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Prevalence and Predictors of Substance Use Support Programming Among U.S. Religious Congregations

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Introduction

Approximately 40 million people in the US have a substance use (i.e., alcohol and other drugs) disorder (Substance Abuse and Mental Health Services Administration [SAMHSA], 2021). From 2019 to 2020, drug overdose deaths increased by 30 percent and nearly 92,000 persons in the U.S. died from drug-involved overdose in 2020 (Centers for Disease Control and Prevention [CDC], 2021). Despite the high level of need, only about 1 percent of those with a substance use disorder obtain treatment including inpatient or outpatient care at a hospital, rehabilitation facility, mental health center, emergency room, private doctor's office, prison or jail, or self-help group (i.e., 12-step support group) (SAMHSA, 2021). This substantial unmet need is due to lack of affordable treatment (because of high cost and lack of health insurance or coverage), but also the unavailability of high-quality treatment services (Kerridge et al., 2017; Possemato et al., 2016; Rapp et al., 2006; Schonbrun, Strong, Wetle, & Stuart, 2011; Tsogia, 2001). Moreover, even when individuals do obtain services for substance use problems, staying engaged and completing treatment can be a formidable challenge (Saloner & Cook, 2013; Sprague Martinez, Walter, Acevedo, Lopez, & Lundgren, 2018).

Religious congregations may be particularly well-positioned to help address these documented unmet needs for substance use problems (Fulton, 2020). In many communities, congregations are often the first-place people turn to for support for their substance use problems (Grim & Grim, 2019; White, Kelly, & Roth, 2012; Wong, Derose, Litt, & Miles, 2018). Congregations are particularly effective in community mobilization, responding swiftly to crises, and delivering health and social services (Bopp, Peterson, & Webb, 2012; Walker et al., 2015; Gazley, Fulton, Zebrowski, & King, 2022; Whisenant, Cortes,

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Declaration of interests

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& Hill, 2014). In fact, some congregations provide free or low-cost services related to addressing substance use problems (Hidalgo et al., 2019). Further, once a person has entered treatment, being connected to a religious congregation has been linked to several improved outcomes, including better treatment retention, longer durations of abstinence, and increased self-efficacy (Brown, Tonigan, Pavlik, Kosten, & Volk, 2013; Califano et al., 2001; Chu & Sung, 2009; Petry, Lewis, & Østvik-White, 2008; Stokes, Schultz, & Alpaslan, 2018).

Prior research on congregation-based programming support for substance use is limited and most studies have focused on congregations hosting 12-step support groups such as Alcoholics Anonymous (AA) or Narcotics Anonymous (NA) (Grim & Grim, 2019; Hidalgo et al., 2019; Shields, Broome, Delany, Fletcher, & Flynn, 2007). These 12-step support groups often just use the congregation's space and have no religious oversight by the congregation and the programs offered may be spiritual but not religious (Brown Whitney, Schneider, & Vega, 2006; Grim & Grim, 2019). A spiritual approach encompasses views of higher purpose, meaning, and value—the reliance on a higher power to maintain sobriety (Brown Whitney, Schneider, & Vega, 2006). Religious recovery programs promote a strong connection within a specific theological orientation (Brown Whitney, Schneider, & Vega, 2006). Evidence suggests that both spiritual and religious self-help groups (e.g., AA, NA) are associated with positive long-term recovery outcomes such as greater likelihood of abstinence, especially when used in addition to formal treatment (Laudet, Savage, & Mahmood, 2002; Moos & Moos, 2005, 2006). In 2020, a Cochrane Systematic Review found that 12-step programs, in particular AA, are at least as effective as other well-established treatments for alcohol-related outcomes such as drinking consequences, drinking intensity, and addiction severity (Kelly, Humphreys, & Ferri 2020). Further, a study, using data from AA indicated that congregations save the government \$316.6 billion by hosting recovery support groups (Grim & Grim, 2019). Overall, 12-step support programs are highly desirable because they are widespread, readily available, and do not charge individuals for participating (Donovan, Ingalsbe, Benbow & Daley 2013).

While few studies have examined programs that congregations developed with an overt religious focus, Hidalgo et. al (2019) explored four examples in depth and found that religion added value and meaning—the connection to a congregation provided a community of support, and external organizations provided clients or services for the congregational programs. However, this study did not assess program effectiveness. This limited research reveals the multiple ways congregations may play a role in supporting individuals who struggle with substance use. Yet, few studies have examined the extent of congregations' involvement in providing substance use support programming.

