more weeks gestation. Male role norms were assessed by respondents' agreement or disagreement with 25 belief statements about men's expected behavior modified from the Masculine Role Norm Scale (MRNS) developed by Thompson and Pleck (1986). The construct validity of the MRNS is supported by evidence that scores were significantly positively related to both men's and women's attitudes toward men and significantly negatively related to individuals' attitudes toward gender egalitarianism (Thompson & Pleck, 1995). Each of the statements was scored on a 7-point Likert scale ranging from 1 "Strongly Disagree" to 7 "Strongly Agree," with higher values corresponding to more traditional views of masculinity. Response values for each statement were summed to create a total overall MRNS score and total scores for three distinct subscales. First, the 11-item Status Norm Scale included survey items measuring the extent to which participants believe that men should acquire skills that warrant respect and admiration (e.g., "Success in his work has to be man's central goal this life"). Second, the 8-item Toughness Norm Scale included survey items measuring the extent to which participants believe that men should become mentally and physically tough (e.g., "When a man is feeling a little pain he should try not to let it show very much"). Third, the 6-item Anti-Femininity Norm Scale included survey items measuring the extent to which

participants believe that men should avoid anything stereotypically feminine (e.g., “If I heard about a man who was a hairdresser and a gourmet cook, I might wonder how masculine he was”). Results showed good internal consistency for the Status Norm Scale for females ($\alpha = 0.88$) and males ($\alpha = 0.90$), the Toughness Norm Scale for females ($\alpha = 0.75$) and males ($\alpha = 0.83$), and the Anti-Femininity Norm Scale for females ($\alpha = 0.70$) and males ($\alpha = 0.74$). Subscale reliability was consistent with previous studies utilizing the MRNS (Condon, Corkindale, Russell, & Quinlivan, 2006; Gallagher & Parrott, 2011).

Outcomes. Outcomes were assessed at 6 months postpartum. The amount and content of participants’ sex-related communication with sexual partners was evaluated using a 7-item scale devised by the project team. Participants indicated the frequency of communication with their partners about specific topics on a 5-point scale: 1 “Never,” 2 “Rarely,” 3 “Sometimes,” 4 “Often,” and 5 “Very Often.” The items were divided into two subscales: general sex communication and sexual risk communication. The general sex communication subscale included the items, “I tell my partners what I like sexually” and “I ask my partners what they like sexually.” The sexual risk communication subscale included the following 5 items: “I talk to my partners about condoms,” “I ask my partners about their past sexual partners,” “I ask my partners about their STD history,” “I ask my partners whether they have been tested for HIV,” and “I talk to my partners about AIDS concerns.” Results showed good internal consistency for general sex communication for females ($\alpha = 0.93$) and males ($\alpha = 0.91$) and for sexual risk communication for females ($\alpha = 0.87$) and males ($\alpha = 0.87$).

Sexual self-efficacy of participants was evaluated using a 17-item, adapted version of the Condom Use Self-Efficacy Scale (CUSES) developed by Brafford and Beck (1991). Statements addressed participants’ ability to put a condom on themselves or a partner, the degree to which

the partner would disapprove, ability to persuade a partner to use a condom, and ability to use condoms when under the influence of drugs or alcohol. Participants indicated how much they agreed or disagreed with each statement on a 5-point Likert scale, ranging from 1 “Strongly Disagree” to 5 “Strongly Agree.” Examples of survey items include “I feel confident in my ability to put a condom on myself, or my partner” and “I feel confident that I could use a condom successfully.” Results showed good internal consistency for sexual self-efficacy for females ($\alpha = 0.93$) and males ($\alpha = 0.92$), consistent with previous studies using the CUSES (Brafford & Beck, 1991; Klonoff et al., 2014). The CUSES has been used extensively in existing literature and the validity of the scale has been demonstrated its correlation with other self-report scales such as the Attitudes Toward Condoms scale and the Contraceptive Self-Efficacy scale (Brown, 1984; Levinson, 1986).

Covariates. All covariates were assessed at baseline, with the exception of the item assessing whether the participant was still in a relationship with the father or mother of the baby at 6 months postpartum. Potential covariates assessed included participant’s age in years, income, race (black, Hispanic, white, or other), years of education, length of relationship with the father or mother of the baby in months, and relationship status with father or mother of the baby at 6 months postpartum.

