

## Older Sexual Partners and Teens' Mental Health

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### Abstract

Using two waves of data from the National Longitudinal Study of Adolescent Health, this paper investigates the influence of having an older sexual partner on subsequent mental health among girls. We describe and test status asymmetry and social age theories to explain this association. Our preliminary findings indicate that having sex with an older partner is associated with decreases in self-esteem and increases in depression. Higher levels of relationship conflict in age disparate partnerships account for a small portion of the association between having an older partner and increased depression. If age is tied to status as suggested by past research on adolescence (Brown 1999), then our findings suggest that the age-related status asymmetry between age disparate partners may help to explain negative associations between having an older partner and mental health.

## **Introduction**

In 1995, a research study on the older partners of teen mothers generated a spate of media coverage calling for policy and legal measures that would protect both teen girls and all of us. Arguments circulating in media outlets suggested that stringent statutory rape laws would protect teen girls from predatory older men, and changes to welfare policy would hold these men accountable for the babies they create and thus ease the taxpayer burden (Landry and Frost 1995).

In the decade prior to this study, teen pregnancy and parenthood had become a common refrain in the chorus of public lament about social ills. The age at first sex had dropped steadily from 1980 to 1995, and the teen pregnancy rate had increased during the same period (Singh and Darroch 1999). The nation's teenagers were growing up too fast. At the same time, concern had begun to mount about a welfare system stretched thin by an increase in non-marital childbearing among women unable to support their children. The study by Landry and Frost (1995) was conducted in the eye of this perfect storm and shifted the focus to connect these two social ills:

"The vision that we may have of two reckless teen-agers casually creating a baby is not the norm," said Sen. Joseph Lieberman, D-Conn. "It's typically older men involved with teen-aged girls in a setting that is often abusive, exploitive or overpowering." (Alpert, 1995)

Senator Lieberman's comments are likely an accurate representation of the public concern at the time, but they do not accurately reflect teen girls' partnerships. In the early 1990s 82% of teenage girls who had become sexually active had a partner who was within 3 years of their age (Schelar, Ryan, and Manlove 2006). It is true that where age differences existed, girls

were more often the younger partner. This is also true of adult partnerships – on average women marry men who are two years older than them (US Census Bureau, 2001).

An age difference in the teenage years may be substantively different than an age difference in adulthood. The adolescent years are dense with physical, social, and psychological development. While physical maturation may define entry into adolescence (age at first menarche is about 12 years old), legal adult status (age 18) is an important marker for exiting adolescence, especially as it relates to sex with an older partner vis-à-vis statutory rape laws. Because of this legally imposed “end” to adolescence, sexual partners who are just one year older than their teen partner but on the other side of this age threshold are in violation of the law in at least a few states. Therefore, an age difference of one or two years during the transition to adulthood can be substantially more consequential than the same age difference in adulthood.

Statutory rape laws do not exist simply to frustrate teens and their slightly older partners. On average, having an older partner is risky business. Teen girls with older partners are more likely to report forced or unwanted sex and are less likely to use contraception (Darroch, Landry, and Oslak 1999). Both of these factors make them more likely to get pregnant than girls who have sex with same-age partners (Darroch et al. 1999). The research literature on age differences between sexual partners focuses on these physical health detriments. While those with older partners are more likely to experience pregnancy, this is not the normative experience for teen girls with older partners. Most do not experience forced sex, and most do not get pregnant. However, there may be other negative outcomes associated with having sex with an older partner. Is the mental health of teens affected by this experience? Below we review literature on partner age differences and adolescent sexual activity and mental health. Next, we offer two theoretical perspectives that may help in understanding the relationship between having an older

partner and mental health. We then test hypotheses derived from these theories using data from the National Longitudinal Study of Adolescent Health. Finally, we discuss our findings in relation to the extant literature and to contemporary policy proscriptions on statutory rape.

