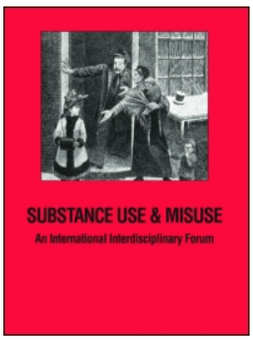

Substance Use & Misuse

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/isum20

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To cite this article: Marc Galanter, William L. White & Brooke Hunter (2022): Internal and External Resources Relied on by Established Twelve Step Fellowship Members for Their Recoveries, Substance Use & Misuse, DOI: 10.1080/10826084.2022.2151311

To link to this article: https://doi.org/10.1080/10826084.2022.2151311

Published online: 13 Dec 2022.

SUBSTANCE USE & MISUSE
https://doi.org/10.1080/10826084.2022.2151311

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ORIGINAL ARTICLE

Internal and External Resources Relied on by Established Twelve Step Fellowship Members for Their Recoveries

Marc Galanter[a], William L. White[b] and Brooke Hunter[c]

[a]Department of Psychiatry, New York University Grossman School of Medicine, New York, NY, USA; [b]Research Division, Chestnut Health Systems, Punta Gorda, Florida, USA; [c]Research Division, Chestnut Health Systems, Normal, Illinois, USA

ABSTRACT

Background: The Twelve Steps described by Narcotics Anonymous (NA) and Alcoholics Anonymous denote key aspects of how members can achieve abstinence from alcohol and other drugs. However, there are limited empirical findings on what long-term members rely on to support their ongoing recovery. *Method:* In order to clarify the members' reliance on those latter resources, we surveyed 2,293 long-term NA members through the internet on items they rely on for their recovery. They scored nine NA-related resources (e.g., their sponsor) and three non-NA institutional ones (e.g., a professional therapist). *Results:* Three factors accounted for 53.6% of the variance in the respondents' scores of the 12 items. We labeled them, with the percent of variance accorded, as NA-based social (24.9%) support, spiritual (17.8%) support, and outside professional (10.9%) help. While NA-based resources ranked highest, outside resources (a house of worship, a therapist, or medications for psychological distress) were scored by 75.4% of the respondents. Analysis by subgroups of respondents reflected the diversity of resources members draw on. The use of internet-based meetings during the COVID-19 period reflected the resilience of the NA format. *Conclusion:* Members of Twelve Step programs can be studied to shed light on options that they rely on for support for their ongoing recovery, both within the fellowships and outside them. Long-term members can apparently rely on resources inside the fellowship and simultaneously on professional ones, as well. These findings can be helpful for researchers in considering mechanisms that underlie long-term Twelve Step-related recovery and for clinicians in employing both these fellowships and outside resources as adjuncts to their professional care.

KEYWORDS

Narcotics anonymous; alcoholics anonymous; long-term members

Introduction

In this paper, we consider the way members of Narcotics Anonymous (NA) report on how they employ the support available to them to sustain their recovery from substance use disorders (SUDs). NA and Alcoholics Anonymous (AA) are the two principal fellowships whose members employ the Twelve Steps, originally developed in the 1930s for achieving abstinence from addictive substances.

There is benefit in determining mechanisms that underlie given therapies for SUDs, in that they can help optimize treatment approaches for these disorders. In response to a request for applications on this issue by the US National Institute on Drug Abuse (National Institute of Health, 2003), Moos (2008) formulated an approach to better understand the Twelve Step (TS) process. This was based on related social psychological theories such as social learning, role modeling, and self-efficacy. His model was developed further by Rettie et al. (2021) in surveying a variety of groups oriented around addiction recovery, the TS model included, to clarify psychological mechanisms that apply across these different approaches. Change mechanisms associated with spiritual practices, sponsorship, and meeting attendance were reviewed by Magill et al. (2015), while Kelly (2017) and Tonigan et al. (2013) considered the specific role of the construct of spirituality in this process. Specific issues and activities may, however, be selected by TS members themselves as supportive of their recovery. We examine here the way established members report on a group of practices and experiences they see as important to their recovery, those related to specific TS activities, and professionally supported options outside the TS regimen. We also compared which resources respondents relied on both before and during COVID-19.