In addition, little is known about the factors associated with congregations providing support for substance use problems. Whether a congregation provides various health and social services may be influenced by internal and external factors (Fulton, 2016a; Trinitapoli, Ellison, & Boardman, 2009). Internal factors that have been associated with a congregation's likelihood of providing health and social service programming include member composition (e.g. unemployment, education), congregational characteristics (e.g. religious tradition), congregational resources (e.g. number of members, employed staff) and involvement with health and human services (Frenk, 2014; Fulton, 2016b; Munday,

King, & Fulton, 2019; Trinitapoli et al., 2009; Williams et al., 2015; Wong, Fulton, & Derose, 2017). External factors that have been positively associated with congregation-based health and social service programming include congregations' external engagement (e.g., conducting community needs assessment) and community characteristics (e.g., poverty level) (Trinitapoli, Ellison, & Boardman, 2009; Wong, Fulton, & Derose, 2017). Knowing what types of congregations may be inclined toward providing substance use support programming can be pivotal in fostering potential collaborations between congregations, health providers, and other informal sources of care to reach underserved populations.

There are few studies using nationally representative samples to assess the prevalence of and factors associated with congregations providing substance use support programming (Frenk, 2014; Wong, Fulton, & Derose, 2017). One of the first studies used the 2006 wave of the National Congregation Study (NCS) to examine the prevalence and predictors of congregation-based social services that assist people with mental disorders and found that 8% of congregations provided such services and the only significant predictor was a congregation's religious affiliation and tradition (Frenk, 2014). However, that study coded open-ended responses for support provided for mental disorders classified by Axis I (i.e., clinical disorders) and Axis II (i.e., personality disorders and mental retardation) using the Diagnostic and Statistical Manual Mental Disorders, IV-TR and did not report what percentage of congregations were involved in providing support for substance use related disorders. The subsequent 2012 wave of the NCS defined substance use disorder and mental illness separately by using separate questions about congregational support programming for "people struggling with drug or alcohol abuse" and for "people with mental illness" (Chaves, Anderson, & Eagle, 2014). A more recent study using 2012 NCS data suggest a growing proportion of congregations are providing support for "people with mental illness," but it remains unknown to what extent congregations are involved in providing support specifically for substance use problems and what factors are associated with providing such services (Wong, Fulton, & Derose, 2017).

This study aims to assess the prevalence of and factors associated with congregation-based support services for substance use problems. We analyzed data from the 2012 National Congregations Study, a nationally representative survey of religious congregations in the United States (U.S.). Our study investigates the extent of congregations' involvement in substance use programming and identifies internal and external factors associated with providing such support. The analysis advances general understanding of congregational involvement in social service provision and identifies specific factors associated with congregations providing substance use support that can inform potential collaborations between congregations and professionals interested in addressing community substance use problems (see Figure 1 for a list of congregational factors associated with providing substance use support programming).

Methods

Data source and study population

To identify factors associated with congregations offering substance use support programming, this study analyzed data from the National Congregations Study (NCS)

(Chaves, Anderson, & Eagle, 2014). The NCS is a nationally representative, repeated cross-sectional survey of religious congregations in the U.S. that was initiated in 1998 and administered in two subsequent waves in 2006 and 2012. Each of the three waves of the NCS used a sample derived from its respective 1998, 2006, or 2012 General Social Survey (GSS), a nationally representative survey of U.S. adults. GSS respondents who reported attending religious services at least once a year were asked to provide the names of their congregations. The congregations named by the respondents were then used to establish a representative sample of U.S. congregations (Adler Jr, Fulton, & Hoegeman, 2020). We analyzed data from the 2012 NCS, which was the first wave to ask congregations specifically about offering support for people struggling with drug or alcohol use. Key informants at each congregation (e.g., clergy, staff, or leader) were interviewed in person or by phone on a wide range of topics including congregational member characteristics, leadership, programming, and resources. A total of 1,331 congregations participated in the 2012 NCS (73% response rate).

Measures

Our study's dependent variable, whether the congregation offers a substance use support program, was measured using the following item: "Within the past 12 months, have there been any groups or meetings, or classes or events specifically focused on the following purposes or activities?" Following this question was a list of 26 distinct groups or activities that spanned a wide range of areas (e.g., "To discuss politics?" and "To discuss parenting issues?"). Offering substance use support programming was assessed using the dichotomous item: "Support for people struggling with drug or alcohol abuse?" Response options were *yes* (coded 1) or *no* (coded 0).

The independent variables include measures of congregations' internal and external factors expected to be associated with providing substance use support programming based on prior research that examines factors associated with congregational provision of health and social services (Fulton, 2016a, 2016b; Trinitapoli, Ellison, & Boardman, 2009; M. V. Williams et al., 2015; Wong, Fulton, & Derose, 2017). The internal factors include variables related to member composition, head clergy characteristics, congregational characteristics, congregational resources, and involvement with health and social services. For our study, *member composition* was characterized along four dimensions: employment status (has members who are unemployed), race/ethnicity (80 percent or more of members are white), age (50 percent or more of members are less than 60 years old), and level of education (50 percent or more of members have a four-year college degree or more).¹ *Head clergy characteristics* included the clergy's gender, country of origin, and level of education. *Congregational characteristics* included the congregation's religious tradition (coded 1 for Conservative Protestant and 0 for Roman Catholic, Mainline Protestant, Black Protestant, and Non-Christian), practices (speaking in tongues is practiced; *yes*=1; *no*=0), and view of the Bible (considers the Bible to be literal and inerrant; *yes*=1; *no*=0). *Congregational resources* were measured by the congregation's size (number of regular adult participants),