Data analysis. Differences between males and females on demographic and relationship variables were assessed using a series of paired t-tests for continuous variables and McNemar’s tests for categorical variables. Unadjusted and adjusted multivariate models were then created using generalized estimating equations (GEE) – a method similar to multilevel modeling as it corrects for clustered and correlated data. GEE models were used to examine effects according to the Actor-Partner Interdependence Model (Kenny, Kashy, & Cook, 2006). The models test for

actor effects – whether a person’s predictor influences the person’s own outcome (e.g., female’s masculinity norms relate to her own self-efficacy; male’s masculinity norms relate to his own self-efficacy). The models also test for partner effects – whether a partner’s predictor influences an actor’s outcomes (e.g., male partner’s masculinity norms relate to his female partner’s self-efficacy; female partner’s masculinity norms relate to her male partner’s self-efficacy). To assess for moderation of these relationships by gender, a set of models were created with interaction terms for each of the three masculinity scales with gender. Simple effects were then conducted to assess the nature of any statistically significant difference between males and females. The actor and partner effects presented in the model are unstandardized regression coefficients (and their standard errors) because the standardized coefficients are not accurate when using the actor–partner approach (Kenny, et al., 2006). All analyses were conducted using SAS 9.4 (SAS Institute Inc., Cary, NC).

Results

Table 1 describes the characteristics of the sample by gender. The average age for females was 18.7 (SD = 1.6) years and 21.3 (SD = 4.1) years for males ($p < 0.001$). The average annual personal income for females was \$5,835 (SD = \$7,448) and \$10,869 (SD = \$11,858) for males ($p < 0.001$). The majority of males and females were black (48.7% and 39.5%, respectively) or Hispanic (36.5% and 39.5%, respectively), with 10.5% of males and 16.9% of females identifying as white, and the remainder identifying as some other race ($p < 0.001$). The average number of years of education for females and males was 11.8 (SD = 1.8) years and 11.8 (SD = 1.9) years, respectively. The average length of the participants’ relationship with the father or mother of the baby was 26.9 (SD = 19.8) months and the majority (84.2%) of the study

participants were still in romantic relationships with the father or mother of the baby at 6 months postpartum.

Table 2 shows the results of the unadjusted models determining the effects of masculinity norms on general sex communication, sexual risk communication, and sexual self-efficacy. Higher actor anti-femininity norms were associated with less actor general sex communication ($p = 0.022$) and less actor sexual risk communication ($p = 0.005$), while partner anti-femininity norms were related to less actor sexual risk communication ($p = 0.030$). Higher status norms for actors were significantly associated with more actor sexual self-efficacy ($p = 0.022$). The opposite effect was shown for higher toughness norms and higher anti-femininity norms for actors, as both were associated with less actor sexual self-efficacy ($p = 0.001$ and $p < 0.001$, respectively).

Table 3 shows the results of the final adjusted models determining the effects of masculinity norms on general sex communication, sexual risk communication, and sexual self-efficacy of individuals in a relationship after controlling for gender, age, income, years of education, length of relationship with father/mother of baby, and relationship status with father/mother of baby at 6 months postpartum. All effects from the unadjusted models remained significant, with the exception of the association between partner anti-femininity norms and actor sexual risk communication. Higher anti-femininity norms for actors were significantly associated with less actor general sex communication ($p = 0.009$), less sexual risk communication ($p = 0.002$), and less sexual self-efficacy ($p = 0.016$). Higher status norms for actors were significantly associated with more sexual self-efficacy ($p < 0.001$), while higher actor toughness norms were associated with less sexual self-efficacy ($p = 0.004$). No partner effects were found after adjustment for confounders.

Further GEE analyses were conducted to determine whether masculinity effects varied by gender. The only significant interaction was between actor toughness norms and gender on sexual self-efficacy ($p = 0.021$). Simple effects were conducted to identify the nature of the difference in this relationship by gender. Simple effects showed that higher toughness norms related to less sexual self-efficacy for females ($B = -0.025$, $SE = 0.007$, $p < 0.001$), but not for males ($B = -0.009$, $SE = 0.007$, $p = 0.190$).

Discussion

Results of the present study highlight the influence male role norms have on psychosocial mechanisms of sexual risk among adolescent females and males in romantic relationships. As anticipated based on previous literature, certain male role norms were positively associated to the outcomes of interest while others were negatively associated with these outcomes. These findings offer unique insights into the relationships of young, low-income, and minority parents, with significant implications for intervention and further study.

