

Shifting Dynamics or Breaking Sacred Traditions? The Role of Technology in Twelve-Step Fellowships

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ABSTRACT

Twelve-step fellowships are the most common long-term maintenance program for recovery from alcoholism and addiction. Informed by six months of participatory observation of twelve-step fellowship meetings and service structure, I conducted in-depth interviews with twelve members of Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) about the role of technology in recovery. I found that there are a number of tensions in how technology is perceived and adopted. As technology and twelve-step fellowships interact, issues of anonymity, identity, consensus, access, unity, autonomy, and physical presence are foregrounded. I relate these findings to the broader research landscape and provide implications for future design in this space.

Author Keywords

Recovery; addiction; twelve-step fellowships; spirituality.

ACM Classification Keywords

H.5.2. [Information Interfaces and Presentation]: User Interfaces: *User-Centered Design*.

INTRODUCTION

Substance use disorders are characterized by needing increasing amounts of a chemical substance to achieve desired effect, consistent use of larger amounts than intended, and persistent unsuccessful attempts to cut down or stop use despite increasingly severe consequences to the user. These disorders are a medical condition (recognized by the DSM), which are estimated to cost the United States \$374 billion per year [33]. 2004 estimates show that 67% of Americans drink alcohol, with 11.9% developing dependence to the substance; 45.8% of Americans try illicit substances during their lifetime, with rates of dependence between 10.3% and 67.8%, depending on the substance [24]. Immediate treatments for substance abuse involve medical intervention such as detox and rehabilitation therapy, but are rarely effective in the long-term unless

paired with a maintenance program [24]. The most common type of a maintenance program is the twelve-step approach, such as Alcoholics Anonymous (AA) and Narcotics Anonymous (NA). Various investigations have shown twelve-step interventions to be as or more effective than alternative approaches and they are frequently the intervention recommended by the medical community [27].

Twelve-step programs are characterized as a social movement that “has become the prototype of a burgeoning category of mutual-help organizations” [22]. In 2012, AA service structure included 114,070 groups and NA included 58,000 groups worldwide [1,2]. Independent studies have hypothesized that these numbers may be understated since only about 50% of groups participate in the general service structure [22]. Some estimates show that as much as 3.1% of the U.S. population may be involved in AA [22].

Though there have been a number of studies examining twelve-step communities from the psychological, sociological, cultural, and clinical perspectives (e.g. [4,13,14,22,27]), the role of technology in twelve-step recovery has not been explicitly examined. In this paper, I report on a series of in-depth interviews, informed by six months of participant observations of AA and NA, conducted with twelve members of twelve-step programs. Three goals drove this investigation: (1) characterizing the perceptions and use of technology by members of twelve-step communities, (2) identifying the unique needs of this community when considering appropriate technological interventions, and (3) describing the opportunities and challenges of working with twelve-step communities to design appropriate interventions to support recovery from addiction and alcoholism. I found that although members of twelve-step fellowships do use technology to support their recovery, there are a number of tensions between the use of technology and the traditions of twelve-step programs.

I begin by providing some background on twelve-step recovery and related work. Next, I provide a detailed description of the methods and present the thematic results of my qualitative investigation. Finally, I discuss the implications of this investigation and how it may provide a unique lens for thinking about technology in other contexts.

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ELEMENTS OF 12-STEP RECOVERY

There are over 200 different types of twelve-step programs (known as fellowships) focusing on specific issues of substance dependence (e.g., Crystal Meth Anonymous) and behavioral compulsion (e.g., Gamblers Anonymous). Though my focus in this paper is on the two most established twelve-step groups (NA and AA have the most meetings worldwide and thus provided ample opportunities for participatory observation), all twelve-step fellowships advocate a similar process for recovery, which includes the following elements:

- **Abstaining from the Problematic Behavior:** twelve-step programs are based on the idea that recovery requires complete abstinence from the problem behavior. Substance-based programs advocate abstinence from all mind-altering substances (e.g., an NA member in recovery does not drink alcohol). Milestones in recovery (e.g., three months clean) are celebrated with a public gifting of a small token such as a poker chip or a keychain. Abstaining is seen as a byproduct of addressing underlying addiction issues (e.g., resentments, loneliness) by following the three classes of suggestions below.
- **Meeting Attendance:** regularly (daily to weekly) attending meetings where time is devoted to reading the fellowship-approved literature, listening to a member speaker share, and sharing experiences in recovery. Each group meeting is autonomous and non-professional (ran by current members of the fellowship). The groups' relationship to individuals and other groups is governed by the Twelve Traditions¹.
- **Sponsorship and Service:** working with a member of the program who has had a longer time in recovery (a sponsor) to get an outside perspective one's recovery process and providing the same service to newer members in the program (sponsees). Additionally, service involves participating in outreach meetings at hospitals and institutions, helping with the logistics of running a meeting, and participating at the regional and national levels of the fellowship.
- **Stepwork:** working with guidance of a sponsor and the fellowship literature to continually progress through the Twelve Steps¹ of the program (after doing Step Twelve, focus again shifts to Step One). The steps include suggestions for admitting the problem, establishing a relationship with a "higher power" (e.g., God), understanding personal character defects through a written inventory, making amends to others, establishing spiritual maintenance practices, and reaching out to newcomers.