### **Status Asymmetry**

In adolescence, status among peers is largely dependent on age (Brown 1999). In high school, for example, the status and prestige awarded juniors and seniors in academics, sports and other extracurricular activities, and social events draws a metaphorical line in the sand between under and upperclassmen (Coleman 1961). The association with older partners may be a status marker for young adolescents among their peers, but romantic involvement with older partners may also result in status asymmetry *within* a relationship. Older partners, especially when age differences are more dramatic, often possess more maturity, life experience, financial resources, and physical size (Darroch, Landry, and Oslak 1999). In these cases, the younger partner, typically female, may have less power to resist the initiation of sexual activities, may engage in sexual intercourse while under the influence of drugs or alcohol, or not feel efficacious enough to promote safe sex practices, such as contraceptive use (Darroch et al. 1999; DiClemente et al. 2002; Kaestle, Morisky, and Wiley 2002; Langille et al. 2007; Leitenberg and Saltzman 2000).

In addition to their vulnerability to negative reproductive health consequences stemming from unsafe sex practices, young teens are likely to experience declines in mental health after sexual intercourse due to their relatively weaker position compared to their older partners. Past research has suggested that sexual intercourse with older sexual partners, particularly among younger teens, is more likely to be nonconsensual or unwanted (Elo, King, and Furstenberg 1999; Gowen et al. 2004; Manlove et al. 2006). If adolescents are ambivalent or opposed to the initiation of sexual activity, they may experience declines in self-esteem or self-efficacy after

engaging in sexual intercourse. Psychogenic models (Finkelhor 1988), using a post-traumatic stress disorder (PTSD) framework, suggest that younger partners could experience a range of negative emotional symptoms, such as anxiety, depression, and difficulty connecting with others. Power differentials associated with gender (Connell 1987), coupled with the fact that younger partners are disproportionately female, suggest that adolescent girls may be especially vulnerable to negative mental health consequences.

It is possible that any change in mental health is not explicitly linked to sexual intercourse, per se, but rather preexisting power differentials in age disparate romantic relationships. For example, an older partner who selectively chooses a younger adolescent to attain greater status and power in their relationship may act more controlling over their younger partner's time and relationships with other peers resulting in relationship conflict. Thus, younger partners may already experience adverse mental health consequences prior to sexual intercourse. Yet past research, predominantly cross-sectional, has been inadequate in distinguishing between these possibilities (Leitenberg and Saltzman 2003). Those that do utilize longitudinal data often focus exclusively on reproductive health consequences, such as pregnancy or acquisition of sexually-transmitted diseases, rather than mental health effects (Ryan et al. 2008; Schelar, Ryan, and Manlove 2008; Young and d'Arcy 2005) or fail to consider the effect of age disparate relationships (Billy, Landale, Grady, and Zimmerle 1988).

### **Social Age**

An alternative perspective suggests that adolescents who have sex with an older partner are not likely to experience any declines in mental health, but instead may experience no change or improvements in mental health. When younger partners are girls, as is the case in the majority of age-disparate relationships among adolescents, an older male partner may actually be at the

same level of physical and emotional maturity as them. That is, having an older partner may be a better social age match for girls because of their relative maturity and physical development as compared to their male counterparts. On average, girls mature *physically* approximately two years earlier than boys (Tanner 1972). Moreover, research conducted by Giordano and colleagues (2006a, 2006b) suggests that boys may be less *socially* prepared for romantic relationships because the shift from same-sex friendships to opposite sex romantic relationships constitutes a larger developmental leap for boys. Girls' same-sex friendships are often characterized by intimate dyadic relationships, therefore girls -- often the younger partner in age disparate romantic relationships -- are better prepared for romantic involvement. Moreover, Giordano et al. (2006a) also found that across age and social background, boys report more communication awkwardness, less confidence navigating romantic relationships, and comparatively less influence and power than their partners as compared to the girls in their sample. Therefore, older boys may be a better match with younger girls in terms of physical and social maturity. If so, there may be no effects of sex on mental health for those in age disparate relationships where girls are younger than their partners, but more mature than boys of their same age.