Status

First, results showed that higher actor status norms were associated with more actor sexual self-efficacy. If an actor believes that men should strive for success and exude confidence, it is reasonable that a male actor would report feeling confident in his ability to use or persuade his partner to use condoms because he should be able to succeed in his actions and his partner should respect his choice to use condoms (Thompson & Pleck, 1986). Previous interventions have capitalized on this by associating condom use with masculinity, emphasizing men's responsibility (Dilorio, McCarty, Resnicow, Lehr, & Denzmore, 2007). One might assume that higher status norms for a female actor would have the opposite effect, expecting that the male

partner should be responsible for remembering or suggesting to use a condom, but this was not the case. This may indicate that the female actors expect females to achieve success and respect as well, leading them to have more sexual self-efficacy. The beliefs that men and women should strive for success and respect are not mutually exclusive.

Toughness

Higher actor toughness norms were associated with less actor sexual self-efficacy for females, but not for males. Female actors with more traditional views of toughness norms might feel less confident in their ability to use or persuade her partner to use condoms because she may fear backlash from her partner or may feel that it is not her place to tell her partner what to do. This is particularly salient for pregnant couples as condom use is not needed to prevent pregnancy and the relationship may be perceived as monogamous, so negotiating or demanding condom use may be interpreted as a lack of trust and may incite anger (Niccolai, et al., 2003). This interpretation may apply to adolescent couples postpartum as well, as suggesting condom use may raise questions about relationship monogamy and provoke a negative response from a male partner if he feels disrespected by the implications of this suggestion.

Anti-Femininity

Finally, higher actor anti-femininity norms were associated with less general sex communication, sexual risk communication, and sexual self-efficacy. If a male actor believes that men should avoid anything stereotypically feminine, it is possible that he would avoid engaging in any sexual communication because communication about feelings or fears could be viewed as a feminine attribute (Fischer, 2000; Hall & Applewhite, 2013). Along a similar vein, female actors with high anti-femininity norms may feel less empowered to communicate sexual concerns to male partners because they do not believe their partner will be open to having such a

discussion because of the belief that expressing sexual concerns is an inherently feminine action. A similar mechanism may be at work in the relationship between anti-femininity norms and sexual self-efficacy. A female adolescent may forgo condom negotiation or demands, regardless of her personal beliefs, if she expects that her male partner will react negatively or simply not be interested in having this discussion (Hogben et al., 2006; Weinman, Small, Buzi, & Smith, 2008).

Actor and Partner Effects

Interestingly, only actor effects were evident after controlling for confounders. Associations between masculine norms and psychosocial mechanisms of sexual risk may be more salient at the individual level than the couple level, although previous studies have demonstrated partner effects of this nature. For example, higher status norms in female partners have been linked to more sexual self-efficacy in male actors, while higher status norms in male partners have been linked to less sexual self-efficacy in female actors (Vincent et al., in press). Further research is needed to better understand how partners' masculinity norms may influence psychosocial outcomes in the context of a relationship and on subsequent sexual risk behavior.

Strengths & Limitations

One strength of the present study is the analysis of couple-level data in addition to individual-level data. Couple-level data allowed us to take into account the interdependent nature of the variables of interest and use the Actor-Partner Interdependence Model to examine the impact of the male role norms on both actor and partner outcomes. Additionally, this allowed for us to determine whether any associations varied by gender. Our focus on expectant adolescent couples and parents in romantic relationships is both a strength and a limitation. Examining masculine ideology in this vulnerable population adds to the literature, as most other studies have

collected relationship data from adult couples of white, middle-class backgrounds (Christensen, et al., 1998). However, these results may not be generalizable to adolescent males and females who are not pregnant or new parents. Furthermore, although we examined the influence of masculinity norms during pregnancy on subsequent psychosocial outcomes at 6 months postpartum, causality cannot be determined and we need to take these data as evidence of associations only. Additionally, the data was collected by self-report and could therefore be subject to reliability and validity concerns. To limit the possibility of social desirability bias, audio computer-assisted self-interviews were conducted.

