Religious Involvement and the Use of Mental Health Care

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Objectives. To examine the association between religious involvement and mental health care use by adults age 18 or older with mental health problems.

Methods. We used data from the 2001–2003 National Surveys on Drug Use and Health. We defined two subgroups with moderate ($n = 49,902$) and serious mental or emotional distress ($n = 14,548$). For each subgroup, we estimated a series of bivariate probit models of past year use of outpatient care and prescription medications using indicators of the frequency of religious service attendance and two measures of the strength and influence of religious beliefs as independent variables. Covariates included common Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, disorders symptoms, substance use and related disorders, self-rated health status, and sociodemographic characteristics.

Results. Among those with moderate distress, we found some evidence of a positive relationship between religious service attendance and outpatient mental health care use and of a negative relationship between the importance of religious beliefs and outpatient use. Among those with serious distress, use of outpatient care and medication was more strongly associated with service attendance and with the importance of religious beliefs. By contrast, we found a negative association between outpatient use and the influence of religious beliefs on decisions.

Conclusion. The positive relationship between religious service participation and service use for those with serious distress suggests that policy initiatives aimed at increasing the timely and appropriate use of mental health care may be able to build upon structures and referral processes that currently exist in many religious organizations.

Key Words. Religion, mental health care utilization

Three distinct concepts underlie the notion of religiosity or religious involvement: participation in organized ritual, contact with religious-based social support networks, and spirituality, which refers to the subjective aspects of religious feeling and experience (Hill and Pargament 2003). Religion plays an important role in American society. Nationally representative surveys show that over 80 percent of adults in the United States report a formal religious affiliation and

roughly 40 percent of adults report attending religious services once a month or more (General Social Survey 2002; Pew Research Center 2002).

A large majority of the numerous studies investigating the relationship between religious involvement and mental and emotional well-being have found a positive association (Koenig et al. 2001). Similarly, many studies have examined the relationship between religious involvement and mental health disorders, and the large majority of these have found that religious involvement is associated with a decreased likelihood of experiencing a mental health disorder. Further, studies of patients with diagnosed psychiatric disorders suggest that religious involvement and religious coping (e.g., prayer, reading inspirational literature) is associated with better mental health outcomes over time (Koenig et al. 1998; Bosworth et al. 2003; Mohr and Huguelet 2004).

Less is known about the relationship between religious involvement and the use of formal mental health care. We define formal treatment as care rendered by individuals trained to assess, refer, and treat people with mental or emotional problems and the settings in which these individuals practice.

Several studies suggest that although religious providers play a relatively small role in the mental health care delivery system, contact with religious providers represents a key entry point into the formal mental health care system (Narrow et al. 1993; Young et al. 2003; Wang et al. 2004). Epidemiologic data from the National Comorbidity Survey suggest that roughly a quarter of people turned to religious providers first for help with their mental or emotional problems (Wang et al. 2003). The same study shows that the role of religious providers depends on the presence and severity of mental health problems. Wang et al. (2003) that while those with serious mental illness (SMI) comprise 16.3 percent of patients reporting any use of religious providers in the past year, those with SMI comprise only 8.7 percent of those reporting religious providers as their sole source of care.

Models of mental health care use conceptualize treatment seeking and the setting in which care is received as an individual choice representing the most desirable option among a set of two or more feasible and/or acceptable alternatives (Frank and Kamlet 1989; Andersen 1995; Pescosolido et al. 1998; Harris and Edlund 2005). In this context, the range of treatment options

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available to an individual is seen as a function of economic resources, the availability of providers in geographic proximity, one's experiences with the treatment system, and external information obtained through formal sources or learning through the experiences and opinions of others. The relative desirability of alternative treatments is seen as a function of preferences and beliefs about the etiology of mental health problems, and various attributes of care, such as cost, convenience, effectiveness, and stigma associated with use.

In integrating religion into this framework, it is important to distinguish three aspects of religion: (1) strength of religious belief, (2) religious participation, and (3) spirituality. In our application, we assess belief strength using measures of the importance of religious beliefs in the respondent's life and the influence of religious beliefs on decision making. We measure religious participation by frequency with which individuals attend church. These measures are described in greater detail in the Methods section. Unfortunately, our data source lacks a distinct measure of spirituality.