### *Hypotheses*

We use the three theories and associated empirical evidence outlined above to test the following hypotheses regarding the relationship between having an older partner and mental health.

**Status Asymmetry (H1):** Girls with an older sexual partner will report lower levels of mental health than girls with a same-age sexual partner or girls with an older romantic (but not sexual)

partner. Age is one indicator of status; but physical or emotional power are other indicators.

Regarding the latter, we offer two additional predictions:

**H1a:** The association between having an older sexual partner and mental health will be mediated by relationship conflict.

**H1b:** The association between having an older sexual partner and mental health will be mediated by whether or not the partner is in a higher grade in school or not in school.

**Social Age (H2):** Girls with an older sexual partner will not report significantly different levels of mental health than girls with a same-age sexual partner or girls with an older romantic (but not sexual) partner if the girl is “mature” for her chronological age.

## **Data and Methods**

To test our hypotheses regarding the effects of partner age differences at first sex on adolescent girls’ mental health, we draw data from the National Longitudinal Study of Adolescent Health (Add Health). Add Health is a nationally representative longitudinal study started during the 1994-1994 school year with over 20,000 7-12 graders (wave 1). Interviews were conducted in person, generally in respondents’ homes, and used audio computer assisted self-interview (CASI) protocols for sensitive subject matter, including sexual history. Audio-CASI uses earphones and a laptop computer so respondents hear questions read and answer questions directly on the computer. Follow-up interviews were conducted in 1996 (wave 2). In order to capture the effects of first sex on mental health, our analytic sample includes only girls who had not had sex at the wave 1 interview, who had valid information on sexual and romantic

partnerships, and who had at least one relationship by the wave 2 interview. Our final sample includes 1585 females with valid sample weights.

### *Dependent Variables*

We include two measures of mental health. The first, depression<sup>1</sup>, is measured by a nine-item subset of questions from the Center for Epidemiologic Studies Depression Scale (CES-D) asked at both waves. The questions ask about the frequency of feelings over the past week ranked from 0 (rarely or never) to 3 (most or all of the time). Questions include feeling depressed, not able to shake the blues, feeling sad, feeling disliked, feeling just as good as others (reverse coded), feeling that everything is an effort, enjoying life (reverse coded), being bothered by things that don't normally bother you, and having trouble keeping mind on what you are doing. We use the wave one measure as a control of prior depression and the same measure at wave two to capture the effects of first sex on changes in depression. Our measure of prior depression ranges from 0 to 22 with an average of 7.96 and the wave 2 measure ranges from 0 to 22 with a mean of 8.32. Descriptive statistics for all variables are shown in Table 1.

Our second dependent variable is self-esteem. This is measured by a scale of four variables: having a lot to be proud of, feeling you are doing everything just about right, liking yourself just the way you are, and feeling you have a lot of good qualities. The scale is measured as an average of the four items on a 5-point scale, from strongly disagree to strongly agree; the alpha for this scale is 0.78. Higher values represent higher levels of self-esteem, with a mean of 3.98 at wave 1 and mean of 4.07 at wave 2.

### *Independent Variables*

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<sup>1</sup> We recognize that our measure is not a clinical diagnosis of depression, but rather a measure of depressive affect. For clarity and brevity, however, we refer to our measure as depression.



We include all romantic, “liked,” and sexual relationships and at both waves 1 and 2 as possible contexts for first sex. Respondents are asked if they have ever had a “special romantic relationship” with anyone; up to three of these relationships during the past 18 months (or since the last interview for wave 2 relationships) are recorded. Respondents are also asked if they have ever held hands, kissed, or told someone they like or love them. Those who indicate doing all three with the same person are deemed to have a “liked” relationship and are looped back into the same set of questions asked about romantic relationships. Finally, those with sexual partners outside the context of either of the above relationship types are asked about their sexual relationship with up to three partners. We calculate the age difference for romantic and liked relationships based on respondents’ reports of their partners’ age at the start of the relationship and the start date of the relationship, relative to respondents’ age at the relationship’s beginning. Questions about sex-only relationships ask about partner’s age at the time of the interview, and thus we calculate the age difference based on partner’s and respondent’s ages at the time of the interview. Because it is relatively uncommon for adolescent girls to be much older than their partners (Hines and Finkelhor, 2007) we dichotomize age difference into two groups: girls who are more than one year younger than their partners and all others. Most girls (72%) have partners within one year of age. We also tested a more stringent conceptualization of age disparate relationships – girls who were more than two years younger than their partner. Our results were similar, although significant differences were slightly larger in magnitude. Therefore, our findings should be considered somewhat conservative in terms the associations between age disparate relationships and mental health outcomes.