Materials and methods

Procedure

An agreement was made with the NA World Service Office, located in Chatsworth, CA, for their office to email an anonymous survey to subscribers of the NA newsletter. It was explained that the purpose of the survey was to assess the mechanisms of support, within and outside of NA, that members relied upon to support their recovery. The study was approved by the Institutional Review Board

CONTACT Marc Galanter marcgalanter@nyu.edu New York University Grossman School of Medicine, 550 First Avenue, NBV2211, New York, NY 10016, USA.

of Chestnut Health Systems, with no consent required. An email was sent to approximately 10,000 NA members who had solicited an online newsletter. It stated that they could volunteer to respond to an attached anonymous survey if they chose to do so. The survey was emailed on March 8, 2021, and data collection was open through the end of May 2021. A total of 3,465 surveys were returned. Only responses from respondents living in the U.S. were analyzed, of which 816 were excluded for non-completion, for a final sample of 2,293. Anonymous responses were analyzed by the authors, after which the files were deleted to protect respondents' personal information. Descriptive statistics were generated to describe the US respondents.

Measures

Respondents were asked to answer items on basic demographics, substance-related experiences, and NA engagement, as described in our previous studies (Galanter et al., 2017; 2022). Twelve resources that reflect the potential for support for recovery were then presented. Respondents were asked to score them relative to the degree to which they felt each resource provided support for their own recovery. The roles of these resources may be based on a variety of experiences relevant to a given respondent, such as their psychological well-being or quality of life. These sources of support were chosen based on the experience of two of the authors' (MG and WLW) past interviews of NA and AA members and their published related research. The terminology for these resources was also clarified in discussion with NA members to properly characterize the specific items and terms to be employed by them and reflect the resources they represent (Jane Nickels, email correspondence, May 5, 2020). The resources were scored by respondents on a zero to four scale in accordance with the format developed by Likert (Likert, 1932). The resources for support were: *Other members* you got to know, *face-to-face* meetings, NA Basic Text and *NA literature*, *My sponsor*, Your own *service work*, *God, NA Prayers, Spiritual awakening,* and *Meditation*. Three institutionally sanctioned items outside the umbrella of NA were also designated: Professional *Therapist*, *Medication* for psychological distress, and *Attendance at a House of worship* (like a church). These labels are abbreviated in the text and tables as italicized above. Respondents were asked to score each of these 12 items for how important they were for support for their recovery from SUD: 0 for not important, 1 for slightly important, 2 for fairly, 3 for very, through 4 for extremely important. The scoring was made for two periods, *Before COVID-19* and *Currently* (i.e., during the COVID-19 period), to ascertain any differences between the two periods. The former represents the more typical pattern of membership, while the latter reflects how it changed during the COVID-19 period. Respondents were also asked to characterize the degree they craved alcohol or drugs during each of the two respective periods (before and during COVID-19), employing a 10-point scale (0-10; 10 being the highest) as originally employed by Volpicelli et al. (Volpicelli et al., 1992), and later employed in relation to craving-based physiologic responses to alcohol triggers (Galanter et al., 2017).

Analysis plan

A factor analysis (FA) was executed on the 12 items for the *Before COVID-19* time period using alpha factoring with an equamax rotation and suppression threshold of 0.30. The *Before COVID-19* time period was compared to the *Current* time period using paired samples t-tests. The *Before COVID-19* time period was further analyzed by dichotomizing Likert responses in order to compare respondents who indicated a score of 0 (not important) for an item versus those who indicated a score of 1—4 (i.e., important to some degree) using a non-parametric chi-square test.

We elected to characterize some respondents who did not turn at all (score zero) to some of the specific resource choices. In order to do this, we selected those respondents who scored zero on the highest-ranking resources in each of the three factors, namely *other members, God,* and *professional therapist.* We then examined which resources those respondents did rely on (scores 1-4). Due to the relatively large effect sizes for many comparisons, the current study focuses on results where a Cohen's *d* or *h* had an absolute value > 0.5 (medium and large effects) (Cohen, 1992).