When mental or emotional problems arise, some individuals may interpret these problems as spiritual, and turn to prayer, reading of scripture and other inspirational works, meditation, and other forms of religious coping rather than formal mental health treatment (Koenig et al. 2001). Further, those who see these problems as mental health or emotional issues may use religious coping in lieu of formal mental health treatment. Individuals who report that their religious beliefs are an important part of their lives may be more likely to see the problem and/or the solution as spiritual and utilize religious coping instead of formal mental health care. We hypothesized

- H1:** Greater importance of religious beliefs and greater influence of religious beliefs on decision making is associated with a lower probability of mental health care use, regardless of the severity of distress.

In some cases, religious participation, and all that it entails, may substitute for formal mental health care and reduce the likelihood of the use of such services (Koenig et al. 2001). In this light, religion often offers many of the elements felt to be important in individual and group therapies, such as empathy, advice, emotional support, help in problem solving, positive role models, opportunities for abreaction, and reality testing. These elements occur both in interactions with lay members and clerical counseling. Further, religion involves other factors that may improve mental health which are not traditionally available in formal mental health treatment, such as prayer, opportunities for social interaction and pleasurable activities, financial assistance, and a sense of belonging.

For several reasons, it is likely that the substitution of religious involvement for formal mental health care is most successful for those with moderate levels of distress, as opposed to those with high levels of distress. First, while many of the elements of mental health treatment are available in religious settings, those with more serious distress may require help from practitioners with specialized training. Second, psychotropic medications are an important component of care for many individuals with serious distress who may have a psychiatric disorder and are not available through religious involvement. Similarly, specialized psychotherapies, such as cognitive behavioral therapy, are typically delivered only in formal mental health care settings. Finally, the needs of individuals with serious distress may overwhelm the resources of clergy and lay members of social support networks centered around religious institutions and activities.

Religious involvement may also facilitate treatment initiation in some cases. Clergy may refer individuals to formal mental health treatment, and because clergy hold positions of authority and are often held in high esteem, their advice to seek formal treatment may be particularly influential. Members of religious-based social support networks may also encourage other members with mental or emotional problems to contact with clergy who may in turn refer to specialty providers.

Religious involvement may also expand the range of available formal mental health treatment options. For example, many denominations sponsor and financially support organizations that provide mental health counseling and other social services (e.g., Catholic Family Services, Jewish Social Services) where patients can pay according to an income-based fee schedule. Further, religious institutions may provide financial assistance so that members can receive treatment from mental health providers practicing in the community. Consistent with research suggesting that individuals with SMI rely less exclusively on religious providers compared with their less impaired counterparts (Wang et al. 2003), it is likely that clergy and lay members are more apt to refer those with more serious distress to formal mental health care, while providing clerical counseling and social support to those with less severe disorders. Based on the expectation that the severity of mental health problems moderates the relationship between religious participation and formal mental health care use, we hypothesized

H2: More frequent religious service attendance is associated with a *lower* probability of mental health care use among those with moderate distress.

- H3:** More frequent religious service attendance is associated with a *higher* probability of mental health care use among those with more serious distress.

In this paper, we used nationally representative data from the National Survey on Drug Use and Health to test hypotheses about the associations between formal mental health service use in the past year and measures of religious involvement. To our knowledge, this is the first study to address this topic. Moreover, the data we use to explore these associations are particularly well suited to this application as it allows us to stratify our analysis by level of mental or emotional distress.

METHODS

Data

We pooled data from the 2001 through 2003 National Surveys on Drug Use and Health (NSDUH, formerly the National Household Survey on Drug Abuse). The Substance Abuse and Mental Health Services Administration (SAMHSA) conducts the NSDUH survey annually for the primary purpose of estimating the prevalence of illicit drug, alcohol, and tobacco use in the United States. The NSDUH sample is drawn from a clustered, multistage sampling design, resulting in a nationally representative sample of noninstitutionalized civilians.

