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Gender and health services use for a mental health problem

Carmen E. Albizu-Garcia^{a,*}, Margarita Alegría^a, Daniel Freeman^b, and Mildred Vera^a

Carmen E. Albizu-Garcia: calbizu@rcm.upr.edu; Margarita Alegría: malegría@rcm.upr.edu; Daniel Freeman: dan.freeman@utmb.edu; Mildred Vera: mvera@rcm.upr.edu

^aCenter for Evaluation and Sociomedical Research, Graduate School of Public Health, Medical Sciences Campus, University of Puerto Rico, San Juan 00936-5067, Puerto Rico

^bPreventive & Community Medicine and Director, Office of Biostatistics, University of Texas Medical Branch, 700 Harborside Drive - 1.134 Ewing Hall, Galveston, TX 77555-1148, USA

Abstract

This study addresses whether the predictors of seeking help for a mental health problem differ by gender. An adaptation of Andersen's Socio-Behavioral Model is used to identify factors associated with seeking care for a mental health problem. Data are derived from two waves of a community survey undertaken in 1992–1993 and in 1993–1994 among a probability sample of adults (18–69 years), residing in poor areas of Puerto Rico. Paired data was used from those individuals who responded to both waves of the survey for a total of 3221 community respondents. Responses from wave 1 were used to predict mental health service use in wave 2. The dependent variable is any use of outpatient mental health services in the year preceding the second interview. Logistic regression was used to model the effects of the independent variables on use. Males and females were found to use mental health services in nearly equal proportions. Gender did not have a main effect on use when other covariates were controlled. Significant interactions with gender were found for several predictors of use. The largest intervention effects were encountered in our need for care indicators. Having a definite need for mental health care and poor self-rated mental health had a larger effect on predicting use of services for men than they do for women. It is concluded that strategies designed to improve access to mental health services for minority disadvantaged populations ought to take into account gender differences in the predictors of use. Studies addressing factors influencing health services utilization for a mental health problem should consider stratifying their sample by gender. Future research should establish whether or not these findings are sustained with other population groups.

Keywords

Gender; Services use; Mental health; Puerto Rico

Introduction

Most population-based studies describing the relationship between sex and the likelihood of using outpatient health services for an emotional problem or a psychiatric disorder reveal that women are significantly more likely than men to seek care (Veroff, 1981; Shapiro, Skinner, Kramer, Steinwachs, & Regier, 1984; Leaf et al., 1985; Wells et al., 1986; Leaf and Bruce, 1987; Bland, Newman, & Orn, 1990). Other studies do not replicate these findings. Greenley, Mechanic, and Cleary (1987) report a tendency for women to be more likely than

men to seek help, yet this sex difference does not attain statistical significance. Gallo, Marino, Ford, and Anthony (1995) found sex differences in utilization of the specialty sector to diminish significantly when morbidity and socio-economic variables were controlled for. Temkin-Greener and Clark (1988) study documented that men in a fee-for-service Medicaid eligible population in New York State were 20% more likely than women to have used mental health services. In 1991 Alegría et al. compared users and non-users of mental health services in a representative sample of adults residing in poor neighborhoods of Puerto Rico. When bivariate analysis were carried out to explore the relationship of sociodemographic characteristics with services use, they found that men and women were equally likely to seek care.

Variations in study populations, in statistical analysis, and in the scope and availability of health care resources most likely account for the differences in the relationship of gender to use of outpatient mental health care encountered by the previous authors. The majority of these studies, however, were not designed to explain how men and women might differ in their help-seeking behavior. Sex has been included in most cases as a covariant or used as a demographic factor to represent segments of the study population. Attempts to adequately understand whether men and women differ in seeking formal care for a mental health problem require approaches that take into account the relationship between gender and other predictors of service use. These interactions may hold true even when men and women seek help in nearly equal proportions. If we ignore this possibility and limit our analysis to the main effect of sex on use, statistical models developed to explain services use will result in biased estimates (Fox, 1997).

The empirical evidence in the mental health services literature suggests that the effects of the predictors of the help-seeking process may indeed vary for men and women. For example, need for mental health services (however defined) has been consistently found to be strongly associated with service use (Leaf et al., 1985; Leaf, Bruce, and Tischler, 1986; Hough et al., 1987; Alegría et al., 1991; Katz, Kessler, Frank, Leaf, & Lin, 1997). Several studies provide evidence that need is acted upon differently by men and women. Kessler, Brown, and Broman (1981) used a stage model to explore gender differences in seeking mental health care among respondents to four US national surveys that assessed emotional distress. They observed gender differences at the early stages of the process. Women were more likely than men to recognize a mental health problem. Yet, when problem recognition was controlled for, both sexes were as likely to report services use. The work of Leaf and Livingston Bruce (1987) provides additional evidence for gender differences in the process of help-seeking. These authors set out to determine whether differences in psychiatric status or in attitudes towards mental health services accounted for the significantly greater proportion of service use observed among women in the New Haven Epidemiologic Catchment Area (ECA) study. They tested a three-way interaction between psychiatric disorder, gender, and receptivity to care in a regression model specified to predict a treatment contact. Their results indicated that men and women undergo different processes in seeking mental health care. A high receptivity to care had a greater effect on use for women with a psychiatric diagnosis than for men with a comparable disorder.

We have not encountered in the literature further attempts to advance the knowledge on the factors affecting men and women's use of outpatient care for a mental health problem or disorder. An understanding of the factors that facilitate or hinder use of services is a foremost issue for policy makers who are required to tackle inequities in access to care for those in need. Although sex is a non-malleable variable, and therefore not susceptible to policy actions, if it is found to interact with other malleable predictors of service use, it may imply that men and women require different strategies from policy makers to encourage utilization. In the present investigation we examine if gender differences exist in seeking

outpatient health care for a mental health problem. The following key questions underlie this study. Are there differences between men and women in their likelihood of using any formal health services for a mental health or emotional problem? Does gender interact with significant predictors of service use? Are men more likely to seek formal care at higher levels of perceived severity when compared to women?

