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Mental Health Utilization Among Diverse Parenting Young Couples

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Abstract

Mental health issues often become apparent as adolescents emerge into young adulthood. The use of mental health services is low among adolescents and young adults, and use is particularly low among minorities. In this study, we examine mental health utilization among diverse young parenting couples. The sample consisted of 296 couples. We used the social–personal framework to examine personal, family, partner relationship, and environmental predictors for using mental health services. We used the Actor–Partner Interdependence Model to assess actor and partner effects on mental health utilization. We also examined moderator effects for gender and internalizing and externalizing behaviors. We found that being female, being White, higher income, more conduct problems, and less anxious romantic attachment predicted mental health utilization. Significant moderator effects included depression $\times$ gender, depression $\times$ medical insurance, and stress $\times$ Latino. Implications for community mental health practice include conducting mental health assessments during medical visits and systematic mental health follow-up for individuals and couples with identified mental health and support needs. Future research should include married couples and the spouse's influence on mental health use and examine relevant parenting factors that may also predict mental health utilization among couples.

Keywords

Mental health service; Mental health; Adolescents; Young adults; Couples; Parenting

Introduction

Mental health disorders are common in adolescents, with prevalence estimates near 20 % in the U.S. (Kataoka et al. 2002; Merikangas et al. 2010). Research examining treatment

seeking behavior has documented low utilization of health care services among adolescents, which may be influenced by factors including socioeconomic status, access to services, costs, and mental health literacy (Copeland 2006; Gulliver et al. 2010; Zachrisson et al. 2006). These barriers may disproportionately affect minority adolescents and contribute to disparities in the utilization of mental health services. The literature has shown that Black adolescents have different rates of mental health treatment compared to their White counterparts and are less likely to receive frequent services and to complete treatment once services are initiated (Copeland 2006; Kataoka et al. 2002; Merikangas et al. 2010). Consequently, minority youth are underdiagnosed and under-treated, potentially leading to poor outcomes during adolescence and later in life.

The use of mental health services is often determined by the type of mental health disorder (Rhodes et al. 2002). Adults with symptoms of mood or anxiety disorders are more likely to seek mental health services compared to individuals with substance use and antisocial behaviors (Rhodes et al. 2002). Among adolescents, it is the outward demonstration of socially negative behaviors that propels them to seek mental health services. One study found that among a nationally representative sample of U.S. adolescents, minority adolescents reported being less likely to receive treatment for internal distress such as feeling depressed, fearful, or stressed (Cummings et al. 2014). However, they were willing to seek treatment for externalizing behaviors and interpersonal problems such as getting into physical fights, rebelling against rules, and school difficulties (Cummings et al. 2014). Adolescents with conduct disorder symptoms have higher treatment rates than adolescents with other mental health disorders (Merikangas et al. 2011). Studies have also shown that adolescents with comorbid conditions are more likely to seek treatment, though this relationship is different among males and females (Essau 2005). Self-rated mental health is also correlated with service utilization, but this relationship is much stronger among white individuals than among African American or Hispanic individuals (Zuvekas and Fleishman 2008).

While it is hypothesized that externalizing behaviors are more easily recognized and therefore individuals are referred more readily to treatment, internalizing behaviors, related to mood and anxiety disorders, more often require self-recognition or the assistance of family members (Merikangas et al. 2011). Because adolescence is a developmental stage in which mental and emotional maturation is evolving, adolescents may lack the self-awareness required to acknowledge the problem and initiate support. Furthermore, as they emerge into young adulthood, new life events may exacerbate existing externalizing and internalizing behaviors or introduce new stressors requiring mental health services and support. One remarkable life event for thousands of U.S. adolescents and young adults is the onset of parenthood. Becoming a parent at a young age is linked to increased stress and less mental health stability and may increase an adolescent's need for mental health services.