¹ An example of the Twelve Steps and Twelve Traditions of one fellowship (AA) can be found here: <http://www.aa.org/1212/>

Twelve-step programs are considered to be programs of suggestions (rather than rules or requirements) and the only requirement for membership is "a desire to stop" the behavior being addressed. Thus, each individual member's program may include some or all of these elements to varying degrees.

Though the research community has not examined the role of technology in twelve-step recovery, there are a number of currently available technological interventions aimed at this audience. These include specialized social networking sites, repositories of speaker tapes and program literature, mobile apps for locating nearby meetings, services for the delivery of daily meditation or reflection readings, and apps for tracking specific behaviors in recovery (e.g., meeting attendance). Neither AA nor NA officially endorses any of these tools, as all of these are for-profit endeavors.

RELATED WORK

Though there have been no previous studies on the role of technology in twelve-step fellowships, this work is relevant to a number of existing lines of investigation including designing for behavior change, technology for recovery from addiction, examinations of AA as a culture and as a clinical intervention, and the role of technology in spirituality.

Self-Management and Behavior Change

It is reasonable to think about substance use disorders as a chronic medical condition. There is evidence of the success of peer-lead self-management programs on the outcomes of other chronic conditions [18] and twelve-step fellowships may simply be an early, non-professional example of a similar intervention. Recovery from addiction or alcoholism is also an example of radical behavior change. Behavior change is of interest to HCI, with many studies focusing on supporting personal health informatics (e.g., [16]) and persuading individuals to adopt healthy behaviors (e.g., [17]). However in this study, I focus on established members of twelve-step fellowships who are familiar with the traditions and practices of these groups. In the context of the Transtheoretical Model of behavior change [21], all of the participants could be said to have reached the *maintenance* stage of behavior change. In the context of the Health Belief Model, these participants can be said to have sufficiently resolved the three classes of factors to understand that their addiction/alcoholism is a relevant health concern, a threat to their wellbeing, and that a twelve-step fellowship reduces this perceived threat for a subjectively acceptable cost [23]. This work discusses the role of technology in maintaining recovery, rather than persuading addicts/alcoholics to seek recovery or the early process of physical detoxification.

Technology for Recovery from Addiction

Computer-based interventions for substance addiction have been shown to be more effective than assessment-only

interventions [19]. Most of these systems involve information being delivered to the patient via an on-site computer in a treatment center. Despite the potential to offer such interventions outside of a treatment center, only one study in the review attempted to do so. Lenert et al. compared an automated email intervention sent to participants who were trying to quit smoking with a single-point-in-time web interaction. While the two interventions had comparable 30-day quit rates, those who received the automated email interventions attempted quitting earlier and more frequently [15]. Computerized interventions are seen as a promising new direction for “less severely dependent” clients [6]. In this study, I focus not on the delivery of initial information to a client who wants to limit their use of a particular substance, but rather on a maintenance program for addicts and alcoholics who have already stopped using and participate in the maintenance program to keep from using again.

As with other maintenance programs for chronic or life-threatening conditions (e.g., [29]), there is a thriving ecosystem of online mutual-support forums and websites for helping the recovering addict or alcoholic. One example is MedHelp alcoholism forum investigated by Chuang and Yang, which was found to help participating individuals receive various forms of support and form a recovery community [5]. Though it seems that most members of the forum were also practicing members of AA, the relationship between these widespread online forums and the practices and policies of 12-step memberships have not been explicitly investigated.

Investigations of Twelve-Step Recovery

Twelve-step fellowships are of interest to both clinical studies of recovery and ethnographic investigations of these fellowships as social structures. Project MATCH, a clinical investigation of recovery from alcoholism, found that AA was no less effective than other interventions on any measures and significantly more effective on the measure of the percentage of participants maintaining abstinence over three years [7]. Other clinical investigations have focused on the effectiveness of twelve-step fellowships for specific subsets of the population (e.g., [11]) and how twelve-step fellowships can be combined with professional interventions for best patient outcomes [30]. Ethnographic investigations of twelve-step fellowships have focused on issues of language and meaning [13], social agency [22], and identity [4]. All of these emphasize that twelve-step fellowships develop a distinct culture, language, and practices that are adopted by new members through participation in these communities. To my knowledge, there have been no formal investigations of how technology fits (or does not fit) into the culture of twelve-step fellowships.