A positive *d* or *h* value for a given item indicates the item was designated by respondents as more important compared to other respondents in the respective subgroups. A negative *d or h* value indicates that the item was scored by respondents, on average, as less important compared to other respondents in that subgroup. Finally, group differences for the 12 items *Before COVID-19* were assessed for the following comparisons using independent samples *t*-tests: male versus female and Black versus White. All analyses were conducted in SPSS Statistics version 26.

Results

Table 1 characterizes the respondents by demographics, their "biggest" drug problem, and NA-related experiences. Table 2 lists the items queried for respondents' reliance on sources of support for their recovery and provides results of a factor analysis of the scores accorded by respondents for each of the respective item choices. The rotated solution revealed a simple structure and explained 53.55% of the total variance. The items were loaded onto three factors, with respective portions of the associated variance for each. For identification purposes, the respective factors can be labeled by inspection as: 1—social (25%), 2—spiritual (15%), and 3—professional (11%), approximating the type of roles that the factors played in the respondents' recovery process.

Table 3 provides the mean scores for items. It also provides the results for the non-parametric chi-square tests comparing the proportion of respondents who indicated an item was *important* to some degree (Likert scores 1-4) versus *not important* (score zero) during the *Before COVID-19* time period. It includes the mean scores (on the 0-4 scale)

Table 1. Background characteristics (N = 2293).

Characteristic	Mean (SD), %
Age, years	52.0 (12.9)
Gender	
Male	46.1
Age at first meeting	30.8 (11.2)
Referred by health care professional	34.4
Meetings attended last week:	
Face-to-face	3.9 (1.38)
Virtual	1.86 (1.21)
Ethnicity	
Asian	0.6
Black	11.5
Hispanic	7.0
White	75.9
Other	5.0
Biggest Drug Problem	
Alcohol	9.2
Marijuana	4.5
Cocaine or crack	16.8
Stimulants/medicines	1.1
Heroin	12.3
Other opiates	8.2
Crystal meth	13.3
Methadone or Buprenorphine	0.3
Multiple Drugs	44.3
How many years ago did you go to your 1st meeting?	17.7 (12.3)
Have you ever relapsed?	41.0
How many years ago?	10.4 (11.0)
How many months did it last?	19.5 (44.9)

Table 2. Factor analysis was executed using alpha factoring with an equamax rotation and suppresion threshold of 0.30.

	Factor		
Item	1	2	3
Other members	0.74		
Face-to-face meetings	0.737		
NA literature	0.723	0.374	
My sponsor	0.707		
Service work	0.624	0.346	
God		0.747	
NA Prayers	0.397	0.653	
Spiritual awakening	0.411	0.615	
Meditation	0.34	0.445	
House of worship		0.426	
Therapist			0.833
Medication			0.741
Rotation sums of squared loadings	2.99	2.13	1.306
Percentage of total variance	24.92%	17.75%	10.88%
Number of items	5	5	2

NOTE: Items that did not load on the respective factors are indicated in parantheses.

Table 3. Comparison of 'Important' versus 'Not Important' for 'Before COVID-19' items using non-parametric chi-square test (N = 2,293).

Components	Mean (SD)	Important[a]	χ^2	Cohen's *d*
Face-to-face	3.50 (1.00)	95.80%	97***	2.32
Other members	3.40 (0.97)	96.50%	81***	2.39
Spiritual awakening	3.31 (1.04)	96.40%	82***	2.38
NA literature	3.30 (1.05)	95.70%	98***	2.31
My sponsor	3.27 (1.12)	94.10%	135***	2.16
God	3.19 (1.27)	91.30%	200***	1.94
Service work	3.15 (1.10)	95.20%	110***	2.26
NA Prayers	2.78 (1.32)	90.50%	217***	1.89
Meditation	2.74 (1.25)	92.20%	179***	2.01
Therapist	1.46 (1.50)	58.00%	963***	0.32
Medication	1.42 (1.61)	50.20%	1142	0.01
House of worship	1.08 (1.50)	40.80%	1358***	−0.37
Institutionally Sanctioned Support		75.40%	565***	1.07

[a]Grouping of anchors 'slightly important' through 'extremely important' (ie scores 1–4).

