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Original article

## The Association Between Developmental Assets and Sexual Enjoyment Among Emerging Adults

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 A B S T R A C T

**Purpose:** To examine the associations between three key developmental assets and an aspect of sexual health, sexual enjoyment, which has rarely been studied in young adults, although its importance is stressed in all recent sexual health policy statements.

**Methods:** Using data from wave III (2001–2002) of the National Longitudinal Study of Adolescent Health, and multiple logistic and ordered logistic regression, we explored the associations between sexual pleasure and autonomy, self-esteem, and empathy among 3,237 respondents aged 18–26 years in heterosexual relationships of  $\geq 3$ -month duration. We also examined the distribution of sexual pleasure across various socio-demographic groups.

**Results:** Compared with young women, young men reported more regular orgasms and more enjoyment of two kinds of partnered sexual behavior. Sexual enjoyment was not associated with age, race/ethnicity, or socioeconomic status. Among women, autonomy, self-esteem, and empathy co-varied positively with all three sexual enjoyment measures. Among men, all associations were in the same direction, but not all were statistically significant.

**Conclusion:** A substantial gender difference in enjoyment of partnered sexual behavior exists among emerging adults in the United States. This study is the first to use a representative population sample to find a relationship between developmental assets and a positive aspect of sexual health – sexual pleasure.

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According to national and international health policy documents, sexual pleasure is a key aspect of sexual health across the lifespan [1–3]. Recent research examining the sexual experiences of adolescents and young adults suggests that by this standard, many young women, and perhaps some young men, do not experience a crucial aspect of sexual health [4–8]. In 1995, the National Commission on Adolescent Sexual Health released a document asserting that the process of becoming a sexually healthy adult is inextricably linked with the processes of healthy

psychological and social development, and calling for more research into the links among these domains. Meanwhile, the demand for rigorous study of the positive aspects of sexual health among young people has grown [9–14]. This article answers both calls, presenting and testing a conceptual framework that links specific developmental assets with enjoyment of sexual behavior among emerging adults in the United States.

### *Adolescents' Subjective Experiences of Partnered Sex*

Although studies are limited, the existing published data suggest that substantial gender differences exist in adolescents' experiences of partnered sex. Qualitative studies have reported that young women struggle to recognize their sexual feelings and communicate their wishes assertively, and as a result, often voluntarily engage in sexual behavior without necessarily enjoy-

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Portions of these analyses were presented at the 2009 meeting of the Population Association of America in Detroit.

ing it [7,8,15]. These studies suggest that peer-reinforced social norms, particularly those related to appropriate behavior for girls, contribute to this phenomenon. Quantitative studies, most retrospective and focused specifically on first sex, have supported these findings [4,16]. Young men, in contrast, are more likely to report that their sexual experiences are pleasurable, but they also report that these experiences are highly anxiety provoking [16]. Qualitative studies have reported that male adolescents worry a great deal about their sexual “performance”—both their ability to please their partner and their ability to meet the standards for normative heterosexual behavior enforced by their male peers [5,6,17,18]. Even after the insular high school social context has been left behind, internalized, sexual scripts might persist and interfere with sexual enjoyment.

### *Developmental Assets and Sexual Enjoyment*

There is consensus that successful transition to adulthood is more likely among youth who possess assets, the cultivation of which is the goal of positive youth development [19]. A recent set of reviews of published data reported that many of these assets were associated with reduced risk of some negative sexual health outcomes [9]. These reviews focused on developmental assets drawn from the four categories suggested by Pittman et al: connectedness, competence, confidence, and character [9,20]. Lerner et al added a fifth category, caring, [21] to these. Just as developmental assets may be protective against negative sexual health outcomes, they may also promote or be promoted by positive sexual health outcomes.

To test this, we identified three assets that may be expected to co-vary with sexual enjoyment and for which multi-item measures were available in a nationally representative data set that also contained measures of sexual enjoyment. These assets were autonomy, self-esteem, and empathy. The first two of these assets belong to the category confidence, whereas the third has been alternately assigned either to caring or to competence [19,22,23].

*Autonomy*, defined as having the strength to follow personal convictions even if they go against conventional wisdom, might increase in emerging adulthood as agency increases [24]. We hypothesize that it co-varies with sexual enjoyment because it may enable communication, experimentation, and reactions that social norms would otherwise inhibit.