Research & Community Implications

Evidence from this study indicates a clear need to address male role norm beliefs in both male and female partners of a romantic relationship when promoting messages about the importance of sexual communication and increasing sexual self-efficacy. Expectations of masculinity held by both male and female partners must be redefined – it is not enough to change males' perceptions of themselves if females still expect and applaud certain characteristics of traditional masculinity. Interventions that directly deal with gender norms, particularly among young couples, may lessen the negative influence of traditional masculinity norms on psychosocial mechanisms of sexual risk and ultimately increase protective sexual behaviors (Basen-Engquist & Parcel, 1992; Catania, et al., 1989; Sales, et al., 2012; Whitaker, et al., 1999). Because pregnancy is a particularly vulnerable time for adolescents and young adults, this is a critical time for intervention. A family-centered approach to reframe masculinity and gender roles to ultimately improve psychosocial mechanisms of sexual risk is needed. Prenatal education classes held at community health centers or obstetrics and gynecology clinics may provide the opportunity to engage in discussion with young couples about gender roles within

relationships and reframe what it means to “be a man” in the context of a relationship and starting a family. It may even be possible to engage counselors or social workers working with young parents or expecting parents to discuss these subjects. Given the positive impact of status norms on psychosocial outcomes, placing emphasis on status as a concept applying to both males and females may encourage young parents to take personal responsibility when it comes to discussing sexual concerns and condom use. Further, by working with both men and women, the onus of redefining gender roles in the relationship is placed on the couple and not disproportionately positioned on one gender. Redefining traditional masculine norms should be a broader societal goal tackled by family-focused interventions along with macro-level interventions to have the greatest impact on psychosocial mechanisms of sexual risk, among other outcomes.

Table 1. Characteristics of the Study Sample, by Gender^a

Characteristic	Gender		<i>p</i>
	Female (N = 296)	Male (N = 296)	
Age, years	18.7 ± 1.6	21.3 ± 4.1	<0.001
Income	5,835 ± 7,448	10,869 ± 11,858	<0.001
Race			<0.001
Black	117 (39.5)	144 (48.7)	
Hispanic	117 (39.5)	108 (36.5)	
White	50 (16.9)	31 (10.5)	
Other	12 (4.1)	13 (4.4)	
Education, years	11.8 ± 1.8	11.8 ± 1.9	0.456
Length of relationship with father/mother of baby, months	26.6 ± 19.5	27.2 ± 20.0	0.070
Currently in relationship with father/mother of baby ^b			0.267
Yes	190 (83.3)	175 (85.0)	
No	38 (16.7)	31 (15.0)	

^a Table values are mean ± SD for continuous variables and n (%) for categorical variables; All measurements taken at T₁ (baseline, 24+ weeks gestation); N = 592.

^b Measurement taken at T₂ (6 months postpartum), N = 434.

Table 2. Unadjusted Effects of Masculinity Norms on Sexual Communication and Sexual Self-Efficacy, by Actor/Partner

	General Sex Communication			Sexual Risk Communication			Sexual Self-Efficacy		
	B	SE	<i>p</i>	B	SE	<i>p</i>	B	SE	<i>p</i>
Status, Actor	0.006	0.005	0.238	-0.005	0.005	0.305	0.006	0.003	0.022
Status, Partner	0.000	0.005	0.967	0.007	0.005	0.157	0.000	0.003	0.988
Toughness, Actor	-0.001	0.008	0.874	-0.007	0.007	0.314	-0.014	0.004	0.001
Toughness, Partner	-0.009	0.007	0.221	0.010	0.007	0.140	0.002	0.004	0.612
Anti-Femininity, Actor	-0.023	0.010	0.022	-0.026	0.009	0.005	-0.022	0.005	<0.001
Anti-Femininity, Partner	0.001	0.010	0.889	0.018	0.008	0.030	0.007	0.005	0.168

Table 3. Adjusted Effects of Masculinity Norms on Sexual Communication and Sexual Self-Efficacy, by Actor/Partner^a

	General Sex Communication			Sexual Risk Communication			Sexual Self-Efficacy		
	B	SE	<i>p</i>	B	SE	<i>p</i>	B	SE	<i>p</i>
Status, Actor	0.006	0.006	0.309	-0.006	0.005	0.227	0.012	0.003	< 0.001
Status, Partner	0.005	0.006	0.408	0.004	0.006	0.510	0.001	0.003	0.870
Toughness, Actor	0.001	0.010	0.905	0.007	0.009	0.426	-0.016	0.006	0.004
Toughness, Partner	-0.016	0.010	0.112	-0.005	0.009	0.589	-0.005	0.005	0.326
Anti-Femininity, Actor	-0.030	0.012	0.009	-0.032	0.011	0.002	-0.016	0.007	0.016
Anti-Femininity, Partner	0.008	0.011	0.486	0.011	0.010	0.239	0.006	0.005	0.228

^a Covariates included in the model are gender, age, income, race, years of education, length of relationship with father/mother of baby, and relationship status with father/mother of baby at 6 months postpartum.