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

For dichotomized importance ratings prior to the onset of restrictions related to COVID-19, the mean difference rating was given for each of the resources that respondents scored.

respondents ascribed to supporting their recovery, all p <.001, and the percent of respondents who scored them as important. The majority of items (9/12) were rated as important to some degree by the overwhelming majority of respondents (> 90%). The remaining three items were outliers with regard to their relative importance to recovery for the sample, but fully 58% of respondents indicated that a *therapist* was important to some degree, 40.8% scored *house of worship* as important, and 50.2% rated *medication* as important. The three items, *house of worship, therapist,* and *medication,* reflected support provided from institutionally sanctioned resources outside the TS process and had the lowest mean scores of the resources for providing support for recovery. Based on these findings, an additional item was created that reflected institutionally sanctioned support; and has a value of 1 if a respondent rated *therapist*, *medication*, or *house of worship* as important, and 0 if the respondent rated none of the three items as important. At least one of these three non-NA supports was rated as important by 75.4% of respondents.

Table 4 addresses the resources with the highest loadings in each of the respective three factors, namely: *Other members* for factor 1, *God* for factor 2, and *therapist* for factor 3. Some respondents scored zero for each of these three respective items, i.e., not important for their recovery. Although these respondents rated these three items as ones they did not rely on for their recovery (score zero), they did designate scores among the other eleven items for those they did rely on. The percentage of those eleven items that scored as at least somewhat important to their recovery (ie scores 1-4) are listed. This lends clarity to what other items were relied on by the respondents who did not rely on the three items that ranked highest in each respective factor. Cohen's d indicates the size of effect distinguishing those who scored 1-4 vs those who scored zero on those resources. For example, 200 respondents scored *God* as zero, whereas 79% of them scored *members* as important (ie, 1, 2, 3, or 4). Thus, a positive value of Cohen's h for *members* among those respondents indicates that the majority (79%) of this subgroup scored 1-4 designating that *other members* were important to some degree (ie, score of 1, 2, 3, or 4).

Some respondents indicated that *other members* were not important to their recovery, but did rate *God*, *spiritual awakening*, and *medication* as important to their recovery. However, no items were endorsed as important to recovery by the majority of this group, meaning that respondents who did think that *other members* were important to their recovery were likely to respond that either any social items or items related to outside institutions were important to their recovery. Conversely, respondents who indicated that *God* was not important to their recovery were more likely to rate other social items as important to their recovery; and were least likely to rate *prayer* or *house of worship* as important. Respondents who indicated that *therapist* was

Table 4. Item scores for those who rated "Members," Good and "Therapist," as providing no support.

	Portion of respondents who scored items as zero					
	Members (n = 81)		God (n = 200)		Therapist (n = 963)	
Items they scored > zero	%	*h*	%	*h*	%	*h*
Other members	---	---	79.0***	1.24	94.5***	2.19
Face-to-face	13.6***	−1.63	78.5***	1.21	94.7***	2.21
NA literature	14.8***	−1.56	73.5***	0.98	93.8***	2.14
Sponsor	13.6***	−1.63	70.5***	0.84	91.5***	1.96
Service work	24.7***	−1.06	72.0***	0.91	93.3***	2.09
God	48.1	−0.08	---	---	90.1***	1.86
NA prayer	17.3***	−1.43	44	−0.24	87.2***	1.68
Spiritual Awakening	44.4	−0.22	72.0***	0.91	95.0***	2.24
Meditation	38.3*	−0.47	70.5***	0.84	88.7***	1.77
House of Worship	19.8***	−1.3	2.5***	−2.51	28.5***	−0.89
Therapist	34.6**	−0.63	52.5	0.1	---	---
Psych Meds	32.1**	−0.73	43.5	−0.26	18.3***	−1.37

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

not important to their recovery were more likely to rate all other items as more important to their recovery.