Background

Gender differences in health care utilization have been primarily explored in the medical service literature. Studies that assess morbidity and its relation to health services utilization have found that adult women report more symptoms than men and that they are also more likely to use medical care (Nathanson, 1975, 1977; Verbrugge, 1979; Gove & Hughes, 1979; Briscoe, 1987; Gijbers Van Wijk, Kolk, Vanden Bosch, & Vanden Hoogen, 1992; Muestra Básica de PR, 1992). Cleary, Mechanic, and Greenley, (1982) proposed that these sex discrepancies could arise from sex differences in one or more of the following factors: disease occurrence, illness perception, and illness behavior. Based on the results from epidemiological surveys carried out in the United States and Puerto Rico, it appears that the overall prevalence of psychiatric disorders does not differ by sex (Hough et al., 1987; Canino et al., 1987; Kessler et al., 1994). This suggests that research approaches should further explore whether or not illness perception and other illness behaviors differentiate men and women's likelihood of seeking mental health care.

Mechanic (1962) refers to illness behavior as the health actions undertaken by the individual in response to somatic or emotional information. The concept includes affective, cognitive, and behavioral processes. Studies have lent empirical support to the hypothesis that illness behaviors are influenced by gender roles, that is, the socially constructed expectations of how men and women should interact with society (Hibbard & Pope, 1983; Verbrugge, 1989; Lorber, 1997). Where as the term "sex" has been used to designate a biological trait, gender refers to socially constructed attributes and behaviors applied to males and females within a given cultural setting. A focus on gender roles implies that the sex differences in illness behaviors are influenced, not by biological differences, but by the nature of the role demands and unequal opportunities experienced by women, even when they share a similar social status with men (Humm, 1990).

Verbrugge (1985) proposed the following potential explanations to account for the gender differences in health status and health behaviors observed in the medical care literature: (1) there are sex differences in morbidity, with women bearing a greater burden of illness and therefore experiencing a greater need for care; (2) differences in the socialization of boys and girls lead women to become more perceptive of their symptoms which, in turn, affects utilization rates; (3) men's greater insertion in the labor force reduces their discretionary time to seek formal care for the symptoms they experience; (4) the differences encountered in survey studies are truly artifacts due to a greater propensity by women to report symptoms as well as encounters with the health care system; and (5) men and women differ in their prior experiences with health care and these experiences influence their respective future health actions. The author also hypothesized that gender differences in use of medical care were influenced by the nature and severity of the condition experienced. Gender is not thought to differentiate help-seeking for rapidly evolving, life threatening, or severe conditions. Differences between men and women's health actions would tend to occur for milder, acute problems or non-fatal disorders for which discretionary care is more likely. These hypothesis remain largely untested in the mental health services literature and have not been explored with a Latino population.

The present study is able to examine whether several of the previously posed hypothesis pertain to gender differences in seeking health care for a mental health problem. We

hypothesize that men will be more likely to seek care when symptoms are construed as constituting a greater threat to their mental health. This implies that perceived or self-rated mental health, more than the presence of disease would contribute to differentiate the likelihood of seeking care between the sexes. We also test the hypothesis that male employment has a negative effect on the likelihood of using formal mental health care.

Methods

Design

The study design is longitudinal. Data for these analyses were collected in 1992–1993 and 1993–1994 from the two waves of the study Mental Health Care Utilization among Puerto Ricans (MHCUPR). The predictor variables were obtained in the first study wave (1992–1993). The dependent variable was measured in the second wave of the study (1993–1994). This study is grounded on a conceptual model derived from The Help-Seeking Decision Making Model adapted from the Andersen (1995) Socio-Behavioral Model and from Goldsmith, Jackson, and Hough (1988). It provides an appropriate framework for this investigation since it takes into account individual, social, and structural factors associated with seeking care for which gender differences have been reported (Glieb & Kofman, 1995).

Sample

The target population included civilian, non-institutionalized individuals between the ages of 18–69 (in 1992) residing in housing units located in low socioeconomic neighborhoods of Puerto Rico. A two-stage cluster sample was used stratified by urban and rural strata. Substrata were classified as economically depressed based on an index of median house rent, family income, and house value, which was developed by the US Department of Labor. A probability sample was selected consisting of 4029 eligible housing units distributed among 354 clusters. Each cluster contained approximately 20 housing units in rural areas and 14 in urban areas. One respondent in each eligible household was selected applying the Kish (1965) method. All individuals were assigned a post stratification weight that matched the age-sex population data reported by the US Bureau of the Census of persons classified as poor in the Island for 1990. Clusters defined a survey area that contained nearly 57% of the total Island population living in poverty. A total of 3504 individuals were interviewed in 1992–1993, yielding a response rate of 92.6%. Approximately 93.0% of the 1992–1993 wave were re-interviewed in 1993–1994. The subjects for this study included all individuals in the sample who responded to the survey in both waves 1 and 2 ($N=3221$). Not all wave 1 responders were re-interviewed in wave 2. Non-responders in wave 2 significantly differed from responders in that there was a larger proportion of males among non-responders (10% of males and 7% of females were not re-interviewed in the second wave $p<0.01$). The two groups did not differ significantly along any other of the study variables.

