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Reproductive Health Services: Barriers to Use Among College Students

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Abstract

The objective of the current study was to explore demographic, financial, and psychosocial barriers associated with the use/non-use of reproductive health (RH) services. The sample included 212 college students (60 % female) aged 18–19 from a Northern California public university. In October, 2014, students took an on-line survey with questions on knowledge, access, barriers, and use of different RH services and settings. Findings indicated that college students were more likely to visit a primary care setting and/or school-based setting for their RH care. Sexual intercourse was the strongest correlate of having received RH care in the past year, followed by gender, social disapproval, and knowledge of available services. Analyses stratified by gender found a similar pattern among females. However, the only significant predictor among males was knowledge of available services. These findings highlight universities as uniquely positioned to reduce perceived barriers to accessing RH services by making use of technology, promoting health and wellness centers, and providing/adding sexual and reproductive information to general education classes.

Keywords

Barriers to reproductive health services; college students; gender; health care access; knowledge of health services

Compared to youth in other western industrialized countries such as the United Kingdom, American youth have a longer lag between first sex and first visit for reproductive health (RH) care, with a median interval of 22 months for U.S. females younger than age 25 (Finer & Zabin, 1998; Stone & Ingham, 2003). According to national data, receipt of contraceptive, sexually transmitted disease and/or gynecological services from a provider differs by age,

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gender, insurance coverage, sexual experience, and number of partners. For example, 45% of sexually active 15–19 year olds without insurance have received any gynecological services compared to 62% with Medicaid. Further, only 22% of sexually active 18–19 year-old males report receiving advice about male or female contraception compared to 74% of females (Tyler, Warner, Gavin, & Barfield, 2014). Low RH utilization rates among young adults are cause for concern as preventative, diagnostic, and treatment services are necessary for establishing healthy sexual and reproductive behaviors.

To better understand why U.S. youth often forgo RH care during periods of high sexual risk, studies have examined perceived barriers (Carroll, Lloyd-Jones, Cooke, & Owens, 2012; Elliott & Larson, 2004); however, few have focused on young adults, particularly college students. Given that young adults have the highest rates of unintended pregnancy and sexually transmitted diseases (Finer & Zolna, 2014; Forhan et al., 2009), it is imperative to begin identifying the social, psychological and logistical barriers that prevent this group from obtaining RH services. The current study aims to better understand these challenges.

A review of empirical studies examining barriers to using RH services among youth and young adults found that four categories of barriers emerged: (1) *service access* (e.g., ease and knowledge of access); (2) *service entry* (e.g., wait time, clinic comfort); (3) *quality of services* (e.g., perceived lack of respect); and (4) *social ramifications* (e.g., embarrassment, being recognized, being gossiped about, and confidentiality) (Bender & Fullbright, 2013). A similar set of perceived barriers has been observed among school-aged youth and male youth (Carroll et al., 2012; Lindenberg, Lewis-Spruill, & Crownover). The findings that a host of nonfinancial issues pose significant barriers to the receipt of health services is especially true of young adults and women (Kullgren & McLaughlin, 2010) and are consistent with research on health disparities in the general population and conceptual models of access to medical care (Andersen, 1995).

Although numerous qualitative studies using interviews and focus groups have identified barriers to youth access to health services, little research has linked perceived barriers to actual receipt of services among college students. Therefore, the current study examines associations between different domains of barriers and the receipt of RH services among young adults attending college, and whether these associations vary by gender. Through increased understanding of the types of barriers that influence college students' use of RH services, school policies and programs can be developed to address these issues and reduce perceived obstacles.

Method

Participants & Procedure

In the fall semester of 2014, students attending a northern California state university were asked to participate in an anonymous on-line study on RH. An invitational e-mail was sent to 800 randomly selected students who were between the ages of 18 and 19 and had completed at least 30 class credits (about 2 semesters or 1 year). The sampling frame was equally split between males and females. Students were sent an initial e-mail invitation. Within each e-mail was a brief description of the study as well as a link to the on-line survey hosted by

SurveyMonkey. A total of three reminder e-mails were sent out in one week intervals. This study was approved by the Institutional Review Board of the Prevention Research Center.