There are no differences that met the criterion for inclusion (based on the allowable size of effect scores listed in the Methods section) for: male vs female, before COVID-19 vs currently, and history of relapse vs none. There was also no difference that met the criteria for a small effect size between scores on resources during COVID-19 or before. Black respondents, however, scored higher than White respondents on *house of worship* (d = 0.80), *NA prayers* (d = 0.79), and *God* (d = 0.68).

Discussion

Manualization of treatment for SUDs is a well-established approach for systemizing clinical modalities. For example, results of a study on different manualized adaptations of cognitive-behavioral treatment can be analyzed, leaving options for applying this modality open (Kiluk et al., 2018). In many respects, the text of the Twelve Steps, developed by laypeople, spells out in a descriptive manner a way of achieving abstinence for both Narcotics Anonymous (NA),) (1993) and AA (W, 1952). There is value, however, in examining how established members rate these approaches a considerable time after recovery initiation. This can be heuristically valuable, even without the option of formal manualization, to ascertain how lay members, in practice, employ different aspects of this TS format, and how they use outside supports as well.

To this end, we selected nine aspects of NA members' reliance on the fellowship and, as a complement, three aspects of outside institutional help, that a respondent could score for the degree to which he/she relied on each aspect to support their own recovery. Scoring on these items can be useful in characterizing the way members can adapt the resources available to them. This can be useful both for clinicians in how they can better utilize TS resources and for researchers in conceptualizing the mechanisms underlying the programs' effectiveness.

Respondents were longstanding members, most commonly male and middle-aged, with their first NA meeting two decades before. An appreciable number (41%) had relapsed in the past, and for those who did, the relapse was substantial in that it lasted for an average of almost two years. Nonetheless, there was no distinction in items relied on for those who reported a history of relapse and those who did not. Scoring on resources was not significantly different before vs during COVID-19. The patterns were sustained despite the transition in meetings between the two periods. This reflects relative adaptability among longstanding members in the face of a major transition in meeting options.

A factor analysis (Table 2) and the respondents' scores for the items queried (Table 3) revealed the relative importance ascribed to the items available. Based upon inspection, respective factors subsumed in the factor analysis can be labeled as social (25%), spiritual (15%), and professional (11%), approximating the role that each factor plays in respondents' recovery process. It is notable that the interpersonally NA items scored highest, followed by spiritually related ones. Items scoring lower, but commonly employed for help with recovery were outside the NA umbrella, namely professionally related ones, and also *house of worship*. Further research would be valuable in clarifying the nature of mobilizing response and mechanism operative from an empirical and statistical standpoint. These could include an assessment of quality of life and psychological well-being. This would expand beyond the generic sense of these words.

Examples of diversity

Analyses were undertaken to illustrate the diversity of members in terms of the different patterns of the resources they relied on. There is value in looking at the pattern of reliance by different subgroups of respondents to illustrate how individual members may differentially make use of supports available to them (score zero). To this end, we elected to examine three different subgroups of respondents as indicated in Table 4, namely those who scored three items as not important to them and were then able to compare them to other members of that respective subgroup. We did this by selecting the items that rated highest in the three respective factors in the factor analysis.

A small number of respondents did not indicate reliance on *other members* (the item that ranked highest in the factor analysis). As illustrated in Table 4, the only NA-related items they

indicated that they relied on most were *God*, *spiritual awakening*, and *meditation*, which happened to be spiritually related items rather than NA interpersonal items or professional care.

Similarly, a portion of respondents did not indicate that *God* was a source of support for them. In practice, they may fall into the cohort of members who most likely self-designate as *atheists* or agnostic, which is similar in prevalence to a probability sample of the US population (Lipka, 2016). It is notable that those who did not indicate *God* as a device for support relied on social (factor 1) aspects of the fellowship at rates similar to other members of this subgroup. Those who scored *therapist* as zero do rely on social aspects of the fellowship (factor 1), as well as *spiritual awakening* and *meditation*. Unlike the other two subgroups first mentioned, they scored higher on *medication*, apparently reflecting that a group of patients indicated reliance on medication without relying on *therapy*, as such. The incidence of COVID-19 clearly impacted the feasibility of members meeting face-to-face on a regular basis, a key resource for supporting recovery. This could potentially have an impact on the viability of the Twelve Step format. Despite this, we found that the longstanding members were able to adapt to this situation by switching to an internet-based format without altering the relative reliance on other resources they drew on to support their recovery. This finding reflected the resilience of the fellowship for stabilizing recovery in long-term members. Diversity, however, merits further research, particularly with regard to the context in which each of the resources studied here is relevant to the respective individuals' recovery-related experiences, such as cultural context and professional help available in a given setting.