Studies attempting to explain gender differences in illness behaviors are confronted with the difficulty posed by the interaction of gender with ethnicity, social class, and economic status (Lorber, 1997). The sample for this study presents several singular attributes that allow it to supersede these limitations. The sample is drawn from an ethnically homogeneous population. In addition, the majority of the sample represents the lower socioeconomic strata of the Island's residents. As a result, gender roles are likely to vary less within each sex category allowing us to detect gender differences in help-seeking behavior if they exist. Another advantage afforded by this sample is that utilization has been found to be higher than that reported by other studies (Narrow, Regier, & Rae, 1993; Hough et al., 1987; Katz et al., 1997). The greater proportion of users allow us to specify regression models that test interactions between gender and a larger number of the predictors that have been extensively

used in utilization research, while controlling as much as possible for confounding variables (Hosmer & Lemeshow, 1989).

Measures

Dependent variable—In this study our interest lies in identifying gender differences that contribute to explain which individuals seek help for a mental health problem from any of the sources of services in the formal system of care. Our study population includes both users and non-users of formal care for a mental health problem. Our dependent variable is measured dichotomously. A subject was considered to have used services when reporting at least one visit to a formal health services provider, whether in the general medical or mental health specialty sector, in the year preceding the second interview. Care from the general medical health services sector was assessed by asking respondents if they had discussed any emotional, alcohol or drug problems with a non-psychiatrist physician. Visits to any of the following services were ascribed to the mental health specialty sector: the private office of a psychiatrist, psychologist, social worker or counselor; a mental health center; a psychiatric out-patient clinic at a general or Veterans Administration hospital; an alcohol or drug treatment center; a social, family, or psychological services agency.

Independent variables—According to the Help-Seeking-Decision-Making Model that theoretically sustains this study, predictor variables associated with use of formal care for a mental health, alcohol or drug problem can be aggregated into the following domains: need for health care, predisposing, enabling, and restricting factors.

Need for mental health care—Need for care can be ascertained subjectively through measures that tap the perceived health status of the respondent as well as through assessments that apply more objective criteria such as psychiatric diagnosis or degree of emotional distress. In this study we included measures for both the subjective and objectively evaluated mental health status to determine the need for mental health, alcohol or drug abuse services. Self-rated mental health was appraised by asking respondents a single question on how they rated their mental health along an ordinal scale that ranged from excellent to poor. Responses to this item were dichotomized so that the variable could be entered into the model as a dummy for which the reference group were those individuals who rated their mental health as excellent or good.

In addition, a multi-dimensional aggregate measure of assessed need previously reported by Vera et al. (1998) was included. This aggregate indicator of need for mental health, alcohol or drug services includes measures of disorders, distress, and impairment. Five psychiatric disorders (as reported in a twelve-month time period) contributed to the measure: major depression, dysthymia, alcohol abuse, alcohol dependence, and antisocial personality disorder. The diagnosis selected represent disorders that differ in their prevalence by sex, thereby reducing sex biases in ascertainment of need. The prevalence of affective disorders is higher among women, whereas that of alcohol abuse/dependence and antisocial personality are higher among men (Canino et al., 1987; Kessler, McGonagle, Swartz, Blazer, & Nelson, 1993; Kessler et al., 1994). Diagnosis for the first four disorders were generated through computer algorithms using the Spanish version of the Composite International Diagnostic Interview, based on the DSM-III-R nosology. The DIS was used to ascertain the diagnosis of antisocial personality disorder. Two measures of distress were also included. One of these, the Center for Epidemiological Studies Depression Scale (CES-D), measures depressive symptoms during the week preceding the interview. The Psychiatric Symptoms and Dysfunction Scale (PSDS) was used to identify individuals with current mental health problems. All of these measures have been validated for Hispanics (Rubio-Stipec et al., 1991; Bravo, Canino, & Bird, 1987; Alegría et al., 1991; Roberts, 1980). The

third measure used to construct the aggregate indicator of need for mental health care is self-reported impairment associated with symptoms of emotional distress or of a psychiatric disorder.

These three groups of measures were used to assign all study respondents into three categories of assessed need for mental health, alcohol or drug services: definite, probable, or unlikely. The definite category included individuals who fulfilled at least one of the following criteria: one or more psychiatric disorders, scored high on the symptom scales (CES-D >22; high on all of the 5 PSDS sub-scales), or reported use of hard core drugs within the previous 30 days. In addition, individuals assigned to the definite need for care category had to score positively in at least two of the impairment questions. Probable need for care includes respondents who reported a lower number of symptoms on the distress measure (CES-D between 16 and 22; scored high on 3 or 4 of the PSDS sub-scales). Individuals who fulfilled criteria for a psychiatric disorder but did not report impairment were also assigned to the category of probable need for services. All other respondents were assigned to the category of unlikely need for mental health, alcohol or drug services. Comparisons were made using the unlikely category as the reference group.

The model also included measures of physical health among the need variables since empirical findings lend support to a relationship between psychological and physical problems that may bear on the decision to seek care (Manning & Wells, 1992). Measures of physical health status were obtained by asking respondents to rate their physical health with a single item whose responses ranged from excellent to poor. The variable was entered into our model as a dummy, with the reference group comprised of individuals assessing their physical health as excellent or good. In addition, a question with yes–no response was used to ask participants if they had any kind of physical incapacity. The last variable included in our need domain was whether or not respondents reported non-specific somatic complaints. These have been found to account for nearly a third of the visits to the primary care sector by patients with a mental disorder (Olfson, 1991).

Predisposing, enabling and restricting factors—Included in the model are a group of variables which are posited to be associated with help seeking in the presence of need for care. Predisposing factors are those found to be important precipitants of seeking mental health care. Those entered into our model as dummy variables include sex (1 for females), migration status, with a value of 1 if the individual has always lived in the Island; marital status, assigned a value of 1 if the individual is non-married (single, widowed, divorced, or separated); employment, which included three categories, those unemployed and out of the labor force were each compared to the reference group of those employed. In addition, two other predisposing factors, age and years of schooling, were entered as continuous variables.