Spirituality

Twelve-step fellowships are spiritual programs of recovery. God is referenced in six of the twelve steps. There is a great

#	Gender	Recovery	Fellowship(s)	Location
P1	M	7 yrs.	NA	GA, USA
P2	M	28 yrs.	NA, OA	GA, USA
P3	M	28 yrs.	NA, EA, CODA	GA, USA
P4	M	5 yrs.	AA	CA, USA
P5	M	2 yrs.	AA, NA	CA, USA
P6	M	3 yrs.	AA	GA, USA
P7	F	19 yrs.	NA, Al-Anon	GA, USA
P8	F	6 yrs.	NA	GA, USA
P9	M	2 yrs.	AA, NA, CMA	GA, USA
P10	F	10 yrs.	NA	GA, USA
P11	M	12 yrs.	NA, Al-Anon	GA, USA
P12	M	21 yrs.	NA	NB, Canada

Table 1. Participants’ demographics and fellowships attended (primary listed first). Fellowships included: NA (Narcotics Anon.), OA (Overeaters Anon.), EA (Emotions Anon.), CODA (Co-Dependents Anon.), AA (Alcoholics Anon.), Al-Anon (Families of Alcoholics), and CMA (Crystal Meth Anon.).

deal of controversy about whether twelve-step fellowships are a religious program or even a cult [3], calling into question the constitutionality of twelve-step fellowships as court-ordered or medically-sanctioned interventions. While the use of technology for spiritual or religious purposes is not out of the purview of HCI research (e.g., [31]), taking a stance on the religious aspects twelve-step fellowships is not the purpose of this work. Despite the controversy regarding the twelve-step approach, these are (and will likely continue to be) the most common treatment option for many addicts and alcoholics because AA/NA is free, non-professional, and widespread, making daily meeting attendance practical for most who need it. As in previous work that uses religion as a lens for reconsidering the home [31], this investigation uses twelve-step recovery fellowships as a lens for reconsidering some assumptions of social computing.

METHODS

Informed by participatory observation of AA and NA fellowships, I conducted in-depth interviews with twelve members of twelve-step programs to discuss the role of technology in recovery.

Formative Participatory Observations

Twelve-step fellowships have a distinct culture and language [22]. In order to inform my in-depth interviews, I conducted a six-month participatory observation study of AA and NA. During the course of this time period, I attended 132 meetings (with a roughly even split of AA and NA) in the states of Georgia and California. I also participated in 18 organizational service structure meetings at the group and regional level, conducted a review of currently available technologies for recovery, and reviewed and documented the artifacts of the program such as bulletin boards, information pamphlets, and meeting scripts. This body of work was documented through daily field

notes. Discussing the details of this formative phase is outside the scope of this paper; however, this immersion period helped to contextualize and inform the investigation described in this paper, familiarize me with the language and philosophies of twelve-step recovery, and gain access to members of these fellowships for in-depth interviewing.

Interviews

I interviewed twelve participants who were members of AA, NA, or both to understand how they use technology for recovery and the opportunities and challenges of designing for recovery.

Participants

Table 1 provides a description of the participants, including their time in recovery, the fellowships they attend, and their geographic location. Six participants were recruited through an announcement before the start of three meetings: a co-ed NA meeting, a co-ed AA meeting, and a women's NA meeting. Three participants were directly contacted because they expressed the desire to be in the study during the participatory observation investigation. The remaining three participants contacted me on the recommendations of previous study participants. All participants who volunteered had more than one year of continuous recovery. I acknowledge that there is an unfortunate inherent sampling bias in this approach as the people who volunteered for the interviews were more likely to want to share their opinions on technology and thus perhaps hold stronger opinions (either positive or negative) than the larger body of either fellowship.

Procedure

Because of the sensitive nature of the topic approached, informed consent for participation in this study was obtained verbally and the requirement for documentation of consent was waived. Participants were not compensated for their participation. All interviews with Georgia members of AA and NA were conducted in-person, in the location of the participants' choosing (usually recovery clubhouse or coffee shop). The two California interviews were conducted over Skype and the interview with the Canadian participant was conducted by phone (storyboard sketches and consent sheets were emailed to the participants).