Interviews occur continuously throughout the calendar year and take approximately 1 hour to complete. To assure confidentiality, respondent names are not used; interviews are conducted in private; and sensitive questions about mental health problems and treatment are completed through audio-assisted computer interview technology (ACASI) where respondents key answers directly into a laptop computer in response to prerecorded instructions. Several modifications to the survey design were initiated in 2002. A \$30 incentive was paid for completed interviews; a program was initiated to monitor and improve interviewer quality; and the name of the survey was changed from the National Household Survey on Drug Abuse to the NSDUH. These changes may have combined to influence the reporting of mental health problems, service use, and religious involvement. We describe below how we tested for possible confounding because of the methodology changes and the relationship between religious involvement and mental health service use. Further information on survey methodology is provided in the 2002 NSDUH:

National Findings Report (Substance Abuse and Mental Health Services Administration 2003).

Analytic Sample

We conducted our analysis on two distinct subsamples in order to understand how the severity of mental health problems moderates the relationship between religious involvement and mental health care use. We formed our subgroups using a measure of past year psychological distress called the K6. The measure was developed for use in the National Health Interview Survey and subsequently included in the NSDUH (Kessler et al. 2003). The K6 includes six questions that measure how frequently respondents experience symptoms associated with highly prevalent mood and anxiety disorders (i.e., nervousness, hopelessness, restlessness, depressed, feeling worthless, feeling that everything is an effort) during the month in the past year when they were feeling their worst emotionally on a zero to four scale. Scale values resulting from summing the six items range from zero to 24. Respondents with K6 scores of 13 and higher comprise the first subgroup in our analysis. This group represents 8–9 percent of adults in the United States (Office of Applied Studies 2002) and are considered to have serious distress based on a clinical validation study (Kessler et al. 2003). Respondents with K6 scores of 4 to 12 comprise the second group and are considered to have experienced moderate psychological distress in the past year. Even though clinically defined mental illness is less likely among this group, they still experience a nontrivial probability of using formal treatment in the past year, with roughly 10 percent using outpatient mental health care and 14 percent using prescription medications for mental or emotional problems in the past year (see Table 1). Together these two groups represent just under one-half of adults in the United States.

Religious Involvement

Our analysis included three measures of religious involvement. First, we created indicator variables based on a measure of the past year frequency of religious service attendance for reasons other than for funerals and weddings (0 times, 1–2 times, 3–24 times, and 24 or more times). Next, we used two 4-point scales measuring the level of agreement (strongly disagree to strongly agree) with the following statements: (1) “Your religious beliefs are a very important part of your life” and (2) “Your religious beliefs influence how you make decisions in your life.”

Table 1: Religious Involvement and Probability of Using Outpatient Care and Prescription Medications in the Past Year by Psychological Distress

	Moderate Distress (Unweighted, n = 49,902)						Serious Distress (Unweighted, n = 14,548)							
	Religious Involvement	Outpatient Care		Prescription Medication		Religious Involvement	Outpatient Care		Prescription Medication					
		Row (%)	SE (%)	p-Value	Row (%)		SE (%)	p-Value	Row (%)	SE (%)	p-Value			
Overall	—	9.6	0.2	—	14.3	0.3	—	30.4	0.7	—	40.8	0.7	—	
Service attendance														
Never	34.0	9.3	0.4	.454	14.6	0.5	.851	40.8	27.3	1.0	<.001	37.6	1.1	<.001
1–2 times	22.8	9.5	0.5		14.4	0.5		24.4	28.7	1.3		38.8	1.4	
3–24 times	14.7	10.5	0.6		14.3	0.7		13.9	35.4	1.7		44.3	1.8	
25 or more times	28.6	9.6	0.5		14.0	0.6		21.0	35.0	1.6		47.0	1.4	
Importance of religious beliefs														
Strongly disagree	11.7	10.1	0.6	.362	14.9	0.8	.347	14.8	25.1	1.6	<.001	33.4	1.7	<.001
Disagree	11.5	10.5	0.7		13.2	0.7		12.5	25.4	1.4		33.7	1.6	
Agree	38.1	9.3	0.4		14.2	0.4		36.3	30.1	1.1		40.5	1.1	
Strongly agree	38.5	9.5	0.4		14.6	0.5		36.2	34.7	1.2		46.7	1.2	
Influence of religious beliefs on decisions														
Strongly disagree	10.9	9.9	0.6	.532	14.3	0.7	.160	13.8	27.5	1.7	0.002	34.0	1.7	<.001
Disagree	15.1	10.0	0.6		12.9	0.7		17.0	26.1	1.4		33.8	1.5	
Agree	41.3	9.2	0.4		14.6	0.4		38.9	31.4	1.1		42.9	1.1	
Strongly agree	32.4	9.8	0.4		14.7	0.5		30.1	32.9	1.3		45.2	1.3	

Note: Percentages weighted to represent the noninstitutionalized population of U.S. adults age 18 and older.