In order to isolate the effects of *sex* with an older partner, we create four dummy variables of relationship status – same age partner but no sex (49% of our sample), older partner

but no sex (16%), same age partner with sex (22%), and older partner with sex (13%). As our final measure related to age, we include two dummy variables to index those who were 14 or younger at the wave 1 interview and those who were 17 or older at wave 1 against those who were 15 or 16. Given that most wave 2 interviews occurred 11 months after the wave 1 interviews (mean difference between interview waves is 336 days), most respondents have aged one year between interview waves. Thus, our measure captures those who are young when they first have sex (15 or younger), average (between 15 and 17), and those who have sex later than average (at least 17).

We include a series of independent variables to test our three hypotheses. Aside from our main measure of interest, age differences between partners, there are few indicators of status difference between partners with which to test our *status asymmetry hypothesis*. We rely on the age disparate partnership measures described above to test this general hypothesis. Additional models include relationship conflict as a possible indicator of status asymmetry. This is a summed scale of whether a partner has: a) insulted you, called you names, or disrespected you in front of others, b) sworn at you, c) threatened you with violence, d) pushed or shoved you, and e) thrown something at you that could hurt you. The scale ranges from zero to five, with higher scores indexing greater conflict in the relationship. We include two final measures as potential sources of status asymmetry indexing whether a partner is in an older grade at school (versus same grade or younger) and whether a partner is not currently enrolled in any type of school (i.e. partners who have dropped out or have graduated from high school and are not currently enrolled in post-secondary education or training).

To test our *social age hypothesis*, we include two dummy variables indexing maturity relative to same-age peers. The first asks girls to indicate how physically developed they think

they are relative to other girls their age; those who believe they look older than some or most girls their age are considered physically developed compared to those who believe they look average or younger than their peers. As a second measure of maturity, we use interviewer remarks on the maturity of each girl, with those labeled mature or very mature coded one and those who are about average or immature coded zero.

We include numerous control measures in our models, including race (non-Hispanic white, non-Hispanic black, Hispanic, non-Hispanic Asian, and other race) and family structure (intact, single-parent, step family, or other). We include measures of both parents' education as less than high school, high school completion or GED, some college, and college degree or more. Finally, we measure family income based on parent reports in separate parent interviews conducted at wave 1. We include family income (logged) in our models and use imputation techniques in STATA for cases in which parents did not complete interview or where parent responses to this question are missing.

### *Method*

In Table 1 we show descriptive statistics for the variables used in our analysis. We estimate ordinary least squares regression models of self-esteem (Table 2) and depression (Table 3) at wave two controlling for wave one self-esteem and depression. Table 2 shows four models that test the two main and two sub-hypotheses for associations between first sex with an older partner and self-esteem. The first model includes the age disparate relationship indicators and controls. The omitted category for the age disparate relationship indicators is sex with a same age partner, but post-hoc adjusted Wald tests indicate significant differences between other age disparate relationship categories. The coefficients on the age disparate relationship indicators are our baseline test of the status asymmetry hypothesis (H1). The second model shows our more

specific tests of the status asymmetry hypothesis by adding the indicators for relationship conflict (H1a) and partners' school grade and attendance (H1b). The third model tests the social age hypothesis by adding the two maturity indicators (H2). The fourth model includes all indicators together. Table 3 shows these same models for the depression outcome. We adjust for the Add Health sampling design using the *svy* commands in STATA 9.2.