Gender and ethnicity

In an attempt to address key demographic issues impacting recovery, we chose to look at both gender and race in response patterns, as they are ones that have been studied in relation to stigma (Kulesza et al., 2016), opioid use disorder (Wood & Elliott, 2020), and alcohol use disorder (Holzhauer et al., 2020). Our study sample, however, pertains to methamphetamine, as well. This is useful because there are no such data available in the literature relative to methamphetamine.

One study on persons recently referred to AA indicated that men and women may respond to different needs at the time of entry into AA (Kelly & Hoeppner, 2013). It is notable, however, that there were no items in this study where there was a difference (that met criteria) between the genders on the nine items under the NA umbrella or the three outside NA itself. This suggests that over the long term, for those respondents who are committed, members of both genders were apparently making similar use of the supports for stabilizing sobriety.

In a probability sample of US residents, (Diamant, 2021), Black respondents were found to be more likely to believe in God or a Higher Power than Whites, and more likely to pray frequently. Similarly, in a cross-sectional study of persons who reported that they had recovered from SUD (Kelly & Eddie, 2020), Blacks were more likely than Whites to indicate that spirituality had made "all the difference" in their recovery more so than other options of support for recovery that were listed. This differential is reflected in relation to Black respondents in this study. Black respondents scored higher on religiously oriented items than Whites, namely NA *prayer* and *God*. They also scored higher on interpersonal items, reflecting a commitment to the fellowship overall, but apparently augmenting their orientation with a religious source outside the fellowship itself.

Spirituality and spiritual awakening

Among our respondents, the role of *spiritual awakening* was ranked third after only *other members* and *NA meetings*. Findings on this issue are worth noting. Spirituality has been reported in different settings to play an important role in recovery among patients in community treatment settings (Tonigan et al., 2013) and among respondents in the cross-sectional sample cited above of persons who reported "recovery" from SUD and indicated that overall, spirituality, more than religion, had made "all the difference" in terms of their recovery (Kelly & Eddie, 2020).

Regarding spiritual awakening as such, patients discharged from SUD treatment who reported experiencing a spiritual awakening were three times more likely to be abstinent after discharge than other patients (Bond et al., 2003). Members of a group of physicians in recovery who reported the experience of spiritual awakening reported decreased craving for drugs or alcohol following the spiritual awakening (Galanter et al., 2014). Among our respondents, it was the item that scored third highest after the two leading interpersonal items.

Service work and sponsorship

The large majority of respondents marked service work (helping other members and persons with SUDs) as very important to them. One key aspect of such service for long-term members is serving as a sponsor for other more recently engaged members. In this respect, the experience of helping fellow TS members has been associated with a positive outcome in recovery (Pagano et al., 2009). Acquiring a sponsor is key to TS membership because the sponsor is tasked with guiding a member in working through each of the Twelve Steps and supporting their abstinence. Sponsorship roles can also play a role in a sponsee's emotional support (Whelan et al., 2009). A positive clinical outcome of acquiring a sponsor has been associated with a diversity of treatment contexts, such as outpatient care for stimulant use disorder (Wendt et al., 2017) and with persons introduced to AA with prior TS exposure (Subbaraman et al., 2011). Benefit has also been found in maintaining a sponsor over the long-term of membership and not just early in membership (Witbrodt et al., 2012).