Enabling and restrictive factors represent attributes of the individual's environment that can facilitate or hinder his or her disposition to seek formal health care for a mental health problem. The model includes family income, measured as a continuous variable. Since the study sample is comprised mainly of low income individuals, an index of economic strain was also incorporated considering that it might be a better estimator of the effects of income on utilization. This taps into the respondent's satisfaction with his/her ability to pay for food, medical care, clothing, and living accommodations. Three factors related to perceived support from friends, family, and other relations were also specified, inasmuch as social networks have been implicated in an individual's recognition of a health problem and in influencing how the problem is cared for (Pescosolido, Wright, Alegría, & Vera, 1998; Thoits, 1995; Kouzis & Eaton, 1998). These variables were measured by recording the number of individuals in each network with whom the respondents perceived that they could talk about problems or seek advice. In addition, insurance coverage was entered as a dummy

variable with a value of 1 if the individual reported having a private insurance with mental health benefits, Medicaid, or Medicare. A dummy variable was created for residential zone (whether urban or rural) which is used in this study as a proxy to control for supply of mental health services in the respondents geographic area. The model also controls for the respondents' previous use of formal care for a mental health problem.

Statistical analysis

We first compared the distribution by gender of the independent variables as measured in wave 1 and the frequency of services utilization for a mental health problem as measured in wave 2. Multivariate relationships were tested using a series of logistic regression models for which use of outpatient formal care for a mental health problem in wave 2 constituted the dependent variable. To answer the first study question, use was regressed (0=no use, 1=use) on all the covariates specified in the conceptual model to obtain adjusted odds ratio that compared the odds of any use for females to the odds of any use for males when other variables were controlled. Each of the research hypothesis was initially tested with the Cochran–Mantel–Haenszel statistic. This test provides a bivariate analysis of the relation between the independent variable of interest (self-rated mental health and employment status) and the dependent variable, while controlling for gender. For the second question, rather than specifying separate regression models for males and females to test if gender interacts with other predictors of utilization, a combined core model was specified in which each term was entered both singly and as a higher-order interaction term with gender. With the first test of the model those interaction terms that proved significant at a p value less than 0.25 were selected. All higher-order terms that failed to meet this criterion were removed. The subsequent test of the simplified model was used to select interaction terms with a p value equal to or less than 0.10. To address the third question and to test the research hypothesis with a multivariate analysis, two new variables were created from each of the interaction terms that attained significance in the previous model, one for males and one for females. These were specified in a third logistic regression equation along with the other covariates included in the conceptual model. For these new variables the comparisons were carried out between genders. At this final analytical stage, a p value less than or equal to 0.05 was adopted for statistical significance. The logistic regression models were estimated using the SUDAAN software. Adjustment for the effects of the complex survey sampling design was achieved by incorporating the clusters of households into the estimation process using Taylor series estimators (Sha, Barnwell, & Bieler, 1997). For each model the regression coefficients, the odds ratios, the 95% confidence intervals, and the p values are reported.

Results

Distribution of study variables

The paired, unweighted sample was comprised of 1950 women (60.54%) and 1271 males (39.46%). Table 1 presents the distribution of the sample across all study variables by sex. Percentages for the weighted data and standard errors are reported for all the categorical variables. Means and standard deviations are reported for the continuous variables. Nearly 25% of women and 22% of males fulfilled the criteria for definite or probable need for care. In spite of the comparable proportion of men and women with assessed need, the proportion of women rating their mental health as poor or bad was nearly 20% larger. The gender distribution for the remaining need variables evidenced that women are more likely than men to report a physical incapacity and a history of non-specific somatic complaints. The proportion of women rating their physical health as poor or bad was nearly twice that reported by males.

Men and women did not differ significantly in age distribution, yet significant differences were observed in other demographic variables. Men were more likely to be married, employed, and to have lived outside the Island for a period of six months or more. Men were more likely to report an annual family income greater than 20,000 dollars, whereas a greater proportion of women reported annual income under 5000 dollars. A significantly greater proportion of women report undergoing economic strain. Differences between gender were also encountered for other enabling factors. Women were more likely to report availability of insurance and to live in urban areas. The number of relatives, friends, and other individuals with whom respondents felt close enough to talk about their emotional problems or concerns was significantly larger for males. Men and women did not differ in the proportions that reported previous use of formal mental health services by themselves or their relatives.

Twelve per cent of the sample reported any use of services for a mental health problem in wave 2. Eleven percent of the females and 9.8% of the male respondents indicated that they had at least one encounter with the health care system in the second wave. This difference is not statistically significant. Consistent with a prior report from a cross-sectional analysis of a sub-sample from this same population interviewed in 1989 (Alegria et al., 1991), the majority of respondents with assessed need do not seek care, whereas both genders are equally likely to have used services.

Effects of self-rated mental health and labor status on utilization, stratified by gender

Table 2 presents the association between perceived mental health in wave 1 and use of outpatient care in wave 2, stratified by gender. Significant differences are observed between strata. It can be seen that, compared to women, a greater proportion of the men who rate their mental health unfavorably in wave 1 use outpatient services for a mental health problem in wave 2. Nearly 32% of males with an unfavorable mental health perception in wave 1 reported an encounter with the health care system in the subsequent year compared to only 25.8% of women with a similar assessment of their mental health.

