

## Predicting Use of Community Mental Health Services: Do Demographics of Consumers Matter?

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### Abstract

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The set of factors that predicted consumer use of professional mental health services was explored in one Midwestern state. Factors identified in the literature as potential predictors of mental health service utilization were entered into a stepwise regression analysis. The three most significant predictors of service utilization were the extent to which consumers perceived that services were available, residence in urban areas, and participation in self-help groups. Wherein residence was conceptualized as a proxy systemic predictor for actual available services rather than a demographic predictor, no demographic factors were found to be significant predictors of utilization for the consumers in this study. The findings provide behavioral health policymakers, practitioners, and researchers with information they can use to enhance programs and policies for persons who need mental health services.

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**Keywords:** mental health services, utilization, consumer, mental illness.

### Introduction

Advocates are challenged to understand more clearly, why persons who suffer from severe mental illness use professional mental health services. This study explored the model of factors which best predicted the number of services consumers use, within the larger context that utilization of mental health services occurs in terms of systemic factors as well as individual factors of consumers. Understanding why consumers use services is especially salient at a time when it is incumbent on policymakers, practitioners, and researchers to identify mental programs and services that have the most utility to particular groups of individuals who suffer from mental illness.

### Conceptual Framework

Andersen proposed that access to care involves factors that characterize individuals as well as factors that characterize the system(s) in which they must access care (1995). In this context, factors that characterize individuals may overlap with factors that characterize the system in which they must access care. For example, while residence in rural areas may characterize an individual, it may also characterize the system, particularly in terms of actual services available and cultural norms and mores regarding mental health problems.

### Rationale/Background

One popular model of mental health service utilization relies upon the following four dimensions to describe a consumer's likelihood of using services: availability, affordability, accountability, and accessibility (Stefl & Proserpi, 1985). When considering these four aspects of utilization, it becomes apparent that factors which characterize the individual as well as factors that characterize the system are associated with service use.

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Individual factors include: (a) age (Sullivan et al., 1993) (b) gender (Klinkenberg & Calsyn, 1998) (c) ethnicity (Rosenheck et al, 1997); US DHHS, 2001) (d) education (Sullivan & Spritzer, 1997) (e) income (Kiernan et. al 1989) in addition (f) marital status (Kiernan et. al, 1989; Klinkenberg & Calsyn, 1998). Systemic factors include: (a) consumers' perceptions that services are available (Hodges et. al, 2005) (b) urban/rural residence (Lambert, Agger, & Hartley, 1997; US DHHS, 2002; NIMH, 2000; Wagenfeld, et. al 1993) and (c) use of self-help services (Bell, 2012; Bernecker, 2014; Hodges, et. al, 2003; Hodges, 2014; Pratt, 2009; Salzer & Shear, 2002; Solomon & Draine, 2001).

## **Problem and Purpose**

Despite the fact that mental health services have been widely studied, few researchers have asked consumers about the services they use. This study explored which set of factors predicted the number of services consumers use when geographic location was conceptualized as a factor that characterizes the system(s) in which consumers accessed services. With this in mind, the researchers speculated that characteristics of the system rather than characteristics of individuals would predict best the number of services consumers use.

## **Methods**

### *Sample*

The target population for this study included all individuals who receive community-based services in one large Midwestern state. From this population, a criterion sample of 311 individuals selected for participation in this study was identified in mental health centers, self-help groups, social events for mental health consumers, and community meetings during a four-month period. This sampling method delimited the study to persons with mental illness who the researchers believed could provide rich information regarding the extent to which our predictor variables are associated with utilization of mental health services (Isaac & Michael, 1995). More important, this sampling strategy seemed warranted in the absence of a sampling frame from which mental health consumers could be randomly selected.

### *Instrument*

The 25-item written questionnaire was developed using a panel of experts. Members of the panel included a representative from each of the following communities/agencies: the community of persons with mental illness, a Protection and Advocacy Agency, an advocate from the National Alliance for Persons with Mental Illness (NAMI), a mental health research institute, and a local University. The first eleven items on the questionnaire addressed the following information: (a) age, (b) ethnicity, (c) gender, (d) education, (e) place of residence, (f) marital status, (g) income, (h) membership in a self-help group, (i) participation in a self-help group as part of mental health recovery, (j) payment for mental health services, and (k) reason for seeking mental health services. Items 12-15 and their respective sub-items elicited information from respondents regarding services in the community. That information includes: (a) available services in the community, (b) use of particular services and length of use, (c) usefulness of available services, and (d) usefulness of additional services not currently available. Items 16 and 17 addressed barriers to services and services that were most useful to recovery in the past. Although items 18-25 focused on client satisfaction, these data were excluded from analyses due the possible conceptual overlap between service utilization and client satisfaction with services.