*Self-esteem*, defined as belief in one's own worth, has also been reported to increase during emerging adulthood [24]. We hypothesize that it co-varies with sexual enjoyment because it may enhance the ability of a young adult to acknowledge, communicate about, and negotiate for his or her sexual preferences. Previous studies have reported that self-esteem is inversely associated with susceptibility to peer pressure and positively associated with sexual communication and refusal to have unprotected sex [25,26].

*Empathy* is defined as the cognitive capacity to take other's perspective, often leading to an emotional response involving congruence with other's emotional state [27]. We hypothesize that it co-varies with sexual enjoyment because it may increase motivation to give sexual (and other kinds of) pleasure to the partner. That pleasure might be enjoyed vicariously by the empathic person, and might also inspire the partner to provide pleasure in return.

To summarize, according to our conceptual model, these three developmental assets may enable young people to experi-

ence higher levels of sexual pleasure. This study is the first to use a population sample to test for associations between developmental assets and sexual enjoyment among emerging adults.

## **Methods**

### *Data*

Data for these analyses were obtained from wave III of the National Longitudinal Study of Adolescent Health (Add Health). Add Health is an ongoing study of a nationally representative cohort of youth who were in grades 7–12 in the 1994–1995 school year. Of the 20,745 students interviewed in their homes during 1994 and 1995 in wave I, 15,197 were re-interviewed in wave III during 2001 and 2002, when they were 18–26 years old.

The interviews took place in the respondents' homes. The interviewer read the less sensitive questions aloud and entered the responses into a computer. The more sensitive questions, including those used in this study, were administered through Audio-Computer-Assisted Self-Interview; the respondent listened to the prerecorded questions using earphones and then answered the questions by keying directly into the computer [28].

### *Sample*

The 15,197 respondents in wave III were asked to list all sexual or romantic relationships they had been in since June 1995. For each relationship listed, respondents indicated whether that relationship had included sex, which was defined as vaginal, oral, or anal intercourse. Respondents were then asked to classify their sexual relationships by date of most recent sex and to indicate whether they were still in the relationship.

If the respondent was still in that relationship, and the relationship had lasted at least 3 months, and the partner was not of the same gender as the respondent, the respondent was eligible for a special subsample. The survey administered to this subsample included additional items that measured developmental assets and aspects of sexual enjoyment. (Of the 6,979 respondents currently in a relationship with their most recent sex partner, more than 95% had been in the relationship for at least 3 months, and more than 98% were in relationships with other-sex partners). About half of these eligible respondents were randomly selected for inclusion in the special subsample. A small fraction of these respondents were excluded because their relationship did not meet extra criteria intended to select the “two most important relationships” of the respondents. The final subsample consisted of 3,488 respondents. In this study we examined the 93% of the 3,488 with complete sexual enjoyment data ( $N = 3,237$ ). Respondents excluded due to missing data were less likely to have attended college and were more likely to be black, compared to those who had complete data.

The following weighted statistics describe the sample. Women comprised 58.6% of the respondents. The mean respondent age was 22, with more than 98% of the sample aged between 19 and 25. About seven-tenths of respondents (71.2%) described themselves as white non-Hispanic 13.1% described themselves as black non-Hispanic, and almost the same percentage (11.6%) described themselves as Hispanic. About one-tenth (10.2%) had not graduated from high school, one-third had graduated from high school and were not currently in school (32.9%), and the rest were distributed equally between two other groups described by

their educational attainment, enrollment, and work status. Consistent with other research that examined this demographic group, nearly all (more than 96% of both the men and women) had vaginal sex with their partner, most (more than 86% of both men and women) had received oral sex from their partner, and most (more than 82% of both men and women) had performed oral sex for their partner [29]. More than 90% of both men and women had at least one kind of oral sex with their partner.

## Measures

### Sexual pleasure

The regularity of orgasm was one measure of sexual enjoyment that was used in the current study. This measure asked, “When you and your partner have sexual relations, how often do you have an orgasm?” The answer options were *most of the time/every time*, *more than half the time*, *about half the time*, *less than half the time*, and *never/hardly ever*. The wording of this measure did not specify the kind of sexual relations, although as noted previously, sex was defined earlier in the interview as vaginal, oral, or anal sex, and nearly all respondents had vaginal sex with their partner. The meaning of the term “sexual relations” in this question was left open to respondent interpretation.