Prayer and meditation

As stated in the 11th Step, prayer and meditation provide the means for established TS members to improve their

contact with "God, as we understood Him." Outside the realm of TS practice, Krause and Hayward (2013) reported on a large cohort of persons surveyed in a national probability sample by the US Center for Medicine and Medical Services who reported practicing prayer. They were found to have lower consumption of alcohol, and this effect was greater for those whose prayer was reinforced by congregational or prayer group support. Among AA members studied in a laboratory setting (Galanter et al., 2017), active engagement in prayer was associated with the experience of lesser alcohol craving when exposed to drinking cues. Among our sample, the large majority (90.5%) reported that *NA prayers* were important to their recovery.

Professional help

The benefit derived from psychotherapy among AA members has been considered relative to different applied approaches, such as psychodynamic, cognitive-behavioral, and mindfulness-oriented treatments (Marcovitz et al., 2020). Among our respondents, reliance on a professional therapist was associated with a lesser reliance on average than NA-related items. That is to say, persons who did not rely on therapy were more likely to rely on the TS-related items; Or, stated otherwise, there was less reliance on NA resources among those who relied on a therapist.

Additionally, the outcome of psychotherapy relative to AA members has also been evaluated relative to respective patient characteristics, such as prior treatment experiences and level of education (Terra et al., 2007). Benefit from psychotropic medication was also adjudged to be helpful by half of our respondents. NA policy acknowledges that members may employ non-addictive medications for mental health. Their literature, however, stipulates that they should be taken as advised by a licensed health professional and includes an advisory that a given member should share their experience with such medication with their sponsor and/or a close friend in the fellowship (Narcotics Anonymous World Services & Inc, 2007).

The majority of our respondents indicated reliance on professional help. This suggests an acceptance by their program's fellowship as being compatible with professional care, and respondents not being committed to the TS process itself as singularly relevant to SUD recovery. A sizeable minority of respondents, however, scored zero on this (not at all), and their responses to items in Factors 1 & 2 indicated greater reliance on NA-related items than other respondents in their subgroup.

Limitations

This study evaluates different sources of support for recovery that long-term NA members turn to, both inside and outside the fellowship. The resulting findings are, however, delineated by the following limitations: Responses were obtained from a minority of members contacted as some did not have access to the NA newsletter, others may have dropped out of NA early or were recent recruits, and others may not be fully committed to NA, or inclined to respond to the survey format. The term Twelve Step is used here, but the option of generalizing results to AA members or even the general SUD population is limited.

In order to assure that the length of the survey did not dissuade members from replying, certain, potentially relevant information was not solicited, such as respondents' reliance on sources of support like family and non-TS peer relationships; reliance on maintenance medication; and respondent characteristics, such as DSM-diagnostic and employment status. External corroboration of responses, such as urinalysis confirmation of abstinence, was also not available. In order to illustrate different respondent subgroups, profiles of respondents who did not indicate reliance on three of the items of support were analyzed. Clearly, there are many other subgroups of respondents who could be characterized. Altogether, the deficits cited here illustrate the complexity of resources that different TS members may turn to for long-term support. Further research into gaining an understanding of the way different subgroups of members choose to avoid relapse is therefore needed.

Conclusion

Long-term members of TS programs can be studied in order to shed light on sources of support for their recovery, both within the fellowships and outside of them. Of particular interest from our findings is therefore the comparison of resources employed both inside and outside the NA fellowship. For example, a majority of the long-term members surveyed employed professional help (therapy and medications for psychological problems), indicating TS membership for SUD is compatible with ongoing clinically-based care.

Our findings can be helpful for researchers in considering mechanisms that underlie Twelve Step-related recovery, and for clinicians in employing these fellowships and complementary outside resources as adjuncts to their professional care. There is a need, however, to gain further understanding of the diversity of TS members' experiences once abstinence has been established for furthering recovery and preventing relapse. Future studies can further illuminate if and how mechanisms of support change across the long-term stages of recovery. Resources members rely on may be different at different points in their NA recovery. They may reflect other issues, such as improved psychological well-being or quality of life.

Acknowledgments

The authors would like to thank Jane Nickels, Becky Meyer, and Stephan Lantos for aiding with data collection.

Declaration of interest

The authors declare that they have no conflict of interest. The authors alone are responsible for the content and writing of the article.

Funding

The author(s) reported there is no funding associated with the work featured in this article.

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