Table 3 presents the relationship between employment status in wave 1 and utilization in wave 2 stratified by gender. Surprisingly, the employment category for which marked gender effects are observed is out of the labor force. The percent of men in the out of the labor force category who used formal health services for a mental health problem is nearly two-thirds larger than that of women in the same category. This relationship attained statistical significance at a p value of less than 0.001.

Multivariate analysis including interactions with gender

Table 4 shows the results of the first logistic regression analysis that examined the effects of the independent variables measured in wave 1, on use of outpatient services for a mental health problem in the second wave. The interaction terms with sex that achieved statistical significance at a p value less than 0.25 in the previous core model (data not shown) were also specified in the equation. Consistent with the lack of significance between sex and use encountered in the bivariate analysis, the multivariate analysis indicates likewise that sex lacks a main effect on use.

At this stage of the analytical process, we were primarily interested in testing our conceptual model and determining which of our predictor variables and interaction terms yielded a significant effect on the likelihood of using any formal source of outpatient mental health service in wave 2. Four out of the six need for care indicators (self-rated mental health, definite and probable need for care, and reporting non-specific somatic complaints) were significantly associated with any use of services in wave two. Having a definite need for

care (OR 2.89), compared to those unlikely in need, demonstrated the strongest effect. Reporting a physical incapacity and self-rated physical health status were marginally significant. As expected, the mental health morbidity measures exert moderate to strong effects on use even when all other predictor variables are simultaneously controlled. Of the enabling variables retained in the model, being out of the labor force, compared to those employed, had a moderate effect on the likelihood of using services (OR 1.94). A history of previous mental health services use is the variable with the strongest effect on utilization (OR 4.73). Two other enabling variables are significantly associated with the likelihood of using any source of formal care. The size of the network of supportive relatives reported in wave 1 is inversely related to subsequent services use in wave 2. As the number of relatives with whom the respondent can talk to about emotional problems increases, the likelihood of using formal care decreases. Having insurance that covers mental health benefits (compared to no insurance) also increases the likelihood of any services use for a mental health problem (OR 1.70).

Five higher-order terms were significant at p values less than 0.10. These were the product of interactions between sex and definite need for care, perception of mental health status, being out of the labor force, prior use of mental health services, and availability of an insurance with mental health benefits. They confirm that the substantive variables of our model do interact with gender. An additional analytical step was taken to determine the gender specific effects of these predictor variables on services use. A third logistic regression model was then specified (see Table 5). This time, use of any source of formal care in wave 2 was regressed on wave 1 predictor variables with the following modification. Each of the five predictors that proved to interact significantly with sex were entered as two new variables, one for men and one for women. For this set of variables the model tested between gender comparisons.

The results of this final model are presented in Table 5. Several interesting findings emerge. Although the need for care indicators continue to influence utilization, the magnitude and significance of their effects vary by gender. Consistent with our hypothesis, men that perceive their mental health status as poor or bad are nearly two and a half times more likely to seek care in wave 2 when compared to men and women who assess their mental health favorably (OR 2.37). This relationship is not sustained for women (OR 1.44, 95% CI=0.94–2.2, $p<0.09$). Gender differences are also noted for the other need indicators. Men with a definite need for care are five times more likely to use services when compared to all other men and women unlikely in need of care (OR 5.06). This variable also has a significant effect on women's use of care, although of a lesser magnitude. Women with definite need for care are nearly twice as likely to use any source of formal services (OR 2.3) when compared to all the respondents unlikely in need. The other assessed need category included in the model is probable need of mental health or substance abuse services. There is no gender interaction with probable need for care. The interaction of gender with morbidity appears to occur at the higher end of the spectrum of severity. Compared to individuals unlikely in need of services, both men and women with a probable need for care increase their likelihood of using services by approximately 75%. The effect of non-specific somatic symptoms is also non-gender related. Individuals of both sexes who report one or more non-specific somatic symptoms increase their likelihood of using services by 87%.

Three categories of employment status were entered as dummies in the model. Currently employed was used as the reference category. A gender interaction was found for the category of out of the labor force. Although being out of the labor force (compared to employed) had an effect on use for both men and women, the magnitude of the effect is larger for men (OR 2.65 vs. OR 1.77). Contrary to what was hypothesized, gender and unemployed status did not interact. In fact, the effect of unemployment on use was not

significant for either gender. A marked gender effect is observed for having previously used mental health services. Women with a history of previous health sector encounters for a mental health problem are seven times more likely to use any formal services compared to all other respondents without a history of previous services use (OR 7.02, 95% CI=4.85–10.16, $p<0.001$). The effect on men, although large (OR 2.98), is less than half of that observed for women. The mild positive effect of insurance on utilization that was observed in the previous regression model is no longer evidenced. Males who report availability of an insurance that includes mental health benefits have a 40% greater likelihood of using services, yet both the p value of the statistical test and the 95% confidence interval for the odds ratio were marginally significant.

Discussion

The relationship between gender and the processes involved in encountering health services for a mental health problem has received limited attention during the last decade. This situation is in part explained by the fact that large data sets are required to systematically address challenges posed by the nature of the research subject. The data set used for this study propitiates research in this field for several reasons: the proportion of respondents that use services for a mental health problem is large enough to formulate meaningful comparisons along a larger set of explanatory variables; the sample design controls for the effects of other variables that are confounded with gender; and it includes a larger number of variables to explain use of health services that are not always available in other population surveys.