¹The thresholds we used to construct the dichotomous member composition variables correspond with natural cutpoints in the data and they are consistent with previous research on congregations (Dougherty et al., 2020; Holleman et al., 2022; Ferguson 2020). Additional analyses that shift the percentage thresholds for these variables do not generate significantly different outcomes

whether the congregation employs staff for social service programs (at least one staff member spent more than 25% of work time on social service programs, *yes*=1; *no*=0), and whether the congregation owns its building (*yes*=1; *no*=0). *Involvement with health and human services* was measured with two dichotomous items that indicate whether the congregation provides health-focused education programs (*yes*=1; *no*=0) and whether the congregation established a nonprofit to conduct human service projects (*yes*=1; *no*=0).

The external factors include variables related to the congregation's external engagement and community characteristics. *External engagement* is measured with two dichotomous items that indicate whether the congregation assesses the needs of its community (*yes*=1; *no*=0) and had a social service representative as a visiting speaker (*yes*=1; *no*=0). *Community characteristics* were measured with four dichotomous items (*yes*=1; *no*=0) related to the racial-ethnic composition of the congregation's surrounding neighborhood (census tract is at least 80% African American), the socioeconomic composition of the congregation's surrounding neighborhood (census tract has at least 30% of the households living below the official poverty level), the congregation's community context (census tract is predominantly urban), and geographic region (located in the Northeast—i.e., New England and Middle Atlantic).

Analysis

Missing values for the independent variables were multiply imputed using the Imputation by Chained Equations (ICE) package in Stata 16.0, which uses the distribution of the observed data to estimate a set of plausible values for the missing data (Royston, 2009). Ten complete imputed datasets were created and pooled using Rubin combination rules (Rubin, 1987). Item nonresponse diagnostics (that is, stabilization plots) indicated that the mean and variance estimates for the variables with missing values had stabilized and thus did not contain significant nonresponse bias (Fulton et al., 2022; Fulton, 2018). Congregations that had a missing value for the item indicating whether it offers substance use support programming ($n = 3$) were not included in the analyses. The analytic dataset contains 1,328 congregations, 99.8% of congregations in the final sample. We performed all analyses using Stata version 16.0 (StataCorp LP, College Station, TX).

To identify the factors associated with congregations providing substance use support programming, we first conducted bivariate analyses on each of the variables measuring internal and external factors. We then performed a multivariable logistic regression incorporating all of the variables. All analyses were weighted to the congregational attendee levels, which is considered the appropriate method for studies aimed at assessing the social impact of congregational services (Fulton, 2011; M. V. Williams, Derose, Haas, Ann Griffin, & Fulton, 2019).²

²The NCS constructed two types of weights that enable researchers to analyze the data from either the congregation level or attendee level. Deciding which level to analyze depends on the focus of the study. The congregation level is more appropriate for studies that assess trends among congregations (e.g., Do congregations located in urban areas tend to be more liberal?). That type of research benefits from using weights that treat each congregation as one unit regardless of its size. On the other hand, the attendee level is more appropriate for studies concerned with the social impact of congregational activity. That type of research benefits from using weights that treat congregations in proportion to their size.

Results

Table 1 presents the descriptive statistics at both the congregation and attendee level as well as the percentage of missing values for the variables included in the study.³ Approximately one-third of congregations in the U.S. provide substance use support programming and roughly one-half of all congregation attendees belong to a congregation that provides such programming. This finding indicates that larger congregations are more likely to provide this type of program. The member composition of congregations in the U.S. exhibit meaningful variation along each of the dimensions measured. A large majority of U.S. congregations are led by men and comprise people born in the U.S. with some college education. Although only 5.5 percent of U.S. congregations are Catholic, over one-quarter of congregation attenders attend a Catholic congregation. Over 75 percent of congregations consider the Bible to be literal and inerrant, and over two-thirds of congregation attenders attend a congregation that holds such beliefs. Smaller percentages of congregations indicate being externally engaged and involved with health and human services.

Table 2 displays the results of the multivariable analyses.⁴ The multivariable analysis, which includes all of the independent variables, indicates that several internal and external factors are significantly associated with a congregation providing substance use support programming.⁵ Congregations with members who are unemployed (odds ratio [OR]=1.60 [1.07 – 2.39]; $p<.05$), and whose members are younger in age (OR=1.41 [1.04 – 1.92]; $p<.05$) are more likely to offer substance use support programming.⁶ We find significant associations for one of the clergy characteristics indicators and two of the congregational characteristic's indicators. Offering substance use support programming is positively associated with having clergy who were born in the U.S. (OR=1.61 [1.10 – 2.35]; $p<.05$), conservative Protestant religious affiliation (OR=1.56 [1.14 – 2.13]; $p<.01$) and congregational practices involving speaking in tongues (OR=1.86 [1.34 – 2.59]; $p<.001$).⁷ With respect to congregational resources, congregations with more participants (OR=1.25 [1.13 – 1.39]; $p<.001$) and with staff dedicated to providing social services (OR=1.71 [1.23 – 2.38]; $p<.01$) have an increased odds of providing substance use support programming. Involvement with health and human services is also significantly associated with offering substance use support programming. Congregations that provide health-focused education programs (OR=1.46 [1.13 – 1.89]; $p<.01$) and those that established a nonprofit to conduct human service projects (OR=2.00 [1.31 – 3.03]; $p<.01$) are more likely to offer substance use support programming.