References

- Barker, G., & Ricardo, C. (2005). *Young men and the construction of masculinity in Sub-Saharan Africa: implications for HIV/AIDS, conflict, and violence*. Washington, DC: The World Bank Conflict Prevention and Reconstruction Unit.
- Basen-Engquist, K., & Parcel, G. S. (1992). Attitudes, norms, and self-efficacy: a model of adolescents' HIV-related sexual risk behavior. *Health Educ Q*, 19(2), 263-277.
- Brafford, L., & Beck, K. (1991). Development and validation of a condom self-efficacy scale for college students. *J Am Coll Health*, 39(5), 219-225. doi: 10.1080/07448481.1991.9936238
- Brown, I. S. (1984). Development of a scale to measure attitude toward the condom as a method of birth control. *Journal of Sex Research*, 20(3), 255-263.
- Catania, J., Coates, T., Greenblatt, R., Dolcini, M., Kegeles, S., Puckett, S., . . . Miller, J. (1989). Predictors of condom use and multiple partnered sex among sexually-active adolescent women: Implications for aids-related health interventions. *The Journal of Sex Research*, 26(4), 514-524.
- Centers for Disease Control and Prevention. (2014). Sexually Transmitted Disease Surveillance 2013. Atlanta: U.S. Department of Health and Human Services.
- Christensen, L. L., Russell, C. S., Miller, R. B., & Peterson, C. M. (1998). The process of change in couples therapy: a qualitative investigation. *J Marital Fam Ther*, 24(2), 177-188.
- Condon, J. T., Corkindale, C. J., Russell, A., & Quinlivan, J. A. (2006). Processes and factors underlying adolescent males' attitudes and decision-making in relation to an unplanned pregnancy. *Journal of Youth and Adolescence*, 35(3), 447-458. doi: Doi 10.1007/S10964-005-9025-2
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity - Rethinking the concept. *Gender & Society*, 19(6), 829-859. doi: 10.1177/0891243205278639
- Dilorio, C., McCarty, F., Resnicow, K., Lehr, S., & Denzmore, P. (2007). REAL men: A group-randomized trial of an HIV prevention intervention for adolescent boys. *American Journal of Public Health*, 97(6), 1084-1089.
- Fischer, A. (2000). *Gender and emotion: social psychological perspectives*. United Kingdom: Cambridge University Press.
- Gallagher, K. E., & Parrott, D. J. (2011). What accounts for men's hostile attitudes toward women? The influence of hegemonic male role norms and masculine gender role stress. *Violence Against Women*, 17(5), 568-583. doi: 10.1177/1077801211407296
- Hall, N. M., & Applewhite, S. (2013). Masculine ideology, norms, and HIV prevention among young Black men. *J HIV AIDS Soc Serv*, 12(3-4), 384-403. doi: 10.1080/15381501.2013.781974
- Hogben, M., Liddon, N., Pierce, A., Sawyer, M., Papp, J. R., Black, C. M., & Koumans, E. H. (2006). Incorporating adolescent females' perceptions of their partners' attitudes toward condoms into a model of female adolescent condom use. *Psychol Health Med*, 11(4), 449-460. doi: 10.1080/13548500500463964
- Ickovics, J. R., Nicolai, L. M., Lewis, J. B., Kershaw, T. S., & Ethier, K. A. (2003). High postpartum rates of sexually transmitted infections among teens: pregnancy as a window of opportunity for prevention. *Sex Transm Infect*, 79(6), 469-473.
- Kenny, D., Kashy, D., & Cook, W. (2006). *Dyadic data analysis*. New York, NY: The Guilford Press.