### **Preliminary Findings**

In Table 2 we present results for our first dependent variable, self-esteem. In model 1 we show results for our baseline model with indicators for sexual intercourse and age difference in relationships as an initial test of our basic status asymmetry hypothesis. After controlling for girls' self-esteem at wave 1, having first sex with an older partner between waves 1 and 2 decreases girls' self-esteem. Additionally, girls whose fathers have education past high school have lower levels of self-esteem compared to those whose fathers are high school graduates and non-Hispanic black adolescent girls have higher levels of self-esteem than their white peers. When we add our additional measures of status asymmetry, relationship conflict, having a partner in an older grade, and having a partner out of school in model 2, the effect of sex with an older partner increases slightly and remains significant. Additionally, as expected, having a partner in an older grade increases girls' self-esteem. However, having sex with an older partner off-sets any gains in self-esteem by having a higher status (older) partner. These additional variables do not mitigate the significant effects on self-esteem for blacks and girls whose fathers have at least some college education.

When we add our measures of physical development and maturity in model 3, the negative effect of sex with an older partner is not reduced. Girls who are more mature than their peers or more physically developed are not sheltered from this negative effect. Finally, we

include all measures in model 4. Here, our main findings hold; compared to girls with same-grade or younger partners, girls with partners in older grades have higher levels of self-esteem, but having sex with an older partner decreases girls' self-esteem and off-sets any gains in self-esteem from having an older partner. Having sex with an older partner decreases self-esteem and our theoretically-grounded mediators do not have much effect on this association.

Table 3 presents results for our models of depression. Model 1 presents results of our baseline model with age disparate relationship indicators. Compared to girls who have first sex with a same age partner, depression increases for girls whose first sex is with an older partner. Additionally, girls in non-sexual relationships show decreases in depression relative to their peers with older partners (superscripts represent significant differences between sex and no sex for girls with older partners). That is, girls who have first sex with an older partner have on average greater increases in depression than girls with older partners in non-sexual relationships and than girls in sexual relationships with same-age partners.

In model 2 of Table 3 we add indicators for status asymmetry to our baseline model. Here, relationship conflict is positively associated with depression and only slightly mediates the effect of sex with an older partner. We find no significant effects on depression for girls whose partners are in older grades or not in school. In model 3 we test our social age hypothesis by including indicators for development and maturity. Here, being on average more developed or mature than ones' peers does not mediate the detrimental effect of having first sex with an older partner for girls' depression.

Finally, our fourth model in table 3 includes all of our key independent variables. While the coefficient for sex with an older partner is reduced to non-significance ( $t=1.93$ ), significant differences exist between girls who have sex and those who do not. Girls who have sex with an

older partner experience increases in depression compared to girls who have older partners but do not have sex, and girls who have first sex with a same-age partner experience increases in depression compared to girls who have similar age partners but have not had sex. The relationship between partner age differences and depression is partly mediated, though not entirely, by the inclusion of relationship conflict. It may be that girls in sexual relationships with older partners also experience higher levels of relationship conflict. Recall that our relationship conflict measure is a summed scale of both verbal/emotional and physical conflict; thus, girls in sexual relationships with older partners may be particularly at risk for experiencing both increases in depression and also abuse in these relationships.

### **Preliminary Conclusions**

Our preliminary analysis shows that girls who have sex with an older partner experience decreases in self-esteem and increases in depression compared to their counterparts who have sex with a same-age partner. The association between having an older sexual partner and mental health is not mediated by our proxy measures for status: whether the older partner was in a higher grade in school or not in school. Although having a partner who was in a higher grade, itself, is associated with higher self-esteem. The status proxy indicating whether the relationship conflict was present does mediate the association between sex with an older partner and increased depression—it reduces this association by about 15%, but it remains significant. These findings indicate that sex with an older partner is associated with decreases in self-esteem and increases in depression. It may be the case that status asymmetry between partners of different ages disadvantages the younger partner, although we were unable to properly capture status with grade, out-of-school, or conflict measures in these preliminary analyses.