This study examined the effects of gender on utilization of mental health services. Predictors of contacts with the formal sector of mental health care have been identified that differ by gender in an adult Puerto Rican population residing in poor Island neighborhoods. The results obtained indicate first of all, that men and women are equally likely to use services for a mental health problem when all sources of formal care are jointly considered. This finding contradicts reports from other studies which have detected a differential use of mental health services by men and women. In the work of Leaf and Bruce (1987) a lack of a gender effect on use was only encountered for the specialized mental health care sector. The authors proposed that this was probably a result of including in their array of specialized sources of care, mental health services for which men have higher rates of use that had not been considered in earlier studies, such as those provided by the Veterans Administration. It is possible that by reducing the sex bias in the ascertainment of use of the specialty sector, they obtained similar rates of treatment encounters for men and women. In their case, the greater proportion of women receiving care from the general medical sector accounted for the gender effect observed on use when all sources of formal care were aggregated. In the present study, however, treatment settings similar to those explored by Leaf and Bruce are included, with the exception that the human services sector was also accounted for. It is unlikely that this source of care favors males. The fact that sex differences in any use of formal care are not observed with our data suggests several explanations. Unlike the New Haven ECA study population, our study's sample is predominantly comprised of adults in the low socioeconomic tiers of the Island. The population studied reports a mean annual family income less than US \$15,000.00, and on the average, they have not completed high school. A more meaningful comparison for this group is the New York City Medicaid population studied by Temkin-Greener and Clark (1988). These authors reported a mental health services utilization rate of 8% for the sample, which was nearly three times that of the total county population. They also found men to be 20% more likely than females to have had a treatment contact for a mental health problem, predominantly within the specialized sector of care. They attribute the gender difference in utilization to the Medicaid eligibility criteria, which favor the inclusion of men only when they exhibit a substance abuse problem

or when they are unemployed. The work of Gallo et al. (1995) with pooled data from all ECA sites, revealed that the role of sex in estimating specialty sector use was significantly reduced when morbidity, socioeconomic status, and previous contacts for mental health care were controlled for. In this study, the sample represents non-institutionalized individuals from the community, which controls for the selection bias encountered when only recipients of public insurance are sampled from. Furthermore, the proportion of respondents with assessed need did not differ by gender. The utilization rates observed in this study are larger than those reported in the studies discussed above and greater than those reported by the researchers from the Los Angeles ECA, which has the largest proportion of Hispanics of all ECA study sites (Hough et al., 1987). These findings, along with the observation in our study that possessing mental health insurance coverage does not contribute significantly to utilization when other need, predisposing and enabling factors are controlled for, suggest that poor Puerto Ricans face less structural barriers to mental health care than their US counterparts. It also suggests that realized access for men and women is likely to be comparable when socioeconomic differences are controlled.

Although gender does not have a main effect on the likelihood of use, an important result from this study is that gender was found to interact with significant indicators of need as well as with several of the predisposing and enabling factors that exert an effect on utilization. Of all the morbidity indicators used in this study, definite need for mental health services had the largest effect on use among both genders, but the size of the effect was much larger for males. Having a probable need for care was also significant but unrelated to gender. This implies that when need, predisposing, and enabling factors are taken into account, men, compared to women, are more likely to seek care if they are exhibiting significant morbidity. A similar effect is observed for self-assessed mental health status, providing evidence that men are more prone to seek mental health care when they perceive their mental health as poor or bad. An unfavorable perception of mental health status attained only a marginal effect on use by women.

Unemployment status, when compared to employment, does not predict utilization for either sex. The study hypothesized that if employment constituted a barrier for men to seek care, unemployed men would have had a greater likelihood of using mental health services when need and other covariates were controlled for. This lack of an effect could be due to the fact that to qualify as unemployed in this study respondents must report that they are actively seeking employment. The time demands associated with pursuing employment opportunities could constitute as much a barrier to help-seeking as those associated with being employed. Yet, the labor status showing the largest effect on use was being out of the labor force. An individual was considered to be out of the labor force if both of the following criteria were fulfilled: being unemployed at the time of the interview and a report that he/she was not seeking employment. In addition to those individuals who have given up on the likelihood of obtaining gainful employment, this category also includes those homemakers and retirees who inform that they are no longer in the job market. The effect of out of the labor force on use for men was nearly twice the size of the effect observed on use for women, after adjusting for need, age, education, and the remaining covariates in the model. Men who are out of the labor force have nearly a three times greater likelihood of using mental health services when compared to the remainder of the sample, whereas the likelihood of use for women who are out of the labor force increases by approximately 75%.

There are several potential explanations to account for this finding. One possibility is that employment truly constitutes a barrier to seeking mental health care, but more so for men than for women. This implies that men and women's work conditions may differ in the constraints they impose upon the individual's opportunities to contact mental health services when in need of care. Another possibility is that men and women are dissimilar in their

vulnerability to the lack of employment opportunities. It is possible that for the men in our sample, this labor status is associated with a higher degree of emotional distress. The finding that the size of this effect on women's mental health services use is nearly 33% smaller than that for males, can also suggest that women are less vulnerable to the stressors arising from long term unemployment. The work of Pugliesi (1995) provides evidence that the mediators intervening between work and psychological well-being do interact with gender. This interpretation would also be consistent with the work of Conger, Elder, Simons, and Ge (1993), who encountered in their study gender differences in stress vulnerability. Women appeared to be more vulnerable to events or losses within their social network, whereas men were more likely to respond with distress to financial and job-related stressors. Contrary to the relationship that has been proposed by Verbrugge (1985), employment could be thought of as exerting its effect on use by promoting emotional well-being and reducing need for care. Another possibility is provided by the relationship-between diminished mental health and participation in the labor market that has been reported by other researchers (Bartel & Taubman, 1979; Ettner, Frank, & Kessler, 1997). It could be that men and women experience different consequences of ill-health on labor status. Men, more so than women, may be more susceptible to drifting out of the labor force as a result of mental illness. Our findings with regard to the role of labor status and services use raise more questions than they do answers. The exact nature of these relationships needs to be explored through future studies that take into account how gender, labor status, and need, interact in predicting use of mental health services.