Mental Health and Parenting at a Young Age

Because mental health problems among adolescents and young adults are frequently undiagnosed, high risk populations such as young minority parents may lack postpartum mental health support in dealing with parenthood stressors. Postpartum depression affects

10–20 % of women (Kozhimannil et al. 2011). Evidence has shown that African American women are more susceptible to postpartum depression due to factors such as financial hardship, chronic medical conditions, and stigma associated with mental illness (Boyd et al. 2009). Adolescent mothers are at higher risk for postpartum depression compared to their adult counterparts, with estimates in adolescents ranging from 26 to 50 % (Nunes and Phipps 2013). Because detection and treatment rates are low among low-income minority women young minority mothers may be more vulnerable to underdiagnosis and inadequate mental health services (Kozhimannil et al. 2011).

Mental health and well-being of young mothers is often the focus, with there being little attention to fathers' psychological well-being (Shaw et al. 2006). Though limited, there is research indicating signs of psychological distress among minority fathers. One study found that the rate of 12-month depressive symptoms is 1.5 times higher among urban Black fathers compared to a nationally representative sample of all fathers (Sinkewicz 2011). Rates of comorbid anxiety and substance use are also disproportionate among urban Black fathers (Sinkewicz 2011). Expecting adolescent fathers have higher self-reported anxiety and depression scores and are less likely to receive psychiatric or counseling services compared to expecting adult fathers (Quinlivan and Condon 2005). Common stressors for expecting young fathers include limited finances, unemployment, health of the mother and baby, parenting, and maintaining a relationship with the expecting mother (Elster and Panzarine 1983). In a previous study, we found mirroring concerns among young parenting fathers from racially diverse backgrounds (Albritton et al. 2014).

Given that young parents may experience stressors such as pregnancy concerns, adjustment to parenting, relationship strain and financial hardship (Albritton et al. 2014; Kershaw et al. 2013), it is essential that women and men seek mental health services and other supports as needed. As a couple, young parents are navigating complex familial and partner relationships, and it is important to understand factors that influence their use of mental health services and if partners influence utilization. In general, there is a lack of empirical literature on partner influence on seeking mental health services. Recent literature concerning couples' mental health utilization has focused on very specific populations, such as military couples and their experiences with stress disorders (Mansfield et al. 2010; Meis et al. 2013). Our study broadens the current literature, as we examine multiple factors that may predict mental health utilization and whether partner influence plays a role in seeking services.

Guiding Framework for Utilization of Mental Health Services

Numerous demographic characteristics such as age, income, education, employment status, and marital status affect the use of mental health services for women and men (Gagne et al. 2014; Rhodes et al. 2002). The presence of anxiety symptoms and use of mental health services have been associated with familial factors (Essau 2005). Gender has also been shown to moderate adolescent and young adult use of mental health services (Chandra and Minkovitz 2006; Rhodes et al. 2002). To our knowledge, the moderating effect of gender on mental health services has not been thoroughly examined in combination with personal, family, partner relationship, and environmental characteristics.

For the purposes of this article, we used the social–personal framework to guide the selection of variables tested among a sample of young, mostly minority parenting couples. The social–personal framework emphasizes the importance of understanding the social and personal attributes that predict behaviors (Donenberg and Pao 2005). Previous research has shown that attributes within this framework such as family closeness and self-efficacy can affect mental health behaviors (Connolly 1989; Kim et al. 1999). This framework has been applied to explain risk-taking behaviors among youth diagnosed with mental health disorders (Donenberg et al. 2003; Donenberg and Pao 2005), but to our knowledge, this is the first time that the social–personal framework has been used to predict a mental health utilization outcome.

Because the mental health disorder type often determines treatment seeking behavior, we hypothesize that internal (depression and anxiety) and external (conduct problems and hostility) behaviors moderate the utilization of mental health services. We also test gender as a moderator as previous studies have shown that gender is associated with willingness to seek mental health services (Chandra and Minkovitz 2006) and the number of mental health visits (Rhodes et al. 2002). Our study aims are to: (a) examine personal, family, partner relationship, and environmental conditions factors predicting mental health utilization, (b) examine internal and external behavior moderators, (c) examine gender differences in mental health utilization, and (d) examine partner influence on mental health utilization.