We also fail to find support for our alternative hypothesis that having an older sexual partner would *not* be related to changes in mental health because an older male partner might be the perfect maturity match for a younger female partner who matured earlier. Our baseline model finds differences in mental health for those with an older sexual partner. Further, accounting for two measures of maturity (self- and interviewer-reported) does not change this association.

Finally, we tested two contrasts in these analyses. First, is having sex with an older partner different than having sex with a same age partner in terms of mental health? To this, our answer is yes. Second, is having sex with an older partner different than simply dating (but not having sex) with an older partner in terms of mental health? To this, our answer is somewhat more complicated. If a young woman has an older male partner, she is significantly more likely to experience an increase in depression if she has sex with that older partner than if she does not have sex with him. However, if a young woman has an older male partner, she is no more likely to suffer detriments to self-esteem if she has sex with him.

In conclusion, we find that for the young women in our sample, sex with an older male partner increases their depressive symptoms and decreases their self-esteem. While prior literature suggested some possible mechanisms for this relationship, we were not able to find substantial mediating influences of these mechanisms with the measures we created for them. It should be noted that our mechanism measures may be weak proxies for what we hoped to capture. For example, for status asymmetry, we would prefer to have indicators of perceived popularity and differences in popularity between sexual partners. While the Add Health data's saturated schools sample allows for some assessment of popularity (by who is nominated as a friend frequently by others), all of the other data restrictions we require for our main questions of interest would substantially limit our ability to generate robust estimates using the saturated

schools sample. For our hypothesis of social age, we would have liked measures of how comfortable respondents are in intimate relationships, and the disparity between the comfort levels of young men and women in sexual partnerships. This would allow us to more directly test the idea that many girls who are chronologically younger are actually age-mates to their romantic partners given levels of intimate experience or other indicators of relationship maturity.

### **Next Steps**

As we prepare this paper for the PAA meetings, we plan to conduct several other tests. First, we will test relaxing the age difference requirement from more than one year, to more than two or three years. We will have fewer age disparate partnerships with the later definitions, but we expect that our results will be stronger—having sex with a substantially older partner is likely to have stronger effects than having sex with someone just over a year one's senior. Second, we will spend more time investigating differences in prior levels of mental health by age differences between partners. Currently, we include prior mental health indicators as controls so that we can capture changes in mental health associated with sexual initiation with an older partner. However, it is important to understand the degree to which those who have sex with older partners already have lower mental health before sex. Perhaps their relatively lower levels of mental health leave them little room to further decrease mental health. Or, perhaps small decreases in mental health when it is already quite low can be particularly harmful: they may launch one into a major depressive disorder. Understanding where young women start with regard to their mental health will help us understand the true influence of sex with an older partner.

Finally, we will more fully explore the relationship conflict measure, because this is the only mediating variable that accounted for any of the influence of having an older partner. We



will examine the component measures that create the conflict scale to see if we can determine whether specific manifestations of conflict are more or less associated with sex with an older partner and subsequent mental health. A number of past studies have found that sex with an older partner is more likely to be forced or unwanted, so understanding relationship conflict in these partnerships is especially important.

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**Table 1: Weighted Descriptive Statistics**