³In the Appendix, Table A1 displays all of the variables listed in Table 1 and their bivariate association with providing substance use support programming.

⁴In the Appendix, Table A2 displays the results of several partial logistic regressions that analyze the relationships of each group of internal and external factors. The models' Pseudo R^2 values indicate that the multivariable model in Table 2 provides the best fit.

⁵Additional analyses (not displayed) indicate that the cases with imputed values do not significantly affect the results of the multivariable analysis.

⁶The diagnostic tests recommended by Winship and Radbill (1994) indicate no misspecification related to the probability-proportional-to-size feature of the sample; thus, we present the results from analyzing unweighted data.

⁷An additional analysis includes religious tradition as a categorical variable and makes conservative Protestant the reference category. The results (not displayed) indicate that each of the religious traditions, compared to conservative Protestant, are less likely to provide substance use support programming.

Both of the external engagement indicators were significantly associated with offering substance use support programming. Congregations that assess the needs of its community (OR=2.28 [1.75 – 2.96]; $p<.001$) and those that had a social service representative as a visiting speaker (OR=1.30 [1.00 – 1.69]; $p<.05$) are significantly more likely to offer substance use support programming. Our analysis indicates that none of characteristics of the congregation's surrounding community or geographic location are significantly associated with the congregation having substance use support programming.

Discussion

This study is among the first to examine the extent to which congregations are involved in providing substance use support programming specifically using a nationally representative sample of U.S. congregations. In 2012, over one-third of U.S. congregations reported providing substance use support programming and half of congregational attendees were in a congregation that provided such programming, which is almost five times greater than the estimate derived by a prior study that used the 2006 NCS (Frenk, 2014). These findings suggest that a greater proportion of congregations are involved in providing programming support for substance use in comparison to other types of social services such as programming for mental illness, for which only about a quarter of congregations reported providing such support (Wong, Fulton, & Derose, 2017). Nonetheless, our study and prior research highlight congregations' role in meeting the mental, emotional, physical, and spiritual needs of communities (Baruth, Bopp, Webb, & Peterson, 2015; DeHaven, Hunter, Wilder, Walton, & Berry, 2004; Webb, Bopp, & Fallon, 2013); congregations are one of the few institutions that provides this kind of holistic care (Campbell et al., 2007; Haughton et al., 2020). In addition, the vast majority of these programs are financially supported by contributions made by members of the congregation. Less than 2% of all congregations receive funding from the government (Fulton & King, 2018), which suggests that these congregational services supplement rather than supplant government-funded services (Flórez, Fulton, & Derose, 2019).

We found a host of internal and external factors associated with substance use programming. Among internal factors, our finding that congregations with more unemployed members were more likely to provide substance use support programming could be reflective of congregations' responsiveness to the needs present within their communities given that substance use problems are more prevalent among unemployed populations (Cerdá, Johnson-Lawrence, & Galea, 2011; Lowry, Kann, Collins, & Kolbe, 1996). Our finding that congregations with younger members are more likely to offer substance use support programming could be due to younger adults having less stigmatizing views of substance use (Adlaf, Hamilton, Wu, & Noh, 2009), which may foster a more supportive environment for people with substance use problems. An alternate explanation could be that because younger adults suffer from more substance use problems (Lipari & Van Horn, 2017), congregations may be responding to a greater need to address substance use problems.

Among clergy characteristics, being U.S. born was the only significant factor. The role of the head clergy is pivotal in the development and operation of congregation-based services and programs (Bohnert et al., 2010; Hatchett, Holmes, Bryan-Young, & Patterson, 2011;

Wang, Berglund, & Kessler, 2003). Moreover, clergy are respected and trusted gatekeepers in their congregations (Baruth, Bopp, Webb, & Peterson, 2015) and are often the first point of contact for help with substance use problems (Bohnert et al., 2010). Therefore, it is vital to understand why clergy nativity is associated with substance use programming. While nativity among clergy has been understudied in this context, studies among immigrant populations in the U.S. suggest that less acculturated individuals (foreign born, limited English proficiency) have greater stigma towards substance use disorders (Flórez et al., 2015; Zemore, Mulia, Ye, Borges, & Greenfield, 2009). U.S. born clergy may hold less stigmatizing views towards substance use (Borges et al., 2012) and thus may be more inclined to provide substance use support programming compared to foreign-born clergy.