Methods

Study Sample and Procedures

We conducted this study using the Parenting and Relationship Transition and Risk Study (PARTNRS) data. The study sample consisted of 296 young couples. Couples who were in their second or third trimester at Time 1 (baseline) were recruited. We followed up with the couples at 6 months (Times 2) and 12 months (Time 3) postpartum. See Table 2 for additional study sample characteristics.

The PARTNRS data were collected between July 2007 and February 2011. Couples were recruited from obstetrics and gynecology clinics and an ultrasound clinic. The clinics were affiliated with four university-affiliated hospitals across southern Connecticut. Expecting young women were referred to the study by their health care provider or recruited by research staff. The research staff screened prospective participants, and if they were eligible the research staff provided them with additional study information. If the father of the baby was not present during the screening process, research staff obtained permission from the women to contact the father to provide study information. Research staff also advised the women to discuss the study with their partner and gave informational materials for the mother to share with their partner.

Prospective participants were eligible for the study by meeting the following criteria: (a) pregnant or partner is pregnant in the second or third trimester at time of baseline interview; (b) women are age 14–21 and men age greater than or equal to 14 at time of the interview; (c) both report being in a romantic relationship with each other; (d) both report being the biological parents of the unborn baby; (e) both agree to participate in the study and (f) 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 considered ineligible if research staff could not re-contact them after screening and before their estimated due date.

Individual participants gave written, informed consent prior to Time 1 data collection. After consent, participants completed a structured interview using the audio computer-assisted self-interview. Although the couples' interviews were scheduled at the same time, they completed the interviews separately for each time point. All study procedures were approved by the Yale University Human Investigation Committee and by the Institutional Review Board at respective study clinics. Participant incentives included \$25, \$35, and \$50 per interview.

Measures

The outcome, use of mental health services, was determined by whether or not they had used professional mental health or social work services within the past 3 months at Time 2 or Time 3. Seeking services from a social worker was not specific to mental health services but was inclusive of any services traditionally provided by a social worker. Participants who indicated that they received services from a social worker or mental health professional were included as having received mental health services.

All predictors were measured at baseline only. See Table 1 for a list and description of all personal, family, partner relationship, and environmental conditions variables, including moderators. In this study, we will first model personal (substance abuse, quality of life), family (family functioning, social support), partner relationship (abuse, relationship satisfaction and attachment), and environmental conditions (general discrimination, neighborhood problems and cohesion) predictors, followed by the moderators (see Fig. 1).

Data Analysis

We combined use of mental health services variable for Times 2 and 3 to examine utilization from a longitudinal perspective and used generalized estimating equations (GEE) to estimate parameters. GEE is similar to multilevel modeling in that it corrects for clustering and correlated data and is fitting for dyadic data analysis (Andrews et al. 2002; Mednick et al. 2010). GEE is also flexible in handling missing data, particularly when within cluster numbers are small (Zorn 2001).

Frequencies and means were conducted to describe the study sample. To examine the influence of predictors for receiving mental health services, we used multi-level modeling to assess the Actor–Partner Interdependence Model using SPSS version 19. The Actor–Partner Interdependence Model incorporates responses from both members of a dyad into a single analysis using multilevel modeling. Multilevel modeling treats members of a dyad as nested scores within the same group (Kenny et al. 2006). A detailed description on how to conduct Actor–Partner Interdependence Model analyses using multilevel modeling programs has been previously outlined (Kenny et al. 2006) and served as the guide for our analysis plan. Actor effects refer to whether a person's score on the predictor variable influences the person's own outcome (e.g., a woman's relationship attachment relates to her own use of mental

health services). Partner effects refer to whether a partner's score on the predictor variable influences the person's outcome (e.g., the male partner's relationship attachment influences the woman's use of mental health services).