We also used two other measures of sexual enjoyment: liking to receive and provide sexual stimulation, as measured by the items, “How much do you like for your partner to perform oral sex on you?” and “How much do you like to perform oral sex on your partner?” The answer options were *like very much*, *like somewhat*, *neither like nor dislike*, *dislike somewhat*, and *dislike very much*. Only respondents who had engaged in each of those behaviors were asked the corresponding question about degree of “liking.”

Similar questions were also asked about vaginal sex and anal sex, but were not used in this analysis because of data problems. More than one-third of the data about vaginal sex were missing as a result of a computer programming error. The remaining sample varied systematically from the full sample, making an analysis of enjoyment of vaginal sex subject to bias. For example, those who were missing this measure differed markedly in their frequency of vaginal sex and likelihood of using birth control at the time of the last vaginal sex. The anal sex enjoyment measure was not used because only about one-fifth of the sample reported having anal sex.

### Developmental assets

The autonomy and empathy scales were each composed of four items obtained from the Bem Sex Role Inventory instrument [30]. The items were preceded in the survey instrument by the introduction, “How often is each of the following statements true of you?” The autonomy items were as follows: I defend my own beliefs, I am independent, I am willing to take a stand, and I am assertive (Cronbach  $\alpha = .70$ ). The empathy items were as follows: I am sympathetic, I am sensitive to the needs of others, I am understanding, and I am compassionate (Cronbach  $\alpha = .86$ ). The seven answer options for all eight items ranged from *never or almost never true* to *always or almost always true*. We developed these scales using a conceptually-driven item-selection process, followed by a factor analysis [31].

Self-esteem was measured using four items that were similar to those reported in Rosenberg’s Self-Esteem Scale [32]. The scale

formed from the mean of these items had acceptable internal consistency (Cronbach  $\alpha = .78$ ).

The scores of the 67 respondents missing an empathy score and the 78 respondents missing an autonomy score were imputed, using the mean score for their gender. All respondents had complete self-esteem data.

### Sociodemographic characteristics

The multivariate analyses controlled for age, race-ethnicity, and socioeconomic status (SES). Age was measured in years and was centered. Race/ethnicity was coded as non-Hispanic white, non-Hispanic black, non-Hispanic Asian, non-Hispanic Native American, and Hispanic. SES was measured by a variable that combined educational attainment, employment status, and whether they were currently attending college [31]. All respondents had complete sociodemographic data.

### Analyses

We first tested for differences in sexual enjoyment by gender, age, race/ethnicity, and SES. Next, we used logistic and ordered logistic regression to separately model the association of each measure of sexual enjoyment with each developmental asset measure, adjusting for age, race/ethnicity, and SES. We chose the regression model types on the basis of distribution of the sexual enjoyment variables and results from preliminary bivariate analysis.

We used collapsed versions of the sexual enjoyment measures to ensure sufficient cell size, wherever necessary. We used a dichotomous indicator for the enjoyment of receiving oral sex analysis, which was set to one if the respondent reported liking it very much and set to zero otherwise. The transformed “like performing oral sex” measure combined the “dislike” and “dislike very much” categories.

All analyses were conducted separately for men and women because preliminary analysis revealed significant interaction terms between gender and developmental assets. Also, in the orgasm analysis, the form of the outcome measure differed for men and women, because the distribution of the measure differed substantially by gender. For men, we used a dichotomous indicator set to 1 if the respondent reported orgasms most of the time or every time, and 0 otherwise. For the analyses of women, we used the measure in its original form. All analyses were adjusted for the complex sampling design, specifically clustered data collected with unequal probability of selection [33]. All analyses were conducted using Stata version 9 (StataCorp, College Station, TX).

## Results

### Gender differences in sexual enjoyment and developmental assets

The distributions of the sexual pleasure variables are shown in Table 1. Men were more likely than women to report having orgasms most or all the time: 87% versus 47%. A total of 15% of young women reported having orgasms less than half the time or never, whereas only 2.6% of young men reported having orgasms with that regularity. Men who had performed oral sex for their partner were also more likely than women who had performed so to report liking it very much: 61% versus 37%. There was also more variability among women in their enjoyment of performing oral sex and in their regularity of orgasms, as compared with