Use of Mental Health Care

Our analyses employed two measures of formal mental health care use. Respondents were considered to have used outpatient mental health care, if they reported using "treatment or counseling for problems with emotions, nerves, or mental health" (not including treatment for alcohol and drug use) in the past 12 months in one of the following settings: (1) an outpatient mental health clinic or center; (2) an office of a doctor, private therapist, psychologist, psychiatrist, social worker, or counselor; (3) a partial day hospital or a day treatment program. We excluded a small proportion of respondents who indicated using "other" sources of mental health care in order to reduce the potential for bias from care rendered in religious settings. Respondents were considered medication users if they reported taking "any prescription medication that was prescribed for you to treat a mental or emotional condition" in the past year. In the NSDUH, rates of prescription use are higher than rates of outpatient use (see Table 1). This is because respondents may not consider prescriptions written by general medical practitioners to be outpatient mental health care use as defined in the survey and because some individuals who use maintenance medications do not receive follow-up during the same past year recall period in which medication use is reported.

Other Covariates

In our multivariate analyses, we controlled for clinical and sociodemographic characteristics that have the potential to confound the relationship between religious involvement and mental health service use. Covariates included whether the respondent experienced symptoms of common psychiatric conditions (major depressive disorder, mania, generalized anxiety disorder, panic attacks, social phobia, agoraphobia, and posttraumatic stress disorder) in the 12 months prior to the interview. Questions were based on stem and summary symptom measures drawn from a truncated version of the Composite International Diagnostic Interview-Short Form (CIDI-SF) (Kendler et al. 1996; Kessler et al. 2003). We also included measures of 12-month alcohol and drug dependence. Respondents were considered to be substance dependent if they reported three or more of the seven criteria for drug or alcohol dependence as specified in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV). Sociodemographic covariates included age, gender, race and ethnicity (white, black, Hispanic, other), education, and reporting fair or poor health status. We also included indicators of survey year to control for changes over time in mental health service use.

Analytic Strategy

We first calculated descriptive statistics to illustrate the bivariate relationships between mental health service use and religious involvement, stratified by level of psychological distress. Next, we jointly estimated probit models of the relationship between religious involvement and the two measures of mental health service use in order to account for the positive correlation between outpatient care and medication use (Green 2003). Separate bivariate probit models were estimated for each of the two distress groups. We also estimated each model with and without covariates in order to show the extent to which clinical and sociodemographic characteristics confound bivariate relationships between religious involvement and mental health service use. Because it is difficult to interpret magnitude of probit model coefficients (Long 1997), we used the parameter estimates to calculate changes in the probability of mental health service use associated with changes in the level of religious involvement. Predicted changes (or “marginal effects”) are a function of both estimated coefficients and sample probabilities of service use conditional on covariate values. We derived these predictions by calculating average differences in the probability of service for different values of the religious involvement measures while holding other covariates fixed at their sample values. We calculated standard errors on these predictions using a bootstrap resampling procedure with 100 replications.

Exploratory analyses guided our choice of model selection in two important ways. First, we pooled annual cross-sections collected before and after the survey methodology change described above based on the results of adjusted-Wald tests. Second, we treated responses to the two belief strength questions as continuous measures after observing that the continuous measures yielded a substantive interpretation similar to that resulting when the belief strength measures were coded categorically.

All parameters, predictions, and standard errors were estimated using procedures that account for the NSDUH’s complex survey design (StataCorp 2003). We applied analytic weights reflecting selection probabilities and non-response to all analyses in order to generalize to the U.S. population.

Results

The descriptive results (see Table 1) show high levels of religious involvement in both distress subgroups with more than 20 percent of respondents attending religious services 24 or more times per year and roughly three-quarters in agreement about the importance of religious beliefs and the

influence of religious beliefs on decisions. For those with serious distress, there are highly significant differences in service use by the frequency of past year service attendance, the importance of religious beliefs, and the influence of religion on decisions, with all measures of religiosity being positively associated with outpatient mental health care and prescription medication. On the other hand, there are no such differences for those with moderate distress.