We assessed whether any of the actor and partner associations differed between men and women. A set of interactions between gender and all predictor variables were entered one at a time in the final model. We also assessed the interactions between internalizing (depression and anxiety) and externalizing behaviors (conduct problems and hostility) using this same strategy. We centered the internalizing and externalizing variables prior to conducting interaction analysis. Significant interactions were added to the final model. In order to interpret the interactions, we conducted simple effects. Because our focus was to look at predictors across gender, depression, and stress, as recommended for continuous variables (Jaccard and Turrisi 2003), we divided depression and stress into three groups—at the mean, above the mean and below the mean. All covariates (gender, race, age, education, income, medical insurance, religious, and wanted pregnancy), regardless of significance, were included in the final model, and we included significant personal, family, partner relationship, and environmental variables in the final model as well.

Results

Sample Descriptive

Demographic data are presented in Table 2. The samples consisted of 239 males and 261 females. Black males and females comprised 49.8 and 42.5 % of the sample, and Latino males and females represented 37.7 and 39.5 %. White males and females represented 8.8 and 13.4 % of the sample, and males and females identified as other race represented 3.8 and 4.6 %. The mean age for males and females was 21.26 ($SD = 3.84$) and 18.67 (1.65) years, respectively. The mean years of education for males and females was 11.87 ($SD = 1.77$) and 11.77 ($SD = 1.85$), respectively. The mean household income males and females was \$17,474.90 ($SD = 21,848.20$) and 13,303.09 ($SD = 15,382.58$), respectively.

Bivariate Analysis

Bivariate associations are presented in Table 3. Gender was significantly associated with mental health use. Age, income, relationship satisfaction, and anxiety attachment were significant for actor only. The potential moderators, including history of depression; anxiety; conduct problems; and hostility, were also significant for actor only. Medical insurance, any abuse, and marijuana use were significant for partner only. Being White, alcohol use, family functioning, and general discrimination were significant for both actors and partners.

Multivariate Analysis

Actor–partner main effects from our multivariate analysis are presented in Table 4. The actor–partner effects presented in the model are unstandardized regression coefficients (and their standard errors). The results from the final model showed several significant findings for actor effects only. Utilization of mental health services was significantly associated with being female versus male ($B = -0.719$), being White versus Black ($B = -1.200$), higher

income ($B = 2.117$), more conduct problems ($B = 0.085$), and less anxious attachment ($B = -0.016$).

There was a significant interaction for depression $\times$ gender ($B = -0.099$, $p = 0.006$). The association was significant for being less depressed and use of mental health services for females ($B = -0.063$, $p = 0.014$) but not for males ($B = 0.036$, $p = 0.282$). There was a significant association between gender and mental health services for females one standard deviation below the mean for depression ($B = -1.402$, $p = 0.001$) but not for females at the mean ($B = -0.032$, $p = 0.156$) or above the mean ($B = -0.009$, $p = 0.980$). Depression $\times$ medical insurance was also significant ($B = -0.186$, $p = 0.004$). There was a significant association between having medical insurance and mental health services for participants one standard deviation above the mean for depression ($B = 1.658$, $p = 0.001$) but not for those at the mean ($B = 0.346$, $p = 0.372$) or below the mean ($B = -0.965$, $p = 0.144$). We also found a significant interaction for stress $\times$ race/ethnicity ($B = 0.084$, $p = 0.039$). African Americans compared to Latinos are more likely to use mental health services when at the mean stress level ($B = -0.679$, $p = 0.028$) and at one standard deviation above the mean ($B = -1.192$, $p = 0.007$) but not for those one standard deviation below the mean ($B = -0.165$, $p = 0.640$).

Discussion

Demographic Variables

We found variables within the social–personal framework to be significant predictors of mental health utilization for the actor, but not their partner. Being female, not being a member of an ethnic/racial minority group, having higher income, and having emotional difficulties such as conduct problems and romantic relationship anxiety were predictors for utilizing mental health services. The finding of utilization of mental health services being associated with females was expected as shown in the previous literature. In our study, 27.9 % of females and 11.8 % of males used mental health services. Previous research has shown that females across the age spectrum are more likely to have used and more willing to use mental health services compared to males (Chandra and Minkovitz 2006; Erath et al. 2009; Mackenzie et al. 2006).