Compared to all other religious traditions, conservative Protestant congregations were more likely to provide substance use programming. Although congregations that consider the Bible to be literal and inerrant were no more likely to provide substance use support, congregations that engage in the practice of speaking in tongues were more likely to provide substance use support. These results suggest that the significance of conservative Protestant congregations is not driven by their fundamentalist characteristics (i.e., biblical literalism), but rather by their charismatic characteristics (i.e., being filled with the Holy Spirit). In Pentecostal congregations, speaking in tongues is considered a holy, mystical ability that can aid in healing problems such as mental health disorders and substance use (Hardwick, 2013). The association between this practice and the provision of substance use programming may reflect more spiritually based support. However, there may be other explanations for this relationship. It could be that congregations that practice speaking in tongues have more traditional views. For example, Pentecostal congregations have more conservative values regarding the use of substances (it is considered a “sin”) (Moyers, 1994) and thus more Pentecostal churches may offer programs. Another possible explanation is that in Pentecostal worship services, there is a strong emphasis on an emotional “release,” often accompanied by speaking in tongues, and some evidence suggests that this may draw many people with substance use problems to Pentecostalism (Belcher & Cascio, 2001; Yong, 1998). Future research is needed to obtain a better understanding of the variable’s impact and understand the types of substance use programming provided by congregations as well as the associations with other clergy and congregational characteristics to better inform potential collaborations between congregations and the substance use service sector.

Congregational resources such as the number of participants and staff as well as providing health-focused education programs and having a nonprofit were positively associated with offering substance programming, consistent with prior research showing a connection between congregational resources and the provision of health-related programs (Fulton, 2011; Haughton et al., 2020; Trinitapoli, Ellison, & Boardman, 2009; Wong, Fulton, & Derose, 2017). Larger congregations and more paid staff have been associated with having congregational health or wellness programs and community outreach programs (Hatchett, Holmes, Bryan-Young, & Patterson, 2011; Maxwell et al., 2019; Tagai et al., 2018). Congregations without such resources may need to establish partnerships with outside health organizations that can provide the resources to support the implementation of health programs (Harper, Kuperminc, Weaver, Emshoff, & Erickson, 2014; Haughton et al., 2020).

External factors such as external engagement (i.e., assessing community needs and having a social service speaker) were associated with congregation sponsorship of substance use programming; however, surrounding community characteristics were not. Previous research indicates that congregations that are connected and engaged with the needs of their community are more likely to provide health programming for their parishioners (Trinitapoli, Ellison, & Boardman, 2009). Congregations are established institutions in the community and have built-in social support, even for individuals who do not regularly attend services at the congregations (Anshel & Smith, 2014; Baruth, Bopp, Webb, & Peterson, 2015; Eng, Hatch, & Callan, 1985; Maton, 1988). Finally, the characteristics of the congregation's surrounding community such as the racial/ethnic composition, poverty level, and urban vs. rural setting were unrelated to having programming for individuals with substance use problems.

Identifying the factors associated with congregational substance use programming can indicate the types of congregations that likely provide such services. Knowing these types can facilitate partnerships between congregations and external public health organizations and providers interested in addressing substance use problems, particularly among people who are not receiving treatment. Most congregations that provide social services do so in collaboration with external organizations, that can provide additional resources such as expert knowledge, best practices, training, referrals, and funding (Cnaan, Sinha, & McGrew, 2004; Fulton, 2016a; Williams et al., 2015). Identifying factors associated with substance use support programming may also help to enable congregations to provide support services (e.g., education among non-U.S. born clergy to raise awareness about substance use issues in their communities).

Limitations

Findings of the current study should be interpreted in the context of the following limitations. Although the 2012 NCS included a question about providing support for substance use separately from mental health programming, it may be important to further distinguish between alcohol and other substances, especially because there may be distinct treatment needs and unique ways of addressing each substance. The NCS does not provide information about the types of substance use programs congregations offered (e.g., 12-step Alcoholics Anonymous, Narcotics Anonymous, outpatient treatment programs, inpatient treatment programs, prayer groups, support groups, and others) or their effectiveness. Congregation-based programs for substance use problems have received little research attention with respect to assessing their effectiveness and quality (Brown, Tonigan, Pavl, Kosten, & Volk, 2013; Califano et al., 2001; Chu & Sung, 2009; Petry, Lewis, & Østvik-White, 2008; Stokes, Schultz, & Alpaslan, 2018). The few effectiveness studies that have been conducted are inconclusive, lack supporting information on validity and reliability of measures, and fail to explore how programmatic religion influence client outcomes (Davis, 2014; Zanis & Cnaan, 2006). Due to the large unmet need for substance use treatment in the US and limited research on congregation-based programming support for substance use problems, there is a need to better understand the extent of congregational programming and the types of congregations involved in providing such services. For instance, future research needs to distinguish between congregations that offer substance use programming

and those that offer only a space to outside groups and identify who is being served by these programs (e.g., congregation members or outside community). This distinction will help to better understand the potential avenues for partnering with congregations to address unmet substance use needs. Future studies need to examine the effectiveness (using validated measures) of the substance support services provided by congregations.