The estimated coefficients from our bivariate probit models (not shown) generally mirrored our descriptive results. In the case of those with moderate distress, the coefficients suggested negative but statistically insignificant associations between the importance of religious beliefs and both types of service use and between the most frequent religious attendance category and prescription medication use. All other associations were positive and insignificant in the presence of covariates. By contrast, for the group with serious distress, our results showed consistently positive associations between service use and measures of service attendance, belief strength, and religious-based social support that were robust to covariates.

Table 2 provides predictions about the changes in mental health care use associated with changes in religious involvement implied by the estimated bivariate probit coefficients from models that include clinical and sociodemographic covariates. The left-most panel of results suggests that for people with moderate distress, increasing past year religious attendance from never to 3–24 times per year would be associated a 1.2 percentage point increase in the probability ($p < .05$) of using outpatient care from 8.3 to 9.5 percent. There was no significant change in the use of prescription medications associated with a similar a change in attendance for this group. Also for those with moderate distress, increasing religious attendance from never to 25 or more times per year was not associated with any statistically significant change in either measure of mental health care use.

Compared with those with moderate distress, attending religious services was associated with substantially larger changes in the likelihood of using both outpatient care and prescription medication for those with serious distress. Increasing attendance from never to 3–24 times was associated with a 5.7 point increase ($p < .01$) in the probability of outpatient use; increasing attendance from never to 25 or more times was associated with a similar 5.4 point increase ($p < .01$) in outpatient use. Likewise, increasing attendance from never to 3–24 times was associated with a 3.7 point increase ($p < .05$) in the probability of medication use; and increasing attendance from never to 25 or more times was associated with a similar 4.6 point increase ($p < .01$) in

Table 2: Predicted Effects of Changes in Reported Religious Involvement on the Probability of Using Paid Mental Health Care in the Past Year by Level of Psychological Distress

	Attendance at Religious Services: Never to 3–24 Times per Year			Attendance at Religious Services: Never to 25 Times or More per Year			My Religious Beliefs Are Important to Me: Strongly Disagree to Strongly Agree			My Religious Beliefs Influence My Decisions: Strongly Disagree to Strongly Agree			My Religious Beliefs Are Important to Me: Strongly Disagree to Strongly Agree and My Religious Beliefs Influence My Decisions: Strongly Disagree to Strongly Agree		
	Moderate Distress		Serious Distress	Moderate Distress		Serious Distress	Moderate Distress		Serious Distress	Moderate Distress		Serious Distress	Moderate Distress		Serious Distress
Outpatient care															
Baseline probability	8.3	26.2		8.3	26.2		9.3	21.8		8.2	30.5		9.0	19.4	
Δ%	1.2*	5.7**		0.4	5.4**		−1.2**	8.8**		0.5	−5.8**		−0.7	2.8	
SE(Δ%)	(0.6)	(1.9)		(0.5)	(1.8)		(1.0)	(2.3)		(0.9)	(2.6)		(0.7)	(1.7)	
Prescription medication															
Baseline probability	11.4	33.3		11.4	33.3		11.9	30.0		11.1	35.1		11.6	24.1	
Δ%	0.0	3.7*		−1.0	4.6**		−0.8	7.0**		0.5	−2.2		−0.3	4.6**	
SE(Δ%)	(0.7)	(1.7)		(0.6)	(1.8)		(0.9)	(2.5)		(1.0)	(3.0)		(0.9)	(1.9)	

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

medication use. This pattern suggests that it is any attendance, rather than the frequency of attendance, that is associated with treatment use.

Moving from strong disagreement to strong agreement about the importance of religious beliefs was associated with a 1.2 percentage point decline in ($p < .01$) in outpatient use and no significant change in medication use for those with moderate distress. For those with serious distress, stronger agreement about the importance of beliefs was associated with a 8.8 percentage point increase ($p < .01$) in outpatient use and a 7.0 percentage point increase ($p < .01$) in medication use. Stronger agreement about the influence of religious beliefs on decisions was not significantly associated with either outpatient or medication use for those with moderate distress. Stronger agreement about the influence of beliefs was associated with a 5.8 percentage point decline in ($p < .01$) outpatient use and with no significant change in medication use for those with serious distress.