Consent was requested on the first web-screen, prior to beginning the survey. Providing consent moved the student to the first page of the survey. The survey took a median of 15 minutes and 22 seconds to complete. A total of $N = 251$ students participated of which 60% were female, 33% self-identified as Latino, and 59% had mothers with more than a high school education. One sample t-tests indicated that the sample was similar to the campus population with respect to gender, Latino ethnicity, and mother's education. However, students who participated in the study had a significantly higher grade point averages (GPA).

Measures

Receipt of reproductive health care (R-RHC)—Participants were asked about their R-RHC at four different settings to obtain a comprehensive measure of past 12-month use. Settings included: (1) primary care setting (e.g., community clinic, private doctor's office); (2) school or school-based/university clinic; (3) family planning clinic (e.g., Planned Parenthood); and (4) hospital, emergency room, or urgent care center. RH services were defined in the survey as "...medical care around issues of sexuality, sexual behavior, and family planning. It includes services such as a pregnancy test, a pap smear, a prescription for birth control/contraception, a testicular exam, and treatment for STD." Affirmative responses to any of the four settings were summed to represent a single construct of past 12-month R-RHC for analyses.

Perceived barriers to R-RHC—Participants were asked to rate the extent to which the following 10 issues made it difficult for them personally to obtain RH care: transportation, cost, disapproval from parents, disapproval from friends, embarrassment, concerns about privacy/confidentiality, inconvenient hours, distrust of health care providers, gender of provider, fear of test results. Response options ranged from 0 (*Not at all difficult*) to 3 (*Very difficult*) and greater scores indicated greater perception of the barrier to R-RHC. We conducted a factor analysis for data reduction purposes and to identify underlying constructs. A single construct was identified—*social disapproval*, made up of 4-items: disapproval by friends, disapproval by parents, embarrassment, and concerns about privacy ($\alpha = .78$). Therefore, the social disapproval construct barrier as well as the other six barriers were examined individually in analyses.

Knowledge of reproductive health care access points (K-RHC)—Participants were asked about their knowledge of the availability of different sexual and RH services (i.e., "Do you know of at least one place in your community where X is available to people your age?"). The following services/resources were assessed: condoms, prescriptions for birth control methods, counseling for birth control, emergency contraception, pregnancy test, pap smear, testicular exam, prenatal care, and STD test. Response options included 0 (*No*) and 1 (*Yes*). Affirmative answers were summed across the 8-items (pap smears for females only/testicular exam for males only), such that greater scores indicated greater K-RHC.

Demographic information—Participants reported on gender, Hispanic/Latino identity, highest level of education completed by mother, health insurance status, and if they had a primary care doctor. They also indicated whether they had ever had vaginal intercourse.

Analysis Plan

First, we examined the distribution of missing data. A total of 39 participants (15%) completed less than half of the survey. No significant differences emerged between those with missing and non-missing data for the variables gender, Hispanic/Latino identity, mother's education, GPA, health insurance status, or having sexual intercourse. Therefore, subjects with missing data were dropped from the analysis, resulting in a sample of 212 participants. Next, bivariate item analyses among the full sample, and again by gender, were conducted for descriptive purposes and to inform the inclusion of key variables in the logistic regression. Finally, logistic regression was used to identify the demographic and psychosocial correlates of R-RHC among the full sample and then by gender.

Results

As noted in Table 1, a total of 50.9% of students reported R-RHC in the past year and 16.2% reported visiting more than one setting. The most frequented locations were primary care settings and school or school-based/university clinics. A greater percentage of females than males reported visiting each of the settings except for hospital/ER/urgent care centers. Demographic and descriptive statistics for study variables are displayed in Table 2.

Bivariate analyses among the full sample indicated that a greater percentage of female, sexually experienced, and Latino college students reported R-RHC in the past year than males, students who had not had sexual intercourse, and Whites. Students who had visited a RH care setting were also more likely to have lower levels of perceived social disapproval, cost and fear of results barriers, and higher K-RHC scores than those who had not visited an RH care setting (see Table 2). A second set of bivariate analyses within gender (not shown in Table 2) found that among males, a greater percentage of Latinos than Whites (48.3% vs 28.8%, $p < .05$) and those with higher K-RHC scores ($M = 5.06$ vs. $M = 3.71$, $p < .01$) reported R-RHC in the last 12 months. Among females, differences between RHC use and non-use emerged among the variables sexual experience (80.0% vs. 24.5%, $p < .001$), K-RHC ($M = 6.19$ vs. $M = 4.31$, $p < .01$), and social disapproval ($M = 2.33$ vs. $M = 1.80$, $p < .01$). Based on these bivariate results, the following variables were selected for inclusion in the regression analyses: gender, Latino, K-RHC, and the social disapproval, cost, and fear of results barriers.