Conclusions

Congregations can be the first point of contact for people seeking help for substance use problems, thus, it is important to understand the extent to which congregations overall provide support and facilitate connections to formal treatment for substance use problems (Grim & Grim, 2019; SAMHSA, 2018). Future research is needed to identify the specific ways that congregations address substance use programming, their level of involvement, and who is being served by these programs, as well as potential outcomes of such programs (Williams, 2016). Evaluating the nature, quality and effectiveness of these programs being offered can help new policies and programs fill any gaps in service (e.g., support congregations to deliver screening, preventive care or evidenced-based programs). For example, in our study, congregations with younger members were more likely to provide substance use support programming, which may be an opportunity to also offer preventive initiatives to meet the needs of the younger populations. Our study provides initial information about the types of congregations involved in providing such services, which lays the foundation for future research.

Our findings also have implications for policies aimed at promoting faith-based and community initiatives around addressing substance use issues. For example, as noted above, congregational substance use programs likely supplement rather than replace government-funded services, similar to a previous in-depth exploration of congregational health programs that suggested most tend to be episodic, small in scale, and local in scope, although congregations are distinctive in being able to identify unmet local needs and network in productive ways (Werber, Mendel, & Derose 2014). Therefore, partnerships among congregations, substance use professionals and academic institutions, or public health researchers are likely needed to address unmet substance use needs (Maxwell et al., 2019). Federal initiatives such as the Faith-based and Community Initiatives, particularly as implemented by SAMHSA, are important for promoting such partnerships, as they provide faith-based partners with block and formula grant funding and training programs and curricula (SAMHSA, 2018). Our findings suggest that certain types of congregations (e.g., those with foreign-born clergy, smaller congregations with fewer resources, etc.) may need additional types of training and support from such initiatives. For example, fostering community collaborations, specifically among congregations with fewer resources has been found as important for successful implementation and sustainment of health programming (Haughton et al., 2020). Finally, evaluation of the nature, quality, and effectiveness of these partnerships and congregation-based programs is also critical to inform how substance use programs offered by congregations may support improved recovery outcomes.

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Biographies

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Brad R. Fulton is Associate Professor in the O’Neill School of Public and Environmental Affairs at Indiana University. His research integrates organizational theory and network analysis to examine the social, political, and economic impact of community-based organizations. His research advances understanding in the areas of organizational behavior, management, leadership, diversity, inequality, and civil society.

Eunice C. Wong is Senior Behavioral Scientist at the RAND Corporation. Her research broadly focuses on mental health disparities and mental health services in community and military settings. Much of Dr. Wong’s research has involved trauma-exposed populations and underserved communities.

Kathryn P. Derose is Professor in the Department of Health Promotion & Policy at the University of Massachusetts and an adjunct policy researcher at the RAND Corporation. Her research focuses on understanding and addressing health inequalities, and she has a particular expertise regarding social determinants of health, faith-based organizations, community-based participatory research, immigrants’ healthcare access, Latino populations, and Latin America

Appendix A

Table A1:

Bivariate associations with providing substance use support programming (N=1,328)

Variable	Congregation Level ^a		Attendee Level ^b	
	mean	se	mean	se
<i>Member Composition</i>				
Has members who are unemployed	.789	.047	.929	.030
80% or more of members are white	.533	.058	.551	.058
50% or more of members are less than 60 years old	.833	.043	.828	.044
50% or more of members have a college degree	.299	.053	.463	.058

Variable	Congregation Level ^a		Attendee Level ^b	
	mean	se	mean	se
<i>Head Clergy Characteristics</i>				
Male	.923	.031	.948	.026
Born in the U.S.	.913	.033	.894	.036
Completed at least one year of college	.855	.041	.959	.023
<i>Congregational Characteristics</i>				
Roman Catholic	.066	.029	.279	.052
Mainline Protestant	.172	.044	.172	.044
Conservative Protestant	.445	.058	.382	.056
Black Protestant	.236	.049	.138	.040
Non-Christian	.081	.032	.028	.019
Speaking in tongues is practiced	.365	.056	.299	.053
Considers the Bible to be literal and inerrant	.750	.050	.683	.054
<i>Congregational Resources</i>				
Number of adult participants (x 1,000)	.165	.053	1.460	.029
Employs staff for social services programs	.226	.048	.293	.053
Congregation owns its building	.884	.037	.937	.028
<i>Involvement with Health and Human Services</i>				
Provides health-focused education programs	.404	.057	.528	.058
Established a nonprofit to conduct human service projects	.146	.041	.174	.044
<i>External Engagement</i>				
Assesses the needs of its community	.783	.048	.804	.046
Had a social service representative as a visiting speaker	.382	.056	.560	.057
<i>Community Characteristics</i>				
Census tract is at least 80% African American	.037	.022	.042	.023
Census tract has at least 30% living below the poverty level	.197	.046	.150	.041
Census tract is predominantly urban	.592	.057	.796	.047
Census tract is predominantly suburban	.199	.046	.100	.035
Census tract is predominantly rural	.209	.047	.104	.035
Located in the Northeast	.098	.034	.109	.036
Located in the Midwest	.245	.050	.271	.051
Located in the West	.225	.048	.218	.048
Located in the South	.432	.057	.402	.057

Source: National Congregations Study, 2012

^a Congregation level weights applied.