Because each belief measure was associated with changes in the probability of service use that go in both positive and negative directions, strong agreement on both measures had the combined (and approximately additive) effect of reducing the magnitude of predicted change in both distress groups. For those with moderate distress, stronger agreement on both belief measures was not associated with statistically significant changes in either measure of service use. For those with serious distress, stronger agreement on both measures was associated with a 4.6 percentage point increase ($p < .01$) in the probability of medication use. The corresponding change in outpatient care was not statistically significant.

DISCUSSION

To our knowledge this is the first study to investigate the relationship between religious involvement and mental health care use. Overall, we found mixed support for our hypotheses. We found strong support for our hypothesis that religious service attendance (irrespective of frequency) is positively related to the use of mental health services among those with serious distress. This positive association is consistent with data suggesting that individuals with SMI are relatively less likely to see religious providers exclusively compared with their healthier counterparts (Wang et al. 2003). We also found no evidence that attendance was associated with lower use among those with moderate distress as we had expected. Further, we hypothesized that our two religious belief measures would be negatively associated with use regardless of the

severity of mental health problems. Contrary to our expectations, we found the results varied across the two measures and by distress severity. Among those with serious distress, those who reported that religious beliefs were an important part of their lives were significantly more likely to use mental health care, while those who reported that their religious beliefs influenced their decision making were significantly less likely to use mental health care. At the same time, we observed weaker relationships of the opposite sign for those with moderate distress.

Our results should be considered in the context of several limitations. First, our cross-sectional data limit our ability to inform causality. For example, it could be the case that the use of mental health services influences religious involvement to the extent that the formal providers encourage individuals with more severe problems to participate in religious activities. However, this is unlikely to be a significant source of bias, because patterns of religious involvement are likely to be established before the initiation of mental health care use. At the same time, religious involvement is likely to be a more stable trait compared with mental health service use, which is often episodic and of short duration.

Second, the NSDUH does not measure denomination and other relevant information about religious beliefs that would help us to understand whether seeking mental health care is consistent with or contrary to religious doctrine. We suspect that confounding from unobserved denomination may help to explain the differential relationship we observed between service use and the two belief strength measures.

Third, the NSDUH does not include a direct measure of contact with clergy for counseling or other reasons. Such a measure would allow us to assess whether religious counseling is positively or negatively associated with formal mental health care. Although we tried to minimize this potential source of bias, some individuals may have misinterpreted the question regarding formal mental health care and included clerical counseling in their response. In this respect, the medication use measure is “cleaner” because people cannot receive prescription medications without being in contact with the formal treatment system, and we note that the results are generally consistent across the two measures. We also note that future waves of the NSDUH will contain direct measures of counseling received from religious providers and will be more informative in this respect.

Fourth, both sets of religious involvement measures and mental health service use measures may suffer from social response bias. Such an effect would lead individuals to over report religious involvement and under report

use of mental health care. While it is impossible to definitively state how such a tendency would affect our results, we can speculate. For example, we might expect that individuals who overstate their service attendance for social desirability reasons would also understate their use of formal mental health services. If true, such bias would likely lead to a negative correlation between religious attendance and mental health care utilization and would suggest that our results understate the magnitude of the positive relationship between religious attendance and mental health services use.

Finally, the measures of religious belief in the NSUDH have not been validated and, to our knowledge, have not been used in other studies. Further, neither of the two belief measures taps the notion of spirituality, a concept distinct from religiosity and religious participation in the religion and health literature, which may influence attitudes and beliefs about mental health care. Thus, the development of short scales for the purpose of studying the relationship between religious involvement and patterns of mental health care use should be a priority for investigators interesting in pursuing work in this area. An instrument developed by Idler and others (2003) intended to measure the multiple dimensions in religion and spirituality in population-based surveys for the more general purpose of health research may be a fruitful place to start.

Despite these limitations, we believe our study fills an important gap in understanding the relationship between religious involvement and mental health care use. The positive relationship between religious service participation and service use for those with serious distress suggests that policy initiatives aimed at increasing the timely and appropriate use of mental health care may be able to build upon structures and referral processes that currently exist in many religious organizations.

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