### *Data Collection*

Institutional review board permission was granted from the relevant institutions and informed consent was obtained from all research participants. Data collectors included both mental health consumers and professionals. The researchers trained data collectors to administer the questionnaire to individuals or small groups of participants, depending on the information processing capacity of each participant. The data collectors were directed to self-help group meetings, community meetings, mental health centers, and recreational activities for mental health consumers in all regions of the state where such groups/meetings were held.

### *Data Analysis*

Tallies were used to identify the average number of services the consumers in the study use. Chi-square and t-tests were used to analyze and explore variable relationships and associations.

Finally, a stepwise regression procedure was used to determine the model of factors that predicted the greatest amount of variance in the average number of services consumers were using at the time the study was conducted (Mertler & Vannatta, 2002).

## Results

Prior to presenting the results of the study, the sample is described. The sample approximates the racial diversity of the state, has good geographic representation, is somewhat undereducated, tends to be either single or divorced, and is quite impoverished. Of the 27 counties represented in the sample, 11 are urban and 16 rural. For the purpose of this study, counties listed as “metropolitan” by the University’s Office of Social and Economic Data Analysis were classified as “urban”, and those listed as “non-metropolitan” were classified as “rural” (OSED, 2001; US Census Bureau, 2015). The results in Tables 1 and 2 show the characteristics of participants in the study.

**Table 1: Percent of Participants by Age, Gender, and Ethnicity (N=311)**

Characteristic	%	n
<b>Age</b>		<b>311</b>
18-21	3.2	
22-35	25.1	
36-50	46.1	
> 50	25.4	
<b>Gender</b>		<b>311</b>
Female	51.0	
Male	49.0	
<b>Ethnicity</b>		<b>311</b>
White	83.9	
Other	16.1	

**Note.** Other ethnicity (8.7% African American; 3.9% Native American; 1.9 Hispanic/Latino; .3% Asian American; 1.3% no specified)

**Table 2: Percent of Participants by Education, Marital Status, and Income (N=311)**

Characteristic	%	n
<b>Education</b>		<b>309</b>
< high school	21.7	
High school/GED	43.0	
> high school	35.2	
<b>Marital status</b>		<b>309</b>
Single	54.0	
Married	9.7	
Separated	6.1	
Divorced	24.3	
Widowed	5.8	
<b>Annual income</b>		<b>305</b>
≤ \$8000	73.4	
\$8000-\$20,000	22.3	
> \$20,000	4.3	
<b>County of residence</b>		<b>311</b>
Rural	30.5	
Urban	69.5	

*Use of Mental Health Services*

The questionnaire asked participants to share which of the following services they use: (a) clubhouses; (b) maintenance level supports; (c) transportation; (d) education about mental health; (e) psychotherapy; (f) housing; (g) vocational services; (h) crisis services; (i) group homes; (j) education; (k) dual diagnosis groups; and (l) outreach/homeless. The average number of services the consumers in this study used was 5.42 (N=12, sd=2.57). The results in Table 3 show the percent of participants who use each type of service.

**Table 3: Percent of Consumers by Type of Service Utilized**

Type of Service	%	n
Clubhouse	76.4	214
Maintenance supports	69.4	195
Transportation	67.2	184
Education about mental health	63.3	176
Psychotherapy	63.1	176
Housing	62.1	172
Vocational services	51.5	135
Crisis services	40.7	116
Group homes	33.2	89
Education	29.2	77
Dual diagnosis group	25.9	72
Outreach-homeless	11.1	29

It is noteworthy that there were no significant differences in the average number of services consumers use by age, gender, ethnicity, marital status, education, or income. However, participants in self-help groups use more services than do non-participants in self-help groups (self-help= $\bar{x}$ =5.81, no self-help= $\bar{x}$ =4.98,  $t$ =-2.823,  $df$ =1,  $p$ =.005). Participants who reside in urban counties use more services than do participants who reside in rural areas (urban= $\bar{x}$ =5.96, rural= $\bar{x}$ =4.22,  $t$ =-5.173,  $df$ =1,  $p$ =.000). Moreover, the perceived availability of services is highly correlated with the overall use of services ( $r$ =.427,  $n$ =297,  $p$ =.000).

*Predictors of Mental Health Service Utility*

All independent variables were considered potential predictors of variance in the average number of services consumers use. The model of factors that best predicts the greatest amount of variance in the number of services used included: perceived availability of services, participation in self-help groups, and residence in an urban county. Individual or demographic factors add very little to the predictive validity of this stepwise regression model. The  $R^2$  change between the model with the three systemic factors and the model including the six demographics factors was only .018. This model of factors is shown in Table 4.

**Table 4: Hierarchical Regression Analysis for Factors Predicting Mental Health Service Utilization (N=311)**

Factor	<u>SEB</u>	B
<b>Step 1</b>		
Urban/rural residence	.299	.268**
Service availability	.052	.369**
Participation in self-help	.276	.114*
<b>Step 2</b>		
Age	.180	-.048
Ethnicity	.148	-.073
Gender	.275	.013
Income	.274	-.071
Marital status	.102	.023
Level of education	.128	.086

**Note.**  $R^2=.255$  for Step 1;  $R^2=.018$  for Step 2;  $R^2=.273$  for overall model;  $F=11.576$ ,  $df=9$ ,  $p<.01$  for overall model.