We also found that race played a role in predicting mental health utilization. Being Black predicted less mental health utilization as compared to Whites. Out of the men and women who used mental health services, 14.1 % were Black, 21.8 % were Latino, 35.6 % were White, and other race was 28.6 % (not shown in sample descriptive). Our finding supports previous studies which suggest that minorities are less likely to access mental health services. For example, Wang et al. (2005) found that within a nationally representative U.S. sample, Blacks and Latinos were only 50–60 % as likely to receive mental health services compared to Whites. Also, in a nationally representative sample of U.S. adolescents and young adults, Blacks were less likely to receive mental health services compared to Latinos and Whites (Broman 2012). In addition, income predicted mental health utilization, which is also evidenced in the literature (Carson et al. 2010; Wang et al. 2005).

Partner Relationship

Partner relationship was the only factor within the social–personal framework with predictors of mental health utilization. We found that emotional difficulties, such as anxious romantic attachment, predict the use of mental health services. The estimate's negative direction suggests that those using mental health services were less anxious in their romantic relationship. One possible explanation for this negative effect might be that utilization of mental health services resulted in lower anxious attachment. Research suggests that those who experience anxious attachment tend to perceive lower levels of social support (Priel and Shamai 1995); utilization of these services may have reassured participants of support beyond their partnerships. More research is needed to fully understand anxious romantic attachment and the use of mental health services.

Internalizing and Externalizing Behavior Moderators

Similar to previous findings, we found that externalizing behaviors such as conduct problems predicted utilization of mental health services. We hypothesize that because externalizing behaviors are necessarily observable, these behaviors may elicit responses from others, who then may encourage or require persons with externalizing behaviors to seek mental health services. For instance, delinquent behavior may result in prompting from one's partner or parents to seek treatment or garner attention from law enforcement or other social service professionals, who may then require the person to seek mental health services. Furthermore, for young parenting couples, resolving external behaviors could relieve relationship tensions within the couple.

Of the moderated effects, we found that depression related to less mental health utilization for women but did not relate for men. This inverse association may be largely attributable to the timeframes for each measurement; utilization of mental health services was measured with respect to the last 3 months and depression symptoms were measured with respect to the last 2 weeks. This inverse association may therefore be the result of effective mental health services. Young women may be more aware of the effect of their symptoms on their family, as often they are the primary caregivers, and thus seek out services in response (Kendler et al. 2001). As expected, participants with greater levels of depression were more likely to use services when they had medical insurance than their counterparts without medical insurance. Although greater levels of depression typically predict use of services (Essau 2005), our finding suggests that lack of insurance remains a substantial barrier among those with high levels of depression.

In addition, African Americans with high levels of stress are more likely to use mental health services than Latinos with high levels of stress, which suggests the need to further investigate racial disparities in terms of services utilization. Earlier research has shown that <9 % of U.S. born Latinos seek mental health services (Nadeem et al. 2007; Vega et al. 1999). Latinos have the lowest rate of health insurance coverage, which is a major reason why Latinos are not utilizing mental health services (Vega and Lopez 2001). Culture also plays a significant role in Latinos using mental health services, including associating anxiety with a physical problem instead of psychological, spiritual beliefs that espouse the supernatural as cause of mental illness, commitment to receiving services from a therapist of

the same ethnicity only, and lack of language proficiency to know where to seek mental health services (Kouyoumdjian et al. 2003). As already noted in the literature, Latinos are very reliant upon family as a main source of support; consequently, they are likely to forego more formal mental health service (Kouyoumdjian et al. 2003). Additional barriers to mental health services among Latinos may also include recent immigration to the U.S. and difficulty assimilating into the culture. These barriers may be particularly pronounced among adolescents and young adults, who may be juggling not only the developmental transition from adolescence to adulthood, but also negotiating cultures of their own families while trying to integrated into a culture of peers, in places such as schools and work.