	<b>Sample size or Range</b>	<b>Weighted proportion or Mean</b>
<b><i>Age disparate indicators</i></b>		
Sex-same age partner	356	0.13
sex-older partner	200	0.22
no sex-same age partner	782	0.50
no sex-older partner	247	0.15
<b><i>Age</i></b>		
<15	635	0.52
15-16	691	0.37
>=17	259	0.11
<b><i>Race/Ethnicity</i></b>		
NH-white	910	0.73
NH-Black	251	0.09
Hispanic	296	0.13
NH-Asian	98	0.03
Other Race	30	0.02
<b><i>Family Structure</i></b>		
Bio/adoptive two parent	936	0.58
Step-parent	201	0.13
Single-parent	391	0.25
other	57	0.03
<b><i>Parents' SES</i></b>		
mother < HS	295	0.16
mother HS grad	467	0.34
mother some college	404	0.26
mother college grad	419	0.24
father < HS	463	0.27
father HS grad	436	0.30
father some college	305	0.19
father college grad	381	0.23
<b><i>Family Income (logged)</i></b>	0-6.68	3.52
<b><i>Key Independent Variables</i></b>		
Relationship Conflict*	0-5	0.31
Partner same grade or less	736	0.48
partner older grade	604	0.37
partner not in school	245	0.14
Maturity	721	0.45
Physical Development	585	0.40
<b><i>Dependent Variables</i></b>		
Depression (time 2)	0-22	8.32
Depression (time 1)	0-22	7.96
Self-Esteem (time 2)	1-5	4.07
Self-Esteem (time 1)	1-5	3.98

N=1585

\*N=1316

**Table 2: Age Disparate Relationship Partners and Self-Esteem**

	Model 1			Model 2			Model 3			Model 4		
	Coeff		SE	Coeff		SE	Coeff		SE	Coeff	SE	
W1 Self-Esteem	0.51	***	0.03	0.50	***	0.03	0.51	***	0.03	0.50	0.03	
<b>Age disparate indicators</b>												
sex-same age partner (ref)												
sex-older partner	-0.15	*	0.06	-0.17	*	0.07	-0.15	*	0.06	-0.17	*	0.07
no sex-same age partner	0.00		0.04	0.01		0.05	0.00		0.04	0.00	0.05	
no sex-older partner	-0.07		0.05	-0.10		0.06	-0.07		0.05	-0.10	0.06	
<b>Key Independent Variables</b>												
relationship conflict				-0.04		0.03				-0.04	0.03	
partner older grade				0.08	*	0.04				0.08	*	0.04
partner not in school				0.05		0.07				0.05	0.07	
physical development maturity							-0.01		0.04	-0.01	0.04	
							0.02		0.04	0.02	0.04	
<b>Age</b>												
15-16 (ref)												
<15	-0.03		0.03	-0.06		0.04	-0.03		0.04	-0.06	0.04	
>=17	0.04		0.05	0.05		0.05	0.04		0.05	0.04	0.05	
<b>Race/Ethnicity</b>												
NH-white (ref)												
NH-Black	0.09	*	0.04	0.12	*	0.05	0.09	*	0.04	0.12	*	0.05
Hispanic	-0.05		0.07	-0.07		0.07	-0.05		0.07	-0.07	0.08	
NH-Asian	-0.07		0.11	-0.06		0.11	-0.07		0.11	-0.06	0.11	
Other Race	-0.03		0.17	-0.07		0.17	-0.04		0.16	-0.08	0.16	
<b>Family Structure</b>												
bio/adoptive two parent (ref)												
Step-parent	-0.02		0.05	-0.02		0.06	-0.02		0.05	-0.02	0.06	

Single-parent	0.00	0.06	-0.02	0.07	-0.01	0.06	-0.03	0.07
other	-0.17	0.09	-0.14	0.09	-0.17	0.09	-0.14	0.09
<b>Parents' SES</b>								
mother HS grad (ref)								
mother < HS	0.03	0.07	0.04	0.07	0.03	0.07	0.04	0.07
mother some college	-0.04	0.04	-0.05	0.04	-0.04	0.04	-0.05	0.04
mother college grad	0.00	0.05	0.00	0.05	0.00	0.05	0.00	0.05
father HS grad (ref)								
father < HS	-0.07	0.07	-0.10	0.07	-0.06	0.07	-0.10	0.08
father some college	-0.13 **	0.05	-0.13 *	0.06	-0.13 *	0.05	-0.13 *	0.06
father college grad	-0.11 *	0.05	-0.10 *	0.05	-0.11 *	0.05	-0.10 *	0.05
log of family income	0.04	0.03	0.05	0.03	0.04	0.03	0.05	0.03
constant	2.05 ***	0.17	2.06 ***	0.19	2.05 ***	0.17	2.06 ***	0.19
R <sup>2</sup>	0.32		0.34		0.32		0.34	
Sample Size	1585		1316		1585		1316	

Note: Models control for imputed missing values on parent education and income.