Logistic regression analyses were used to examine predictors of R-RHC in the last 12 months for the full sample and again for males and females separately. For the full sample (see Table 3), results suggested that having engaged in sexual intercourse was the strongest predictor of R-RHC followed by gender ($OR = 3.59$, $p < .01$ and $OR = 2.06$, $p < .05$, respectively). Having greater K-RHC was also positively associated with R-RHC ($OR = 1.37$, $p < .01$). Social disapproval was negatively associated with R-RHC, such that those who perceived more social disapproval were less likely to have received care in the past year ($OR = .56$, $p < .05$). A similar analysis was conducted stratified by gender. Among males,

the only variable that was associated with R-RHC was K-RHC ($OR = 1.29, p < .05$). Among females there was a strong positive association between having sexual intercourse and R-RHC ($OR = 10.00, p < .01$). Further, similar to the findings with the full sample, females who perceived more social disapproval ($OR = .42, p < .05$) were less likely to have received care, while those with greater K-RHC were more likely to report having received RH care in the past year ($OR = 1.40, p < .02$).

Discussion

The current study sought to examine associations between different domains of demographic and psychosocial barriers and the receipt of RH services among young adult college students. Further, this study explored whether these associations varied by gender. Overall, the study findings suggested that while several barriers influence females' R-RHC, only K-RHC influences males' use of RH services. This finding underscores an opportunity for colleges and universities to actively engage their students in health seeking and risk reduction through information campaigns. For student health/wellness centers that offer RH care, efforts to ensure that both male and female students know what services are available as well as content aimed at reducing perceived barriers (e.g., low costs, flexible hours, patient confidentiality) could result in increased use of services. This could include distributing information at freshman orientation about available services through means that resonate with college youth and maintain confidentiality, such as free smartphone apps or QR codes. Ongoing education efforts throughout the year could incorporate text messages from the student health center to provide tips on maintaining good sexual and reproductive health and where students may go both on campus and in the local community. Curriculum-wide changes that include a required general education course in sexual and reproductive health or a module within a freshman seminar may not only inform students, but may result in changing social norms that reduce barriers to RH care use. Given that a relative lack of knowledge of RH services appears to be an issue especially for young males, student health centers may want to initiate or bolster efforts to get information to them via the Greek system, and other clubs and associations that engage large segments of the male student population. Males may also need information about what male RH services and resources look like. Relatedly, providers should adhere to guidelines put forth by the Male Training Center for Family Planning and Reproductive Health guidelines (Marcell, 2014).

Among females, sexual activity status was also a strong predictor of whether college students had received RH services in the past year. These findings may reflect the fact that, for females, use of the most effective contraception methods (i.e., long-acting hormonal methods and birth control pills) generally require interaction with the health care system for a gynecological examination, prescription, and/or method insertion. These findings also suggest that among healthy young males there are few opportunities to provide clinical interventions to support healthy RH as males may not be intersecting with the health care system.

Previous research has found that parental and peer norms are strong correlates and predictors of a wide range of sexual behaviors including sexual initiation, contraceptive use and number of partners (Bersamin et al., 2008; Coley, Lombardi, Lynch, Mahalik, & Sims, 2013;

Unger & Molina, 1998). Thus, it is not surprising then that in the current study perceived social disapproval around visiting an RH setting impacted use of services, particularly among females. Institutions of higher learning have been sites for social norms interventions relating to peers that work to downwardly adjust students' perceptions about the prevalence of heavy drinking on campus in efforts to reduce binge drinking (Perkins, 2002). Perhaps similarly tailored efforts to foster and raise awareness of healthy peer norms around RH care may encourage young women to seek these services when needed.