^b Attendee level weights applied. Attendee-level estimates are based on the 1.2 million congregational attendees represented among the 1,328 congregations in the sample.

Table A2:

Odds ratios from logistic regression models predicting whether a congregation provides substance use support programming (N=1,328)

Internal and external congregational factors	OR	OR	OR	OR	OR	OR	OR
<i>Member Composition</i>							
Has members who are unemployed	2.33	***					
80% or more of members are white	.80						
50% or more of members are less than 60 years old	1.87	***					
50% or more of members have a college degree	1.31	*					
<i>Head Clergy Characteristics</i>							
Male		1.67	*				
Born in the U.S.		1.32					
Completed at least one year of college		1.40					
<i>Congregational Characteristics</i>							
Conservative Protestant ^a			1.17				
Speaking in tongues is practiced		2.31	***				
Considers the Bible to be literal and inerrant		.85					
<i>Congregational Resources</i>							
Number of adult participants (logged)				1.36	***		
Employs staff for social service programs				2.23	***		
Congregation owns its building				1.01			
<i>Involvement with Health and Human Services</i>							
Provides health-focused education programs					2.12	***	
Established a nonprofit to conduct human service projects					2.65	***	
<i>External Engagement</i>							
Assesses the needs of its community						2.77	***
Had a social service representative as a visiting speaker						1.62	***
<i>Community Characteristics</i>							
Census tract is at least 80% African American							1.38
Census tract has at least 30% living below the poverty level							1.07
Census tract is predominantly urban							1.83
Located in the Northeast							.80
Pseudo R ²	.035	.006	.022	.062	.045	.057	.016

Source: National Congregations Study, 2012

^aReference category: Non-conservative Protestant

Note: The diagnostic tests recommended by Winship and Radbill (1994) indicate no misspecification related to the probability-proportional-to-size feature of the sample; thus, we present the results from analyzing unweighted data.

*
p < .05

**
p < .01

p < .001 (two-tailed tests)

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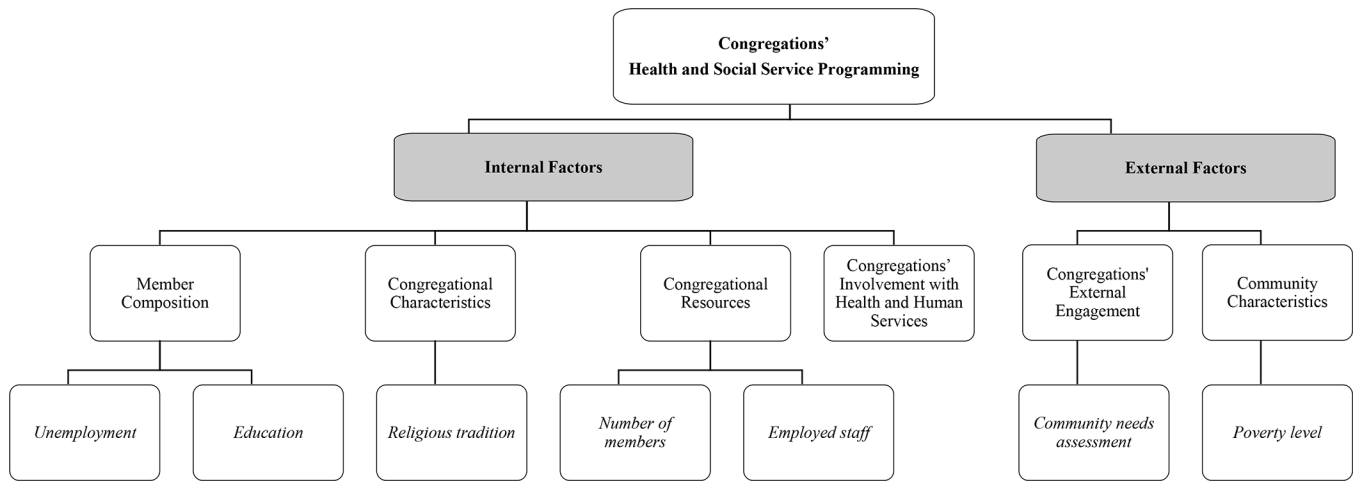


Figure 1: Congregational factors significantly associated with providing substance use support programming

Table 1:

Descriptive statistics of U.S. congregations (N=1,328)