Each interview lasted between 50 and 130 minutes. In the first phase, we discussed the participant's background, fellowship participation, and elements of his or her recovery program. In the second phase, we discussed technology used by the participant to aid in his or her recovery process and general opinions about the role of technology in recovery. In the last phase, I elicited more contextualized feedback by presenting six storyboard sketches for potential technology for recovery. These were meant to provoke feedback and generate discussion (rather than serve as actual directions for design):

- **ServiceNet:** an online system for connecting fellowship members who are willing to help with those who need help (especially newcomers), for example rides to meetings, babysitting during a meeting, etc.
- **Meeting Spot:** a searchable list of meetings that is annotated by actual attendees to include information such as meeting size, detailed directions (e.g., which church door to use), and updated time/location.
- **Remote Attend:** a self-contained tablet-like device that can be used to provide remote presence at a meeting through videochat to a member who is currently housebound, hospitalized, or institutionalized.
- **Recovery Trading Cards:** website for making and printing cards that can be given to a newcomer, containing one member's contact information, meeting details, and recovery conversation starters. Includes a QR code for quickly adding new cards to a smart phone or computer contact list.
- **Recovery Tube:** a website that allows members to upload anonymized video (converted to avatar), audio, or text shares tagging them with topic tags. Members looking for a share on a specific topic can search this list and mark contributions as "extra helpful" to allow for recommendations and filtering.
- **GroupAdmin:** an online tool for storing a group's documents, information for trusted servants, and financial information. It can also be used to conduct a "straw poll" of members through email and facilitate communication with regional and national levels (e.g., generate an email to be sent when group info changes).

These ideas were chosen from a larger body of 50 brainstormed ideas because they focused most directly on addressing the major challenges observed in the preceding ethnographic investigation: finding and getting to meetings, forming a social support network, sharing recovery ideas with the larger community of recovering addicts and alcoholics, and organizing the logistics of the meeting.

After explaining each sketch, I asked the participant a number of questions, though the ones that led to most well-articulated responses were: "How can a system like this go wrong?" and "What would keep this from being accepted by your fellowship?" Perhaps this was because many participants knew me from the participatory observation as a technologist, so the negatively phrased questions made it clear that I was interested and open to divergent interpretations of technology.

Analysis

I transcribed all interviews and coded them using the method recommended by Seidman [25]. I began with an open-coding pass through the transcripts. New codes were added whenever I encountered a participant response that did not fit into any previous codes. An independent

researcher (who was familiar with qualitative analysis and twelve-step programs, but not a member of any program) and I worked together to cluster these codes thematically using affinity diagramming. Through this process, we identified seven major themes presented below. Once this set of codes was developed, I conducted two additional passes through the transcript data assigning codes to statements where appropriate. The themes reported below were those that appeared consistently across multiple interview participants, though points of contention are also noted to highlight divergent responses and opinions.

RESULTS

I begin with an overview of how currently available technology was used by participants to support recovery from addiction and/or alcoholism. Then, I discuss seven themes that highlight the tensions between twelve-step fellowships and technology for recovery.

Current Perceptions and Use

Interview participants used current technologies to support a number of recovery tasks in their lives. They used technology to find new meetings to attend, to do stepwork with their sponsors or sponsees, to attend online meetings, to find community in social networking site groups, to look for information about recovery and addiction, to keep track of a daily inventory, to read program literature, to coordinate and organize service work, and to listen to archived recovery speakers (see Table 2). Additionally, a number of the participants actually took part in the creation of new technological resources for recovery including creating new mobile apps (P4, P12), creating group webpages (P2) and digital resources (P3, P7), and creating/running online meetings (P11). It was clear that there is some optimism and hope about the potential role that technology could serve in recovery, but participants also acknowledged that there are a number of tensions and challenges related to the topic:

I think as a community, recovering addicts tend to be largely technophobic. (P10)

I have this essential trust that people understand the traditions, whereas ... how can you trust technologies to uphold the traditions? (P5)

Recovery has dealt with shifting dynamics since its inception. We dealt with the shifting dynamics of including women, the shifting dynamics of including gay people, the shifting dynamics of crack cocaine—you will find old timers that refer to themselves as joining NA BC, Before Crack—and you can make the argument that the introduction of technology is nothing more than that same shifting dynamic ... Or, you can choose to take the other side of the argument that technology is breaking traditions and the traditions of NA are sacred and you will have nothing to do with it. (P1)

In the remainder of the results section, I discuss seven themes that highlight some of the tensions in using technology for recovery.

Anonymity and Technology

Anonymity is a primary principle of all twelve-step fellowships, which both protects members from external judgment and protects the fellowship from questionable actions and statements of its members. Both types of anonymity are put at risk through the use of technology.