An interaction with gender was also observed for the effects that a history of prior mental health treatment contacts has on use. Women who reported prior mental health treatment experiences were seven times more likely to use services compared to the remainder of the sample. The effect on men, although in the same direction, was of a lesser magnitude. It appears that women are more likely to remain in or return to treatment once they have entered formal care, whereas men are more likely to be incident users of services. Since we have only attempted to explain gender differences in the likelihood of using any of the sources of formal care for a mental health problem, we are unable with the present study to determine how gender affects the intensity of use or the sector of care.

Summarizing, in spite of the finding that men and women are equally likely to report a contact with the treatment sector, distinct differences are observed in their processes of seeking care. It appears that more so for men than for women, seeking mental health services requires a higher degree of morbidity and a negative perception of the status of their mental health. Women appear to be more responsive to symptoms of distress and are able to act upon these before they become a greater threat to their perceived mental health. Once men enter care, our data suggests that they are less likely to remain in or return to care. These findings generate several important concerns. First of all, we do not know if men are also less likely to obtain treatment of an appropriate duration. Future research efforts should help elucidate if factors associated with the treatment process or setting adversely affect retention of men in mental health treatment. Furthermore, the finding that it apparently takes a worst self-appraisal of mental health status for men to seek mental health care raises the concern of whether this has an impact on mental health outcomes. Farmer and Ferraro (1997) found morbidity, distress, and functional limitations to be the strongest predictors of perceived general health in a longitudinal study conducted on two waves of data from the National Health and Nutrition Examination Survey (NHANES). Their findings also suggest that negative health perceptions pose a risk for future health decline. This issue also requires further exploration. Finally, the nature of the relationship-between employment and mental health services use needs to be sorted out. Barriers to mental health care for those employed could be of a structural or attitudinal nature. Strategies designed to encourage mental health

services use by employed men in need will depend on the types of barriers identified and the magnitude of their effects on use.

In conclusion, gender has significant effects on the paths to formal health care for a mental health problem. We have been able to disentangle the effects of social status and ethnicity from those of gender on the predictors of using any source of outpatient care for a mental health problem by sampling from a population that is predominantly poor and ethnically homogeneous. Studies addressing factors influencing mental health services use should consider stratifying their sample by gender or risk arriving at biased estimates. Future research should establish whether or not these findings are sustained with other population groups. The study faces several limitations. First of all, longitudinal studies are susceptible to bias resulting from non-random attrition of subjects between study waves. In our case, although the paired sample differed from the original sample in that a larger proportion of males did not respond in wave 2, responders did not differ from non-responders in any of the other study variables. Attrition cannot be invoked as an explanation for the gendered effects of the predictors of use of mental health services among men and women in our sample. The role of gender on choice of health care sector and on intensity of care also requires further exploration. In addition, ours being a community sample, the prevalence of psychiatric disorders that are near equally distributed among the sexes is very small (i.e., schizophrenia), not allowing us to address the study questions with men and women experiencing the same disorder. The effect of gender on other predictors of service use, particularly attitudes towards mental health services, was not explored in the present study, but warrants attention in subsequent research. Improving our understanding of these complex relationships is essential if one is to encourage appropriate mental health services use by men and women in need.

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Table 1

Distribution of study variables by gender, weighted for probability of selection and non-response. ($N = 3221$).
SE=Standard error, SD=standard deviation

Variable	Females (n = 1950)	Males (n = 1271)
<i>Need</i>		
Assessed need (% , SE)		
Definite	12.27, 0.89	11.13, 0.96
Probable	12.52, 0.89	11.06, 0.99
Unlikely	75.21, 1.22	77.80, 1.39
Perceived mental health ^{a,b} (% , SE)		
Excellent-good	77.96, 1.04	82.00, 1.23
Bad-poor	22.04, 1.04	18.00, 1.23
Perceived physical health ^{a,b} (% , SE)		
Excellent-good	50.80, 1.34	66.84, 1.37
Bad-poor	49.20, 1.34	33.16, 1.37
Physical incapacity ^c (% , SE)		
Yes	20.48, 1.06	16.88, 1.17
No	79.52, 1.06	83.12, 1.17
Somatic complaints ^{a,b} (% , SE)		
Yes	34.82, 1.34	19.51, 1.20
No	65.18, 1.34	80.49, 1.20
<i>Predisposing</i>		
Age (Mean, SD)	38.89, 0.471	37.92, 0.526
Education ^{a,b} (Mean, SD)	10.06, 0.121	10.32, 0.145
Migration ^{a,b} (% , SE)		
Yes	30.18, 1.22	38.69, 1.53
No	69.82, 1.22	61.31, 1.53
Marital status ^{a,b} (% , SE)		
Married	58.10, 1.28	61.62, 1.69
Non-married	41.90, 1.16	38.38, 1.69
Employment ^{a,b} (% , SE)		
Employed	34.70, 1.30	65.55, 1.55
Unemployed	15.32, 1.01	13.62, 1.16
Out of labor force	49.98, 1.37	20.83, 1.36
<i>Enabling</i>		
Annual household ^c Income (% , SE)		
0–4999	30.97, 1.27	26.17, 1.52
5000–9999	30.77, 1.19	31.32, 1.58
10,000–14,999	16.28, 0.96	18.16, 1.19
15,000–19,999	9.09, 0.74	8.84, 0.83
20,000+	12.90, 0.94	15.51, 1.31