<sup>a</sup> Significantly different than no sex-older partner

<sup>b</sup> Significantly different than sex-older partner

**Table 3: Age Disparate Relationship Partners and Depression**

	Model 1			Model 2			Model 3			Model 4		
	Coeff		SE	Coeff		SE	Coeff		SE	Coeff		SE
W1 Depression	0.38	***	0.03	0.37	***	0.04	0.38	***	0.03	0.36	***	0.04
<i>Age disparate indicators</i>												
sex-same age partner (ref)												
sex-older partner	0.82	** <sup>a</sup>	0.30	0.69	* <sup>a</sup>	0.35	0.81	** <sup>a</sup>	0.30	0.68	<sup>a</sup>	0.35
no sex-same age partner	-0.64	**	0.23	-0.54	*	0.24	-0.63	**	0.23	-0.52	*	0.24
no sex-older partner	-0.35	<sup>b</sup>	0.28	-0.29	<sup>b</sup>	0.36	-0.34	<sup>b</sup>	0.28	-0.27	<sup>b</sup>	0.36
<i>Key Independent Variables</i>												
relationship conflict				0.33	*	0.13				0.33	*	0.13
partner older grade				0.23		0.25				0.23		0.26
partner not in school				0.45		0.42				0.45		0.42
physical development							0.20		0.18	0.15		0.20
maturity							-0.21		0.19	-0.16		0.21
<i>Age</i>												
15-16 (ref)												
<15	0.17		0.18	0.20		0.22	0.13		0.18	0.17		0.22
>=17	-0.15		0.25	-0.43		0.25	-0.11		0.25	-0.40		0.25
<i>Race/Ethnicity</i>												
NH-white (ref)												
NH-Black	0.90	**	0.31	0.62		0.31	0.93	**	0.30	0.65	*	0.32
Hispanic	0.00		0.22	0.01		0.28	0.01		0.22	0.03		0.28
NH-Asian	-0.18		0.43	-0.16		0.49	-0.17		0.44	-0.14		0.49
Other Race	0.14		0.89	-0.12		0.92	0.23		0.91	-0.04		0.94
<i>Family Structure</i>												
bio/adoptive two parent (ref)												
Step-parent	0.21		0.25	0.22		0.29	0.21		0.25	0.24		0.28
Single-parent	-0.41		0.32	-0.41		0.37	-0.37		0.32	-0.38		0.37

other	0.24		0.60	0.32		0.63	0.26		0.59	0.34		0.63
<b><i>Parents' SES</i></b>												
mother HS grad (ref)												
mother < HS	0.85	**	0.31	0.82	*	0.33	0.85	**	0.31	0.81		0.33
mother some college	0.48	*	0.24	0.53	*	0.26	0.48	*	0.24	0.52		0.26
mother college grad	0.40		0.27	0.42		0.30	0.41		0.27	0.42		0.30
father HS grad (ref)												
father < HS	-0.66	*	0.30	-0.61		0.33	-0.68	*	0.30	-0.63		0.33
father some college	-0.41		0.26	-0.40		0.30	-0.42		0.26	-0.40		0.29
father college grad	0.05		0.31	0.34		0.34	0.04		0.30	0.33		0.34
log of family income	-0.14		0.18	-0.13		0.20	-0.13		0.18	-0.12		0.20
constant	5.83	***	0.74	5.51	***	0.83	5.81	***	0.74	5.50	***	0.84
R <sup>2</sup>			0.19			0.20			0.19			0.20
Sample Size			1585			1316			1585			1316

Note: Models control for imputed missing values on parent education and income.

<sup>a</sup> Significantly different than no sex-older partner

<sup>b</sup> Significantly different than sex-older partner