**Table 1**  
Sexual enjoyment distributions, by gender<sup>a\*</sup>

Regularity	Regularity of orgasm		Degree of Enjoyment	Receiving oral sex		Performing oral sex	
	Men	Women		Men	Women	Men	Women
Most or all the time <sup>***</sup>	87.1	46.8	Like it very much <sup>***</sup>	83.8	71.3	60.9	37.2
More than half the time <sup>***</sup>	7.4	20.8	Like it somewhat <sup>***</sup>	14.1	20.9	25.7	36.7
Half the time <sup>***</sup>	2.9	17.1	Neither like it nor dislike it <sup>***</sup>	1.9	5.1	9.4	16.6
Less than half the time <sup>***</sup>	1.5	9.0	Dislike it somewhat <sup>***</sup>	.1	2.1	2.8	7.1
Never or almost never <sup>***</sup>	1.1	6.4	Dislike it very much <sup>***,b</sup>	.1	.6	1.2	2.5
N	1,338	1,899		1,191	1,648	1,152	1,566

<sup>a</sup> Differences between men and women significant at the following levels. <sup>\*\*</sup> $p < .01$ , <sup>\*\*\*</sup> $p < .001$ .

<sup>b</sup> The gender difference in percentage who dislike performing oral sex very much is not significant, while the gender difference in the percentage who dislike receiving oral sex very much is significant at  $p < .01$ .

men. In contrast, the distribution of the measure of enjoying receiving oral sex was more uniform across gender, although men were still more likely to select the most positive response option: 84% versus 71%. In contrast to these consistent gender differences, no pattern of differences in sexual enjoyment emerged by age, race/ethnicity, or SES (not shown).

The means, medians, and standard deviations of the developmental asset scores are shown in Table 2. Consistent with previously published data, on average, female respondents scored higher on empathy and lower on self-esteem as compared with male respondents [27,34].

#### Association of sexual enjoyment and developmental assets

Each cell in Table 3 contains the coefficient for the developmental asset term from a logistic or ordered logistic regression of that column's sexual enjoyment measure on that developmental asset. All models controlled for age, race/ethnicity, and SES. In these models, a positive coefficient indicates a positive relationship.

Among men, autonomy was found to be positively associated with the likelihood of having an orgasm most of the time or every time during sex with his partner, but was not associated with enjoyment of performing or receiving oral sex with his partner. Similarly, self-esteem was found to be positively associated with enjoyment of performing oral sex, but was not associated with the other two measures of sexual enjoyment among men. Empathy was the one developmental asset measure that was consistently (positively) associated with all three sexual enjoyment measures, among men.

Among women, the same significant associations were reported with approximately the same magnitudes, but all the

**Table 2**  
Developmental assets, by gender<sup>a\*\*\*</sup>

Developmental asset	Range	Men		Women	
		Mean	Standard deviation	Mean	Standard deviation
Autonomy	1–7	5.5	1.7	5.5	1.4
Empathy	1–7 <sup>***</sup>	5.5	1.8	6.0	1.4
Self-esteem	1–5 <sup>***</sup>	4.3	.9	4.2	.8
Depressive symptoms	0–25 <sup>***</sup>	3.8	6.0	4.8	6.0

<sup>a</sup> Differences between men and women significant at the following levels. <sup>\*\*\*</sup>  $p < .001$ .

other developmental asset coefficients were also statistically significant at the  $p < .05$  level as well. Thus, among women, autonomy, self-esteem, and empathy were all positively associated with all three measures of sexual enjoyment.

As a final check of the results, we re-estimated the orgasm models twice, limiting the sample each time to the respondents who had performed each kind of oral sex. There were no differences between the results thus obtained and the coefficients from the original models (not shown). We also regressed an indicator of liking vaginal sex very much on each of the developmental asset measures (controlling for the demographic factors) for men and women separately, using the sample of respondents whose data for this measure were not missing. The results paralleled those obtained from the enjoyment of receiving oral sex models (not shown). This was expected because the distribution of the like vaginal sex measure was very similar to the distribution of the like receiving oral sex measure, among those with complete data for both.

#### Discussion

enjoyment of partnered sexual behavior as measured in this study, does not differ along racial/ethnic, age, or SES lines, but it clearly differs by gender. Less than half of young women in established opposite-sex relationships have an orgasm most or all the times they have sex with their partner. In contrast, nearly nine out of 10 young men in such relationships have orgasms this regularly. Young women are also five times as likely as young men to have orgasms less than half the time they have sex with their partner. Although orgasm represents only one kind of sexual pleasure, it is highly valued in American culture [35]. Although not as large, significant gender differences are also found in enjoyment of providing and receiving sexual stimulation with a partner, in the form of oral sex.