Variable	Females (n = 1950)	Males (n = 1271)
Economic strain ^{a,b} (% , SE)		
Yes	40.23, 1.34	34.03, 1.57
No	59.77, 1.34	65.97, 1.57
Insurance with mental health benefits ^{a,b} (% , SE)		
Yes	37.22, 1.48	32.22, 1.62
No	62.78, 1.48	67.78, 1.62
Residence zone ^{a,b} (% , SE)		
Urban	54.61, 1.44	49.11, 1.74
Rural	45.39, 1.44	50.89, 1.74
Ever use health care for a mental health problem (% , SE)		
Yes	22.39, 1.14	21.50, 1.34
No	77.61, 1.14	78.50, 1.34
Relatives use of health care for a mental health problem (%)		
Yes	29.28, 1.21	26.26, 1.44
No	70.72, 1.21	73.74, 1.44
Number of persons perceived to provide support		
Family ^a (Mean, SD)	8.66, 0.28	11.34, 0.39
Friends ^a (Mean, SD)	2.53, 0.14	4.7, 0.28
Other ^{a,b} (Mean, SD)	3.22, 0.20	4.68, 0.30
Use of services in wave 2 (% , SE)		
Yes	11.54, 0.78	88.46, 0.78
No	9.80, 0.98	90.20, 0.98

^a $p < 0.01$.

^b The total number of cases may be less for certain categories due to missing values or not applicable.

^c $p < 0.02$.

Table 2

Percent use in wave 2 (1993–1994) by sex and perceived mental health status in wave 1

	<u>Use in wave 2</u>	
	<u>% Yes (SE)</u>	<u>% No (SE)</u>
Perception mental health wave 1 ^a		
Males		
Exc/good	5.01 (0.77)	94.99 (0.77)
Bad/poor	31.62 (3.48)	68.38 (3.48)
Females		
Exc/good	7.54 (0.66)	92.46 (0.66)
Bad/poor	25.80 (2.27)	74.20 (2.27)

^a
p 0.001.

Table 3

Percent use in wave 2 (1993–1994) by sex and employment status in wave 1 (1992–1993)

	<u>Use in wave 2</u>	
	% Yes (SE)	% No (SE)
Employment status ^a		
Males		
Employed	5.77 (0.86)	94.23 (0.86)
Unemployed	6.47 (1.60)	93.23 (1.60)
Out of the labor force	24.67 (3.25)	75.33 (3.25)
Females		
Employed	7.59 (1.01)	92.41 (1.01)
Unemployed	7.20 (1.43)	92.80 (1.43)
Out of the labor force	15.61 (1.25)	84.39 (1.25)

^a $p < 0.001$.

Table 4

Logistic regression of utilization in wave 2 on wave 1 need, predisposing and enabling factors, controlling for other socio-demographic variables^a

Independent variables	Beta coefficient	OR	95% CI	p-value
<i>Need</i>				
Perceived mental health Bad/Poor	0.43	1.53	1.10–2.13	0.012
(Sex* Perceived Mental Health)	−0.60			0.06
Definite	1.06	2.89	1.87–4.48	0.0001
(Sex Definite)	−0.86			0.01
Probable	0.53	1.70	1.06–2.73	0.02
Physical incapacity	0.33	1.39	0.99–1.95	0.056
Somatic complaints	0.58	1.79	1.30–2.47	0.001
Perceived physical health Bad/Poor	0.31	1.37	0.98–1.91	0.067
<i>Predisposing</i>				
Sex (1=F)	−1.19	0.82	0.58–1.17	0.276
<i>Enabling</i>				
Out of labor force	0.66	1.94	1.34–2.82	0.0001
(Sex* out of labor force)	−0.61			0.04
Unemployed	−0.22	0.80	0.50–1.28	0.353
Number of Supportive...				
Relatives	−0.02	0.98	0.96–0.98	0.006
Friends	0.01	1.01	0.99–1.03	0.255
Other	0.00	1.00	0.99–1.02	0.612
Ever use of mental health services				
Self	1.55	4.73	3.48–6.44	0.0001
(Sex* ever use self)	0.69			0.02
Relatives	−0.03			0.82
Insurance	0.53	0.97	0.73–1.28	0.02
(Sex* insurance)	−0.60	1.70	1.083–2.663	0.04

^aControlling for age, years of schooling, marital status, income, economic strain, and zone of residence.

Table 5

Logistic regression of utilization in wave 2 on wave 1 need, predisposing and enabling factors, controlling for socio-demographic variables and entering separately for each gender the variables with significant sex interaction^a

Independent variables	Beta coefficient	OR	95% CI	p-value
<i>Need</i>				
Perceived mental health				
Bad/Poor male	0.86	2.37	1.48–3.79	0.001
Bad/Poor female (Otherwise=0)	0.36	1.44	0.94–2.20	0.095
Definite need				
Male	1.62	5.06	2.88–8.89	0.001
Female	0.83	2.30	1.41–3.77	0.001
Probable need (unlikely=0)	0.57	1.77	1.12–2.82	0.016
Somatic complaints yes (no=0)	0.63	1.87	1.38–2.56	0.001
<i>Predisposing</i>				
Employment				
Unemployed	−0.19	0.83	0.54–1.28	0.399
Out labor force				
Male	0.97	2.65	1.63–4.31	0.001
Female (employed=0)	0.57	1.77	1.22–2.55	0.003
<i>Enabling</i>				
Number supportive relatives	−0.02	0.98	0.97–1.00	0.018
Ever use mental health services				
Male	1.09	2.98	1.96–4.53	0.001
Female (Otherwise=0)	1.95	7.02	4.85–10.16	0.001
Insurance				
Yes male	0.42	1.53	1.00–2.33	0.099
Yes female (Otherwise=0)	−0.01	0.99	0.68–1.43	0.957

^aControlling for age, years of schooling, marital status, income, economic strain, and zone of residence.