Limitations

Although this study contributes to the understanding of young adults' RH, some study limitations are worth noting. Given the cross-sectional nature of our study, it is not possible to determine the temporal order of behaviors. For example, did students receive RH care before or after initiating sex? Examining these and other associations longitudinally may provide greater insights into how individuals gain knowledge or develop perceptions of barriers to receipt of care. Relatedly, our data on RH care asked youth to report on services accessed in the past 12 months. However, some long-acting hormonal methods do not require routine annual checkups. Thus, assessments of youths' R-RHC may need to incorporate longer time frames to more accurately capture health seeking behavior. Additionally, we did not gather data on students' living situation. Given that students living at home with parents may experience more constraints on their behavior, it is important that future research control for living situation.

Nonetheless, our study found important associations among receipt, perceived barriers and knowledge of care for RH among male and female college students. These findings may be useful for institutions of higher learning in their efforts to educate young people and support development of healthy behaviors among this population. Further, study findings can help achieve Healthy People 2020's objective to increase the proportion of young people who receive reproductive health care (U.S. Department of Health and Human Services, 2014).

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Table 1Past 12 Month Receipt of Reproductive Health Care Services by Setting, *N*= 212

Reproductive Health Care Settings	Full Sample %	Male %	Female %
Primary Care Setting	27.9	21.5	31.7
School or School-based/University Clinic	27.6	17.9	33.9
Family Planning Clinic	10.9	7.5	13.0
Hospital, ER, Urgent Care	7.0	11.4	4.1
Any Reproductive Health visits ^a	50.9	34.4	53.3

^aStudents may have visited multiple settings in a year

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Table 2Descriptive Statistics for Study Variables for Full Sample and by R-RHC Use in Past 12 Months, $N=212$

	Full Sample Descriptive Statistics % $M(SD)$	R_RHC Use in Past 12 Months % $M(SD)$	No R-RHC Use in Past 12 Months % $M(SD)$
Female	60.4	53.3**	46.7
Male	39.6	34.4	65.6
Latino	32.8	56.0*	44.0
Non-Latino	67.2	40.0	59.7
Health Insurance	77.3	46.8	53.2
No Health Insurance	22.7	49.4	50.6
Sexual Intercourse	59.5	61.7**	38.3
No Sexual Intercourse	40.5	28.7	71.3
Usual Doctor	23.4	25.7	21.3
No Usual Doctor	76.6	74.3	78.7
Mother Education	5.37(2.51)	5.25(2.60)	5.48(2.44)
Social Disapproval – Barrier	2.03(.76)	1.81(.72)**	2.21(.75)
Transportation – Barrier	1.82(.99)	1.70(.94)	1.96(1.0)
Cost – Barrier	2.25(1.00)	2.10(1.01)*	2.38(.97)
Hours – Barrier	2.32(.96)	2.20(.95)	2.41(.95)
Distrust – Barrier	1.99(1.04)	1.93(1.02)	2.05(1.06)
Gender of Provider – Barrier	2.01(.92)	1.97(.89)	2.10(.97)
Fear of Results – Barrier	1.98(.96)	1.83(.82)*	2.12(1.06)
K-RHC	4.86(2.26)	5.85(1.92)**	4.00(2.39)

Note. R-RHC = Receipt of Reproductive Health Care. K-RHC = Knowledge of Reproductive Health Care Access Points. Of the full sample, 50.9% had received reproductive health care services in the past 12 months.

**
 $p < .01$,

*
 $p < .05$

Table 3Predicting R-RHC in the Past 12 Months, Logistic Regression, $N = 212$

	OR	95% CI
Gender (Female)	2.06 [*]	1.03–4.12
Latino	1.90	.95–3.79
Sexual Intercourse	3.59 ^{**}	1.85–7.14
Social Disapproval – Barrier	.56 [*]	.33–.92
Cost – Barrier	0.94	.67–1.32
Fear of Results – Barrier	1.11	.75–1.65
K-RHC	1.37 ^{**}	1.14–1.64

Note. R-RHC = Receipt of Reproductive Health Care. K-RHC = Knowledge of Reproductive Health Care Access Points.

^{**}
 $p < .01$,

^{*}
 $p < .05$

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