Study Strengths and Limitations

Our study provides some insight into mental health utilization among adolescents and young adults. One of the strengths of this study is that we examined mental health utilization among young parenting couples. Once parenting begins, it is not unusual to see mental health services significantly decline (Munson et al. 2012). This study showed the predictors of utilization while maintaining parenting responsibilities, giving a unique insight into what causes young parents to use formal mental health services. The second study strength is the use of the Actor–Partner Interdependence Model as the analytical approach to examining predictors, which allowed us to account for the social–personal factors nested within couples. A third strength is that this is a longitudinal study that allowed us to demonstrate predictors of mental health utilization rather than associations. On the other hand, one of the study weaknesses is the broad definition of mental health utilization. The outcome measure does not specify whether the person received mental health services, only that they had an appointment with specific care providers. For example, a participant may have reported that he or she visited a social worker, but services rendered may not have been for mental health treatment. Another weakness is that a small number of participants reported receiving mental health services as operationalized in this study, thereby increasing the chances of Type I Errors. Last, our analysis was limited by data availability based on the aims of the larger cohort study. We were therefore unable to include unmeasured constructs or data from additional sources, which may have yielded more complex relationships.

In conclusion, using the social–personal framework encompasses a more holistic and comprehensive set of factors to understand mental health utilization, which is a valuable addition to the literature. Our findings support previous mental health utilization studies in that minorities remain underserved in the mental health system. Members of ethnically and racially diverse parenting couples are reporting internalizing and externalizing behaviors, but they are receiving less mental health services compared to their White counterparts. Transitioning from adolescence to young adulthood is a period where most mental health issues are likely to arise (Kellam and Rebok 1992; Miech et al. 1999), therefore special attention should be given to young parenting populations who may be at greater risk for mental and emotional distress.

The implications for community mental health practice are to consider including routine brief behavioral assessments during and after pregnancy for young mothers and fathers. Ideally, these assessments could be administered during obstetrician and gynecology visits,

pediatrician visits, and nurse home visits to identify individuals and couples that may require additional supports. Minority adolescents and young adults identified as needing additional support and mental health services could receive brief psycho-education during medical visits that would include education about mental health support services and treatment options.

This study also illuminates implications for future mental health utilization research. We recommend that future research examine differences between married and unmarried couples and partner's influence on utilization. Future studies should also include relevant parenting variables. Study samples should include participants who received mental health services in emergency departments as well. We did not have access to this variable, but research has shown that minorities, including young adults, are more likely to seek mental health treatment at local hospital emergency rooms (Carson et al. 2010; Chow et al. 2003). Including hard-to-reach populations, such as young transient families is also needed to better understand how to incorporate more comprehensive mental health interventions. Provider and researcher collaborations are required to build more efficient mental health service systems for adolescents and young adults and families.

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Fig. 1.
Social-personal conceptual framework

Table 1

Mental health services predictors

Variables	Assessment	Example Survey items	Items	Range	A
<i>Personal</i>					
Any substance abuse	Recreational Drug Use Scale (Halkitis and Parsons 2002)	In the past 3 months how often did you consume alcohol? In the past 3 months how often did you use marijuana?	2 items 2 items	1.0 1.0	.66 .73
Quality of life	Short Form Health Survey (SF-8) (Ware et al. 1996)	During the past 4 weeks, how much difficulty did you have doing your daily work, both at home and away from home, because of your physical health? During the past 4 weeks, how much did your physical health or emotional problems limit your usual social activities with family or friends?	8 items	56.94	.70-.99
<i>Family</i>					
Family functioning	Family Functioning Scale (Tavittian et al. 1987)	The members in my family fight with each other I feel loved by my family	12 items	70.0	.81
Social support	Medical Outcomes Social Support Survey (MOSS Survey), (Sherbourne and Stewart 1991)	How often is someone you can count on available to listen to you when you need to talk? How often is someone available to help with daily chores if you were sick?	20 items	36.0	.95
<i>Partner relationship</i>					
Any abuse	Sexual Experiences Survey (Koss and Oros 1982), Conflict Tactics Scales (Straus et al. 1996)	Have you ever been shoved, punched, hit, slapped, or physically hurt by Father/Mother of your baby? Have you ever gone to a hospital or seen a health care provider for being shoved, slapped, punched, hit, or physically hurt by Father/Mother of your baby?	10 items	1.0	.74 (women), .89 (men)
Relationship satisfaction	Dyadic Adjustment Scale (Spanier 1976)	In general, how often do you think that things between you and your partner are going well? How often do you discuss or have you considered ending your relationship?	32 items	125.0	.96
Romantic attachment	Experiences in Close Relationships Inventory, avoidance and anxious subscales, (Brennan et al. 1998)	I try to avoid getting too close to my partner I worry my partner will leave me	36 items	106.0 avoidance 95.0 anxious	.94 avoidance .91 anxious
<i>Environmental conditions</i>					
General discrimination	Daily Life Experiences Scale (Essed 1991)	In general, how often are you not taken seriously? In general, how often are you avoided, or do others move away from you physically?	20 items	5.0	.93
Neighborhood problems and cohesion	Perception of Neighborhood Cohesion, (Buckner 1988)	Given the opportunity, I would like to move out of my neighborhood I regularly stop and talk with people in my neighborhood	16 items	28.0	.92
<i>Moderators</i>					