Participants relayed several examples where individual anonymity was broken through Social Networking Sites or where individuals were concerned about this potentially happening:

Through Facebook, a friend of mine got linked to an NA page, and she didn't do it. Somebody else tagged her, and it was not okay, because not everybody in her life needs to know that she was in NA. (P8)

Even if there are rules that you don't post other people's names, you know somebody will at some point. So what happens then? (P7)

Distrust of technology to be able to protect individual anonymity was also articulated when responding to the idea of remote videochat attendance:

The issue with videochat attendance is that you need to trust about other people not being in the room ... if one member of the group is uncomfortable, the group is just not going to use it. (P4)

As soon as you record your face, there's the possibility to have your own anonymity broken or violate a tradition because a recording might be used in an unintended way. (P12)

This distrust also extended to cloud storage of personal data and committing personal recovery information to any digital form:

I found that committing my personal information to a computer really worried me because there is this idea that everything you type into a computer lasts forever. (P5)

Aside from protecting individual anonymity, twelve-step fellowships worry about members publically identifying as part of the program:

There are Facebook pages devoted to recovery, and people have put themselves out there and I really think that's a violation of traditions ... the danger is in someone becoming identified as a member of a certain fellowship, then perhaps, they relapse. Now, a newcomer might think, "Maybe that AA or NA business is not very effective, so why should I bother trying it?" (P2)

Social Networking Sites and other examples of social computing complicate the process of protecting the fellowship as a whole from the actions of individuals.

Everybody gets on Facebook. And recovery is the core of our existence. What am I going to talk about, except the thing that's most important to me? ... Well, at World Services they met to discuss NA in social media. They talked for two hours and did not come to a consensus. But, NA had a Facebook page before and after that two-hour discussion, without saying that Facebook is wrong or you shouldn't be on Facebook with NA, they took down that page. (P1)

Twelve-step fellowships are still struggling with the relationship between social media and the principle of anonymity.

Principles Before Personalities

Most social computing systems include some notion of persistent identity or reputation, however this idea frequently goes against twelve-step traditions—in particular, the value that all program members are equal and principles come before personalities:

I think for me the biggest issue would be about the spirit of anonymity, in that we are all the same. If you sit there and make a list of what you're good at or what you know about, that totally busts that. (P8)

I can see some people saying that if you have a card with your name and you clean date on it, it sort of sets you apart a little bit ... you could say, "Hey, I have 5 years, I'm better than you." ... You could argue that it goes against the idea of all addicts being equal. (P10)

The whole "celebrity" status thing ... you're almost saying that you're an expert. People may start thinking that this person knows better than somebody else ... this kind of separates us. (P12)

Additionally, one of the basic ideas behind twelve-step programs is that people are capable of change. A persistent state in an online system might hinder this growth, trapping an individual in being seen for who they were instead of who they are:

My first idea is that somebody's past performance might not be a good predictor of their future performance, especially in AA, because people tend to turn a corner. (P5)

This idea extended beyond individuals, to a similar resistance to rating or ranking other aspects of the program, such as meetings or groups:

If somebody just had an isolated experience and writes about it online, then that become the truth ... as soon as you share that, it could be active forever, even though it's relevant only for a moment. (P12)

The interview participants worried that when an impression is committed to publically shared writing, it becomes a "truth" that may be difficult to overcome, which is not in the spirit of recovery.

Membership and Access to Technology

In all twelve-step fellowships, the only requirement for membership is the desire to stop participating in the behavior addressed by the program. Technology is seen to conflict with this tradition because it can potentially introduce additional conditions to central participation in the fellowship:

You could argue that any use of technology goes against the third tradition that the only requirement for membership is the desire to stop using. Now, it's also the desire to start using a computer. (P10)

This concern extends to members who have limited technical ability and would not feel comfortable using technology:

We have a home group member who is really bad with technology. He says, "Don't get me on the Internet, I'll probably crash the whole thing down." So, how would he get a vote in this? (P8)

It also applies to members who may not have the resources to access a type of technology:

The truth is, especially new members of NA, they may not even have computers because they have lost everything they ever had. They're going to be disconnected, disenfranchised... (P12)

My only concern is not to forget about someone that doesn't have technology ... that they're not alienated from a particular resource, really. (P9)

Recovery fellowships do not want to adopt practices that assume any type of technology access on the part of its members, which means that any technical system must have a non-technical alternative for achieving participation.