\* $P<.05$  \*\* $p<.01$ .

## Discussion

Given the limitations of this study, caution should be used in drawing conclusions from the findings. For example, psychiatric diagnosis was excluded as a potential predictor of service use. On the advice of consumers involved in the study, the researchers excluded this information in order to access more information from consumers without being intrusive regarding their mental illness. In spite of these limitations, the model of factors that predicted the variance in the average number of services consumer use warrants discussion. In the model, systemic factors were clearly more predictive of service utilization than were demographic factors. If demographic factors were completely excluded from the model, there would be very little explanatory power lost. However, it should be strongly noted that the researchers categorized urban/rural residence as a systemic rather than a demographic factor in this model. Using urban residence as a proxy for service availability makes sense in light of strong evidence that mental health services are much more available and less stigmatized in urban areas (Hoyt et. al, 1997).

Specifically, the perception of consumers that services are available was the most significant factor that predicted service utilization. Even when the supply of mental health services is adequate to address consumer need, the perception of consumers that services are available is a critical factor in reassuring them that they can gain access to the mental health system. While the association may seem obvious, evidence of the finding has important policy implications, especially when one believes that perceptions form the basis for behavior. Urban residence was the second most significant factor that predicted service utilization. This finding supports the notion that residing in rural areas impacts service utility negatively. Findings in previous studies show differences in rural and urban consumers' service utilization as well (Mohatt, 1997; Ralph & Lambert, 2015). In this study, rural consumers also perceived that services were less available to them than did urban consumers.

There are simply fewer services and fewer mental health providers in rural areas than in urban areas. In addition, cultural characteristics of rural communities, such as the stigma members of community members often attach to mental illness, may prevent consumers from using services that are available. More important, primary care physicians provide nearly 60% of the mental health service in rural areas across the nation, though they have few opportunities to consult with trained mental health personnel in rural areas and often lack mental health training (Bushy, 1997; Mohatt & Kirwan, 1995). Participation in self-help services was the third most significant factor in the model that predicted utilization. This is consistent with previous findings that show self-help services in mental health are more prevalent now than ever before and that they result in positive outcomes for those who use them (Holter, et. al, 2004; Mowbray, Robinson, & Holter, 2002; Solomon, 2004).

Within the context of service and cost constraints associated with managed care in public mental health, self-help services essentially provide "spillover services." Spillover services are those that the formal, public sector has neither time nor money to provide, such as support groups (Segal, Hodges, & Hardiman, 2002).

In fact, some view self-help as an alternative to professional help in the traditional human services sector (Gidron & Hasenfeld, 1994). While self-help services can be viewed as a threat to the formal service system, they can also be seen as a resource. However, to be seen as a resource, self-help services must enhance rather than detract from the delivery of professional mental health services. For example, self-help groups may, in fact, encourage consumers to stay on medications and see their psychiatrists regularly.

### **Implications for Behavioral Health**

In this study, researchers explored which set of factors predicted significantly consumer use of mental health services: Systemic factors or individual/demographic factors. In the process, they identified a model of predictors that provides insights into why consumers use mental health services. Those insights have policy and practice implications for those who are concerned with meeting the service needs of individuals who experience mental health problems, as well as for researchers interested in testing a model of factors that predict service utilization.

#### *Policy*

Two policy areas need attention. Policy seems warranted that links participation in self-help groups with service utilization, especially in light of the possibility that participation in self-help groups may actually foster the consumer use of available professional, traditional services.

In addition, policy that has a focus on rural service provision is needed to enhance service utilization in rural areas, particularly in terms of training professionals to address the unique issues in rural areas. For example, stipends may be needed to initiate professional practice in designated rural shortage areas.

#### *Practice*

More immediately, practice seems needed that utilizes the “generalist practice” approach to mental health. Practitioners can enhance the perception that services are available by focusing on proactive efforts to make consumers aware of services via outreach attempts, publications, advertising, and coordination with other social service systems. Administrators and clinical workers alike can ensure that potential consumers are aware of services in their communities. It seems that when consumers are aware of services, they use them.

Mental health professionals in rural areas should make attempts to increase the knowledge of physicians about mental health screening, diagnosis, treatment, and continuing care. For example, mental health professionals who travel from one rural area to another might pair and team with primary care physicians whenever possible. Again, the use of the generalist model of practice allows for all professionals in rural areas to acquire the skills they need to take on multiple roles.

#### *Research*

Future research is needed that replicates this study taking into account its limitations. Despite the possibility that researchers may lose access to consumer information, the inclusion of diagnosis as a potential predictor of service utilization seems warranted if it can be accomplished without intrusion into privacy. Similarly, though a random sample of consumers is recommended for future studies, researchers in any region of the country will be challenged to accomplish this task due confidentiality issues in the mental health care service delivery system.

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