Variables	Assessment	Example Survey items	Items	Range	A
Depression	Center of Epidemiological Studies-Depression Scale (CES-D), (Radloff 1977)	I thought my life had been a failure I felt depressed	15 items	34.0	.82
Stress	Perceived Stress Scale (Cohen and Williamson 1988)	Unable to cope with all of the things you had to do? Nervous and stressed?	10 items	40.0	.76
Conduct problem	Conduct Problems Scale (Rotheram-Borus et al. 1995)	Got in a fight? Been in trouble at school or work?	7 items	21.0	.74
Hostility	Brief Symptom Inventory (BSI) (Derogatis 1993)	Temper outbursts that you could not control? Getting into frequent arguments?	5 item subscale	20.0	.81

No alpha is reported for relationship power because the measure consisted of one item. No alpha is reported for the high risk behaviors because it is an index. Alcohol and marijuana use each include two items about use 3 months prior to pregnancy (Time 1) and in the past 3 months (Times 2 and 3)

Table 2

Sample descriptive of young couples

Sample characteristics	Males	Females	<i>p</i> value
Gender [N (%)]	239 (47.8)	261 (52.2)	0.001
Race [N (%)]			
Black	119 (49.8)	111 (42.5)	0.001
Latino	90 (37.7)	103 (39.5)	
White	21 (8.8)	35 (13.4)	
Other	9 (3.8)	12 (4.6)	
Age M ($\pm$)	21.26 $\pm$ 3.84	18.67 $\pm$ 1.65	0.001
Years of education	11.87 $\pm$ 1.77	11.77 $\pm$ 1.85	0.066
Household income	17,474.90 $\pm$ 21,848.20	13,303.09 $\pm$ 15,382.58	0.024
Medical insurance N (%)	145 (60.7)	249 (95.4)	0.177
Religious			
Not at all	41 (16.1)	45 (16.7)	0.312
Religious	213 (83.9)	224 (83.3)	
Wanted pregnancy	120 (50.6)	124 (47.5)	0.739
Alcohol use 3 months prior to pregnancy ^a	147 (62.0)	121 (46.4)	0.521
Alcohol use in previous 3 months ^b	131 (55.3)	12 (4.6)	0.002
Marijuana use 3 months prior to pregnancy ^a	101 (42.6)	74 (28.4)	0.512
Marijuana use in previous 3 months ^b	88 (37.1)	15 (5.7)	0.063

Standard deviation ($\pm$)^a Any alcohol and marijuana use in the 3 months prior to pregnancy. Questions asked at baseline only^b Any alcohol and marijuana use in the previous 3 months assessed at Times 2 and 3