Building Consensus Remotely

Decisions made by twelve-step groups or organizational structures are supposed to reflect the "group conscience" and so are frequently made through consensus. This is often a frustrating and time-taking process but one that is seen as necessary and better done face-to-face:

Someone might say something with speech that they didn't necessarily feel comfortable writing down or having a record of at all. If you did have discussion on a particular issue, I think it would be more likely to get hostile over the Internet, because you don't have to worry about offending anyone to their face. (P10)

P11 ran an online meeting and experimented with consensus-building through asynchronous online media, but without much success:

In that medium [online forums], and I'm still convinced of this, group conscience is very difficult to formulate. You're not seeing how people are talking, you're not hearing the timbre of their voice ... You know how contentious service can be anyway? Now take away all the human quality of it and it can become very contentious. (P11)

However, it is not always possible to make decisions in person, leading to an approach that combines grassroots input with final decisions made by elected trusted servants. One powerful example is the creation of new literature which is written and approved by the fellowship through a largely consensus driven process. NA has recently approved a new book, titled *Living Clean*, and P12 discussed the process of its creation:

What happens is that there is always an open door for people to input by sending emails or attending workshops. [The 16 people who were responsible for getting it all together] actually took all of the information that was given and they put

it on pieces of paper. Then they cut all the lines out and started laying them right on the floor to try and actually see what people said, so they can have all the similar ideas together. (P12)

Chapters of the book grew out of this grounded-theory-like analysis. Each chapter draft was distributed back to the groups for comments and approval. However, this was a complex collaborative process—the 130-page book took more than three years to write and approve.

Message of Recovery and Singleness of Purpose

Twelve-step recovery programs specify standards of behavior using the Twelve Traditions. All interview participants emphasized the importance of “going back and reviewing and keeping the traditions in mind” (P6) while designing for this audience. However, in addition to the Twelve Traditions, each fellowship has a specific culture and message that is supposed to stay consistent to create unity among members: for example, “the Al-Anon message is spoken here, leave all other affiliations outside” (P7). In the rooms, this culture is enforced organically:

You know how people sometimes show up at their first meeting and they share, but they don't understand the customs, culture, and rules of the program ... I've seen it where an old-timer will actually step in and stop their share and tell them to talk to somebody after the meeting instead. (P4)

The culture frequently includes a language, a way of sharing, and the tradition of keeping matters that do not relate to recovery out of the discourse. However, these practices get muddled on social networking sites:

That's when you get people talking about religion and politics in the rooms and that contentious nature is not good for unity ... the traditions have a very loose hold on social media. (P1)

It could go wrong by less focus on singleness of purpose, I could see where you could potentially change the focus. (P6)

Tech-Supported Task	Participants
Finding (Physical) Meetings Online	P1, P2, P4, P5, P6, P7, P9, P8, P10, P12
Remote Sponsorship and Stepwork (Videochat, VoIP, Email)	P1, P2, P6, P7, P8, P10
Online Meetings (Forums, Chat, Audio)	P1, P2, P3, P5, P7, P11, P12
Recovery Social Network Sites (Dedicated SNS, Facebook Groups)	P1, P3, P5, P6, P7, P9, P10, P11
Searching for Info on Recovery	P3, P10, P11
Daily Inventory Using App or Program	P4, P7, P10
Getting Program Literature on a Mobile Device (Apps, PDF, eBooks)	P2, P5, P6, P7, P9, P10, P11, P12
Coordinating for Organizational Service Work (Email, Webinars, Online Surveys)	P2, P7, P8, P10, P11, P12
Speaker Repositories (Online, On CD)	P3, P5, P6, P9, P11, P12

Table 2. Interview participants who explicitly discussed each particular use of currently available technology during the course of the interview.

Participants saw a danger that the message of recovery would be lost in personalities as resentments, negative opinions, and outside issues get played out online:

I'm sure as with any online forum, there's going to be risks ... You might get someone that has a resentment and tries to sabotage a meeting. (P9)

People are far more prone to comment negatively than positively online. So, the problem is that the unity of the program could be broken. (P1)

What about just inappropriate comments, like, “well, if you want to meet hot guys, go to this meeting...” (P7)

Controlling this kind of behavior is inherently subjective and interview participants questioned whether it would ever be possible in an online setting without completely reconsidering how twelve-step fellowships work. “Someone has to be the hall monitor, but this is a program where our leaders do not govern, but only serve,” said P11, “so who is going to do that and how is that going to work?”