These results are largely consistent with previous research, although the 1992 National Health and Social Life Survey reported even lower orgasm regularity among women aged 18–24 years [35]. This study reported that the gender difference in sexual enjoyment persists through middle age, although it seems to diminish slightly in the later decades of life [35]. Future work can explore whether this difference contributes to the recently-identified gender disparity among older adults in problems related to sexual pleasure [36].

Among both young men and women, there is an association between three key developmental assets and three kinds of sexual enjoyment, although this association is more consistent among women as compared with men. The two assets that we

**Table 3**  
Increase in log odds of sexual enjoyment per unit increase in developmental asset, by gender<sup>a</sup>

	Orgasm most of the time or every time (logistic regression, men) Regularity of orgasm (ordered logistic regression, women)		Like receiving oral sex from partner very much (logistic regression)		Like performing oral sex for partner (ordered logistic regression)	
	$\beta$	95% CI	$\beta$	95% CI	$\beta$	95% CI
<b>Men</b>						
Autonomy	.47***	.27 to .66	.16	-.05 to .38	.01	-.14 to .18
Self-esteem	.19	-.14 to .52	.36	-.03 to .75	.43**	.13 to .72
Empathy	.31***	.14 to .48	.20*	.01 to .39	.19*	.03 to .35
<b>Women</b>						
Autonomy	.33***	.22 to .44	.14*	.01 to .27	.20**	.08 to .32
Self-esteem	.38**	.16 to .60	.35**	.09 to .61	.45***	.21 to .68
Empathy	.28***	.16 to .39	.24**	.08 to .39	.17**	.04 to .29

<sup>a</sup> Each cell contains the coefficient or 95% CI from an independent logistic or ordered logistic regression of the sexual enjoyment measure on the developmental asset measure, controlling for age, race/ethnicity, and socioeconomic status.

\*  $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

hypothesized would enable youth to overcome barriers to sexual communication and exploration (autonomy and self-esteem) are consistently associated with all three types of sexual enjoyment among women, but with only one measure each of sexual enjoyment among men. These assets may be more important for young women because they face more barriers to sexual expression as compared with men [37,38]. Conversely, because young women face more barriers, the achievement of sexual enjoyment might do more to boost the self-esteem and feelings of autonomy of young women as compared with young men.

In contrast, for both men and women, empathy is associated with all three types of sexual enjoyment. This is consistent with our hypothesis that empathic individuals are more responsive to their partner's needs and thus initiate a positive feedback cycle.

#### Limitations

The two primary limitations of this study are its cross-sectional design, which prevented us from ascertaining the direction of causality, and the restricted set of measures of sexual enjoyment available in Add Health. These measures included only self-reports of orgasm regularity and enjoyment of giving and receiving oral sex; valid data on enjoyment of vaginal sex and other partnered sexual activities, such as sexual touching, were not available. Because more than four-fifths of young adults in established relationships in the United States have oral sex with their partner, these measures of enjoyment are appropriate for a study of this demographic group. Furthermore, the quality of the data of the focal measures is likely to be very high because by measuring enjoyment in the current relationship and using Audio-Computer-Assisted Self-Interview to do so, the Add Health investigators minimized recall and social desirability bias [39,40]. Finally, these results may not be generalizable to emerging adults in short-term or same-gender relationships (data were only available for emerging adults in relationships with opposite gender partners that had lasted at least 3 months).

#### Conclusion

This study adds to the published data that have shown protective effects of developmental assets on negative sexual

and reproductive health outcomes [22,23]. These existing studies have examined the links between developmental assets and experiencing adolescent pregnancy, acquiring a sexually transmitted infection, and engaging in risky sexual behavior, such as having sex without contraception, among other undesirable outcomes. This study is the first to use a representative population sample to examine the relationship between developmental assets and a positive aspect of sexual health—sexual pleasure.

Despite the unanimous agreement in all public sexual health policy documents that sexual health is more than the absence of sexual infection, violence, and other problems, the positive aspects of sexual health have been all but ignored in the literature [1–3]. This article is only the first step toward filling this gap in our understanding of the positive aspects of sexual well-being. Future studies using longitudinal data and more nuanced measures of sexual enjoyment can examine the causes and consequences of the gender differences identified in this study. Such studies can also test the direction of causality in the associations reported in this study by examining hypothesized mediators. Also, data that include a more complete set of measures of developmental assets can be used to examine whether the stronger pattern of associations of developmental assets with measures of sexual enjoyment among women generalizes to other aspects of development.

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