Table 3

Mental health services utilization actor–partner bivariate

Parameter	Estimate	Standard error	<i>p</i> value
Covariates			
Female	−1.053	0.220	0.001
Age (actor)	0.197	0.087	0.001
Age (partner)	−0.018	0.034	0.588
Race			
White (actor)	−0.869	0.265	0.001
White (partner)	−0.595	0.274	0.030
Latino (actor)	−0.171	0.226	0.449
Latino (partner)	0.079	0.231	0.733
Income (actor)	1.849	8.191	0.024
Income (partner)	3.910	5.573	0.483
Medical insurance (actor)	−0.407	0.301	0.177
Medical insurance (partner)	0.571	0.253	0.024
Religion (actor)	−0.113	0.112	0.312
Religion (partner)	0.103	0.109	0.347
Wanted pregnancy (actor)	−0.072	0.215	0.739
Wanted pregnancy (partner)	−0.034	0.2154	0.876
Personal level			
Any abuse: physical, sexual (actor)	−0.189	0.215	0.380
Any abuse: physical, sexual (partner)	−0.441	0.213	0.039
Any substance abuse			
Alcohol (actor)	0.881	0.285	0.002
Alcohol (partner)	−0.825	0.223	0.001
Marijuana (actor)	0.657	0.354	0.063
Marijuana (partner)	−0.773	0.256	0.002
Hard drugs (actor)	1.130	1.039	0.276
Hard drugs (partner)	−0.385	0.591	0.515
Quality of life: physical health (actor)	0.024	0.648	0.754
Quality of life: physical health (partner)	−0.024	0.017	0.142
Family level			
Family functioning (actor)	0.031	0.010	0.001
Family functioning (partner)	0.019	0.010	0.051
Social support (actor)	0.016	0.012	0.188
Social support (partner)	−0.003	0.013	0.801
Partner relationship			
Relationship satisfaction (actor)	0.016	0.005	0.001
Relationship satisfaction (partner)	0.008	0.005	0.123
Romantic attachment: anxious attachment (actor)	−0.023	0.006	0.001
Romantic attachment: anxious attachment (partner)	−0.008	0.006	0.129

Parameter	Estimate	Standard error	<i>p</i> value
Romantic attachment: anxious attachment (actor)	0.001	0.001	0.696
Romantic attachment: anxious attachment (partner)	0.002	0.001	0.112
Environmental level			
General discrimination (actor)	−0.246	0.109	0.025
General discrimination (partner)	−0.338	0.113	0.003
Neighborhood problems and cohesion (actor)	0.012	0.014	0.417
Neighborhood problems and cohesion (partner)	−0.009	0.014	0.505
Moderators			
History of depression (actor) ^a	−0.062	0.216	0.001
History of depression (partner)	−0.005	0.016	0.762
Stress/anxiety (actor)	−0.056	0.020	0.005
Stress/anxiety (partner)	−0.016	0.018	0.386
Conduct problems (actor)	0.120	0.028	0.001
Conduct problems (partners)	0.027	0.028	0.324
Hostility (actor)	−0.056	0.023	0.016
Hostility (partner)	−0.032	0.024	0.182

Dependent variable is use of mental health services. Significant *p* values are in bold

^aHistory of depression is listed as a moderator only and not as a personal factor

Table 4

Actor–partner main effects for final model

Variable	Estimate	Standard error	<i>p</i> value
Female	−0.719	0.272	0.008
Age (actor)	0.108	0.064	0.093
White (actor)	−1.200	0.353	0.001
Latino (actor)	−0.546	0.303	0.071
Income (actor)	2.117	9.324	0.023
Medical insurance (actor)	0.315	0.371	0.395
Religion (actor)	−0.225	0.1267	0.075
Wanted pregnancy	−0.096	0.236	0.683
Any abuse: physical, sexual (partner)	−0.028	0.017	0.098
Conduct problem (actor)	0.085	0.036	0.017
Social support (partner)	−0.029	0.017	0.083
Family functioning (partner)	0.022	0.012	0.064
Romantic attachment: anxious attachment (actor)	−0.016	0.007	0.019

Significant *p* values are in bold. Black is the referent for White and Latino