Group Autonomy

The difficulty of maintaining unity and a single message of recovery is amplified by the tension between the tradition that calls for unity and the tradition that states that each group should be autonomous. Groups interpret the traditions differently due to geographic and demographic differences between groups. For example, in Georgia NA meetings, naming specific drugs is discouraged as it is considered to go against group unity, but:

Every area and every meeting has a different culture and things that are acceptable for sharing. In London, for example, it is not only acceptable, but encouraged to use the names of specific drugs. (P10)

In another example, meetings may face different challenges depending on the demographic of the participants:

In some areas, it's really not a problem because the majority of the members are gay or lesbian, but other areas are still very “men with men” and “women with women” because they try to prevent the very predatory quality of some men in recovery. (P11)

Additionally, NA and AA are grassroots organizations, so there is no requirement for any group to adopt a policy recommended by regional, national, or world levels of the organization:

You will find meetings that won't stock the new book. Even though it was approved unanimously by the World organization, because they don't think that the South had a big enough voice in its approval. (P11)

When most contact between members of the fellowship occurred in person, it was less likely that a participant would run across inconsistent readings of the traditions or conflicting policies. However, as technology connects addicts and alcoholics who would otherwise have never met, unity and autonomy are affected by the response to these inconsistencies.

Importance of Face-to-Face Contact

Every participant emphasized the importance of face-to-face contact for the success of a twelve-step intervention. Participants cautioned that an addict might use online reviews of meetings as an excuse not to attend:

I think there's something positive to be said for going to a meeting and forming your own opinion about it versus listening to the opinions of others and not going. (P6)

There was great resistance to introducing technology that would make an aspect of the program easier or more convenient at the expense of having to take the risk of actually making face-to-face contact with other fellowship members:

Just getting a list of numbers is too easy. People early in recovery need to make a conscious decision to go through the effort of asking for a phone number. They might be terrified to do that, but need to do it ... If it's too easy and you're just spoon-feeding it to people, they're not going to value it. (P1)

Even if online meetings and remote participation could potentially open a meeting to a person who otherwise would not be able attend, participants emphasized that this is “not the same as a regular face-to-face meeting” (P2). The physical aspects of being at a meeting are important:

When I go to a meeting, there is the opportunity to see and be seen, be a part of a fellowship ... I go through a day without touching anyone, but then you go to a meeting and you get to hold people's hands. That's real recovery. (P5)

And remote attendance was seen as just that—remote:

Someone could argue that this encourages a great limitation on face-to-face contact, which could limit empathy, rapport, and unity ... watching a screen is not the same thing as face-to-face contact and it could lead to a level of detachment about your recovery. (P10)

Despite the trouble potentially involved in taking meetings to hospitals and institutions, it was seen as an opportunity to meet in person:

I mean, most people say, “take the meeting to the guy in the hospital.” That's going to mean a lot more. You're going to be able to give him a hug and you can cry together, you know. Taking a meeting there is much more meaningful. (P11)

Though participants acknowledged the potential of temporary remote contact for stepwork or sponsorship, there was resistance to technological conveniences that may reduce face-to-face contact in the long run.

Overall Results

All of the participants in this study already used technology for one or more aspects of their recovery. Each person cited one or more of the offered designs as something they would like to see and use in the future, with the most popular designs being Recovery Trading Cards (5 named it “most promising”) and GroupAdmin (4 named it “most promising”). However, when asked to consider all the designs from the point of view of the group and AA/NA as

a whole, the participants were able to cite a number of issues that may prevent the adoption of such technologies. The main concerns centered around preserving the traditions of each fellowship: keeping participation as open as possible, encouraging in-person contact, supporting group autonomy and unity, and preventing violations of anonymity. Remote Attend was seen as the most potentially problematic idea (8 named it as “most problematic”). It is clear that designing for twelve-step fellowships would require close collaboration with the service bodies of each organization to reach a consensus on what would or would not be appropriate as a technological intervention. However, there are also some considerations that might increase the acceptability of suggested designs. In the next section, I consider five suggestions that may be incorporated into the design of technologies for 12-step fellowships and may also be helpful to other social computing applications.

DISCUSSION

In this section, I present considerations for design that emerged out of my investigation of twelve-step fellowships. Rather than focusing just on specific solutions in designing for recovery, I also draw out themes and design directions that have been foregrounded by this investigation and demonstrate how these ideas may apply to other contexts and existing threads of conversation in the HCI community.

The Social Journey, Not the Information Destination

Though there are a number of ways to make meeting selection, recovery information gathering, and participation in service more efficient in terms of *time*, this may not be helpful to the recovering individual. The interview participants were suspicious of any technology that replaces face-to-face contact with interacting with a system. Getting a list of numbers to call in a twelve-step meeting is not just about gathering contacts, rather it is about making a face-to-face connection and beginning to build a network. While most contact managers try to make it easier to add a contact, one can imagine a technology that makes it more *difficult*, perhaps by requiring you to both meet and to write down a few things about the person you are adding. In recovery, the journey of getting information about new meetings, new people, and new recovery suggestions is just as important as the information gained because it helps build a recovery support network. However, this is not only true of recovery. For example in the workplace, a network of relationships is key to success in an organization [12]. One can imagine that a similar approach to making it harder to contact somebody until making a personal connection might be more difficult in the short-term but more beneficial in the long-term.