Variable	Congregation Level ^a		Attendee Level ^b		% Missing
	mean	se	mean	se	
Provides substance use support programming	.376	.040	.521	.041	.00
<i>Member Composition</i>					
Has members who are unemployed	.689	.039	.878	.027	8.660
80% or more of members are white	.570	.041	.573	.041	.452
50% or more of members are less than 60 years old	.736	.037	.780	.034	1.130
50% or more of members have a college degree	.280	.037	.438	.041	9.639
<i>Head Clergy Characteristics</i>					
Male	.889	.026	.940	.020	4.217
Born in the U.S.	.898	.025	.877	.027	4.292
Completed at least one year of college	.867	.028	.947	.019	4.518
<i>Congregational Characteristics</i>					
Roman Catholic	.055	.019	.277	.037	.000
Mainline Protestant	.203	.033	.171	.031	.000
Conservative Protestant	.462	.041	.376	.040	.000
Black Protestant	.214	.034	.129	.028	.000
Non-Christian	.067	.021	.047	.018	.000
Speaking in tongues is practiced	.285	.037	.239	.035	4.066
Considers the Bible to be literal and inerrant	.779	.034	.681	.039	2.259
<i>Congregational Resources</i>					
Number of adult participants (x 1,000)	.112	.028	1.067	.017	.000
Employs staff for social services programs	.138	.029	.214	.034	1.958
Congregation owns its building	.846	.030	.926	.022	.000
<i>Involvement with Health and Human Services</i>					
Provides health-focused education programs	.281	.037	.427	.041	.151
Established a nonprofit to conduct human service projects	.089	.024	.123	.027	.226
<i>External Engagement</i>					
Assesses the needs of its community	.567	.041	.677	.039	.151
Had a social service representative as a visiting speaker	.314	.038	.477	.041	.377
<i>Community Characteristics</i>					
Census tract is at least 80% African American	.027	.014	.036	.015	.151
Census tract has at least 30% living below the poverty level	.168	.031	.143	.029	.226
Census tract is predominantly urban	.510	.041	.731	.037	.151
Census tract is predominantly suburban	.181	.032	.122	.027	.151
Census tract is predominantly rural	.317	.039	.147	.029	.151
Located in the Northeast	.121	.027	.127	.028	.000
Located in the Midwest	.229	.035	.259	.036	.000
Located in the West	.142	.029	.191	.033	.000

Variable	Congregation Level ^a		Attendee Level ^b		% Missing
	mean	se	mean	se	
Located in the South	.508	.041	.423	.041	.000

Source: National Congregations Study, 2012

^a Congregation level weights applied.

^b Attendee level weights applied. Attendee-level estimates are based on the 1.2 million congregational attendees represented among the 1,328 congregations in the sample.

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Table 2:

Odds ratios from logistic regression models predicting whether a congregation provides substance use support programming (N=1,328)

Internal and external congregational factors	Multivariable	
	OR	95% CI
<i>Member Composition</i>		
Has members who are unemployed	1.603*	1.073 – 2.394
80% or more of members are white	1.084	.795 – 1.478
50% or more of members are less than 60 years old	1.412*	1.037 – 1.923
50% or more of members have a college degree	1.080	.818 – 1.427
<i>Head Clergy Characteristics</i>		
Male	1.368	.825 – 2.268
Born in the U.S.	1.607*	1.098 – 2.354
Completed at least one year of college	0.923	.527 – 1.619
<i>Congregational Characteristics</i>		
Conservative Protestant ^a	1.561**	1.144 – 2.130
Speaking in tongues is practiced	1.864***	1.341 – 2.591
Considers the Bible to be literal and inerrant	0.903	.650 – 1.253
<i>Congregational Resources</i>		
Number of adult participants (logged)	1.253***	1.131 – 1.388
Employs staff for social service programs	1.713**	1.234 – 2.378
Congregation owns its building	1.065	.661 – 1.717
<i>Involvement with Health and Human Services</i>		
Provides health-focused education programs	1.461**	1.128 – 1.892
Established a nonprofit to conduct human service projects	1.995**	1.314 – 3.031
<i>External Engagement</i>		
Assesses the needs of its community	2.277***	1.754 – 2.957
Had a social service representative as a visiting speaker	1.301*	1.001 – 1.691
<i>Community Characteristics</i>		
Census tract is at least 80% African American	0.986	.505 – 1.924
Census tract has at least 30% living below the poverty level	1.181	.826 – 1.689
Census tract is predominantly urban	1.051	.773 – 1.429
Located in the Northeast	1.021	.711 – 1.467
Pseudo R ²	0.142	

Source: National Congregations Study, 2012

^aReference category: Non-conservative Protestant

Note: The diagnostic tests recommended by Winship and Radbill (1994) indicate no misspecification related to the probability-proportional-to-size feature of the sample; thus, we present the results from analyzing unweighted data.

* p < .05

**
p < .01

p < .001 (two-tailed tests)

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