- Kershaw, T., Murphy, A., Lewis, J., Divney, A., Albritton, T., Magriples, U., & Gordon, D. (2014). Family and relationship influences on parenting behaviors of young parents. *J Adolesc Health, 54*(2), 197-203. doi: 10.1016/j.jadohealth.2013.08.012
- Klonoff, E., Rosenthal, L., Earnshaw, V. A., Lewis, J. B., Lewis, T. T., Reid, A. E., . . . Ickovics, J. R. (2014). Discrimination and sexual risk among young urban pregnant women of color. *Health Psychology, 33*(1), 3-10. doi: 10.1037/a0032502
- Levant, R. F. (2008). How do we understand masculinity? An editorial. *Psychology of Men & Masculinity, 9*(1), 1-4. doi: 10.1037/1524-9220.9.1.1
- Levinson, R. A. (1986). Contraceptive self-efficacy: A perspective on teenage girl's contraceptive behavior. *Journal of Sex Research, 22*, 347-369.
- Mahalik, J. R., Good, G. E., & Englar-Carlson, M. (2003). Masculinity scripts, presenting concerns, and help seeking: Implications for practice and training. *Professional Psychology-Research and Practice, 34*(2), 123-131. doi: 10.1037/0735-7028.34.2.123
- Mankowski, E. S., & Maton, K. I. (2010). A community psychology of men and masculinity: historical and conceptual review. *Am J Community Psychol, 45*(1-2), 73-86. doi: 10.1007/s10464-009-9288-y
- Martin, J. A., Hamilton, B. E., Osterman, M. J., Curtin, S. C., & Matthews, T. J. (2013). Births: final data for 2012. *Natl Vital Stat Rep, 62*(9), 1-68.
- Meade, C. S., Kershaw, T. S., & Ickovics, J. R. (2008). The intergenerational cycle of teenage motherhood: an ecological approach. *Health Psychol, 27*(4), 419-429. doi: 10.1037/0278-6133.27.4.419
- Niccolai, L. M., Ethier, K. A., Kershaw, T. S., Lewis, J. B., & Ickovics, J. R. (2003). Pregnant adolescents at risk: sexual behaviors and sexually transmitted disease prevalence. *Am J Obstet Gynecol, 188*(1), 63-70.
- Penman-Aguilar, A., Carter, M., Snead, M. C., & Kourtis, A. P. (2013). Socioeconomic disadvantage as a social determinant of teen childbearing in the U.S. *Public Health Rep, 128 Suppl 1*, 5-22.
- 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.
- Pulerwitz, J., Amaro, H., De Jong, W., Gortmaker, S. L., & Rudd, R. (2002). Relationship power, condom use and HIV risk among women in the USA. *Aids Care, 14*(6), 789-800. doi: 10.1080/0954012021000031868
- Sales, J. M., Lang, D. L., DiClemente, R. J., Latham, T. P., Wingood, G. M., Hardin, J. W., & Rose, E. S. (2012). The mediating role of partner communication frequency on condom use among African American adolescent females participating in an HIV prevention intervention. *Health Psychol, 31*(1), 63-69. doi: 10.1037/a0025073
- Sipsma, H., Biello, K. B., Cole-Lewis, H., & Kershaw, T. (2010). Like father, like son: the intergenerational cycle of adolescent fatherhood. *Am J Public Health, 100*(3), 517-524. doi: 10.2105/AJPH.2009.177600
- Terman, L. M., & Miles, C. C. (1936). *Sex and personality; studies in masculinity and femininity* (1st ed.). New York,: McGraw-Hill.
- Thompson, E., & Pleck, J. (1986). The structure of male role norms. *The American Behavioral Scientist, 29*(5), 531.
- Thompson, E., & Pleck, J. (1995). Masculinity ideologies: A review of research instrumentation on men and masculinities. In R. Levant & W. Pollack (Eds.), *A new psychology of men* (pp. 129-163). New York: Basic Books.

- Vincent, W., Gordon, D. M., Campbell, C., Ward, N. L., Albritton, T., & Kershaw, T. (in press). Adherence to traditionally masculine norms and condom-related beliefs: Emphasis on African American and Hispanic men. *Psychology of Men & Masculinity*.
- Weinman, M. L., Small, E., Buzi, R. S., & Smith, P. B. (2008). Risk factors, parental communication, self and peers' beliefs as predictors of condom use among female adolescents attending family planning clinics. *Child and Adolescent Social Work Journal*, 25(3), 157-170.
- Whitaker, D. J., Miller, K. S., May, D. C., & Levin, M. L. (1999). Teenage partners' communication about sexual risk and condom use: the importance of parent-teenager discussions. *Fam Plann Perspect*, 31(3), 117-121.