Anonymous Social Computing and Democratization

While online interaction allows the users to achieve a certain level of anonymity (e.g., [9]), most social computing approaches rely on the idea of persistent identity and

reputation to encourage desired forms of interaction (e.g., posting good posts) and discourage undesired activities (e.g., vandalism). Identity plays an important role in online peer-support communities, but could also interfere with the ability to get emotional support or accountability in times of trouble [20]. The twelve-step spiritual ideas of anonymity and “principles before personalities” challenge the idea that persistent identity is necessary for the health of the community. Twelve-step programs encourage the understanding that all addicts/alcoholics are equal, that there is no such thing as an AA/NA superstar, and that *any* member can be of service regardless of previous reputation. Anonymity has been serving an equalizing purpose in twelve-step fellowships since their inception; perhaps, it can have a similar effect in online communities that are struggling to democratize participation.

Going for the Real Thing

Videochat has been billed as the next best thing to being there in person, as “almost being there” [26]. However, participants in this investigation pointed out that in the hurry to get “the next best thing” to physical presence, one may miss out on the opportunity to feel a sense of loss that might actually drive the search for “the real thing.” For example: seeking to stay connected to an old sponsor after a move may prevent looking for a new sponsor who can be physically present; connecting with a hospitalized group member using videochat may actually remove the sense of urgency that might have driven one to visit in person. This is consistent with recent criticisms that communication technology may actually create an illusion of contact while making us feel more disconnected and isolated [28]. This is also consistent with work that shows that children who are separated from their parents focus on the next reunion or substitute in-person contact with another adult, rather than relying on mediated communication that occurs during the separation [32]. Maybe remote contact is at times inevitable and videochat is the next best thing, but it also may be important to work under the assumption that it’s still nowhere close the real thing and support achieving in-person contact as the first priority.

High-, Low-, and No-Tech Participation

When access to technology becomes a requirement to full participation, some groups and individuals may become disenfranchised. Communities like AA and NA are particularly sensitive to this possibility and try to provide equivalent no-tech, low-tech, and high-tech ways of participating in important community processes. For example, in the process of writing the *Living Clean* book, an addict could have contributed to the content by participating in a physical book workshop in their area (no-tech), calling in their opinions to the book committee (low-tech), or responding to an online survey (high-tech). There is inherent complexity in having these methods of participation interoperate—in this case, this was achieved only through the service of several individuals who

collected, compiled, and interpreted the input from the various sources. As the differences between those with advanced infrastructure and those without it grow, it may be important to find better ways for high-, low-, and no-tech systems to coordinate. It may be impossible to achieve the same experience when using different levels of technology, but it should be possible to achieve the same goals. This contributes to the ongoing conversation within HCI that maintains that it is important to design technology not only with considerations for those who use it but also for those who might be excluded from its use [8].

Localization, Autonomy, and Polyvocality

There was a great deal of geographic and demographic variety in approaches to recovery and interpretation of traditions within the same fellowship. Groups like AA and NA demonstrate that it is possible to maintain a long-term discussion about the balance between unity and autonomy. This autonomy has always been encouraged in twelve-step fellowships, but may be lost as portions of the fellowship move online. Contact with other perspectives is important, but perhaps the virtual spaces provided by an online community smooth over differences in striving for neutrality in a way that reduces polyvocality in this diverse space. Recent work on post-colonial computing, emphasizes the importance of embracing rather than erasing this diversity of perspectives [10]. The physical metaphor of an autonomous group of a larger fellowship might be an interesting way of considering polyvocality. While an in-person visit to a different physical location holds an implicit understanding of entering a different culture with all of the inherent qualities of being a guest in another’s home, online it may be unclear whose perspectives and interpretations are primary for the moment. Introducing the “home” vs. “visiting” metaphor to online communities with diverse subgroups may be a promising direction in design.

CONCLUSION

This work is the first to examine the role of technology in twelve-step fellowships. Through in-depth interviews informed by participant observation, I identified seven major tensions between technology and the fellowships, including challenges in achieving anonymity, equality, universal access, consensus, unity, and autonomy. These findings may serve to inform the design of future technologies for twelve-step recovery, but may additionally highlight alternative ideas and perspectives to help address existing challenges in social computing.

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