

## Using Qualitative Methods to Inform Scale Development

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*This article describes the process by which one study utilized qualitative methods to create items for a multi dimensional scale to measure twelve step program affiliation. The process included interviewing fourteen addicted persons while in twelve step focused treatment about specific “pros” (things they like or would miss out on by not being involved in twelve-step programs) and “cons” (things they dislike or would benefit from if they did not engage in twelve-step programs). The triangular process used in qualitative research is described, which generated items for the subsequent instrument to measure ambivalence toward recovery programs. Mixed-method strategies included qualitative interviewing to inform scale development and three analytical approaches to produce specific codes, themes, and domains. Key Words: Mixed Method Research, Scale Development, and Twelve Step Programs*

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### Introduction

Padgett (1998) and Weiss (1994) describe a rationale for the use of qualitative interviewing to provide preparation for quantitative studies. This qualitative preparation is often conducted for survey research. By conducting qualitative interviews prior to surveys, key information from participants in specific social/behavioral circumstances (e.g., addicted individuals in twelve step recovery programs) can enrich the quality of the research. Analyzing data generated from the interviews informs the survey designed for larger samples. Furthermore, analysis of data from surveys can be analyzed from either or both a quantitative or qualitative approach. This broad mixed-method tradition provides the foundation for the description of this particular study. The next few paragraphs describe the background of this study within the context of substance abuse research and the focus on informing the development of a scale to measure ambivalence toward twelve step recovery programs.

Generally true in substance abuse research, little is reported about how items for instruments, checklists, or inventories are generated. For example, Baker, Sellman, and Horn (2001) report on the construction of the *Attribution to God's Influence Scale* (AGIS), which observes alteration in perceptions of God's influence of people involved in twelve-step recovery. They mention constructing items based upon consultations with colleagues and participants in spirituality classes, but a specific description of *how* these consultations resulted in the generated items was not included. Given the lack of attention about item generation in the psychometric literature, one might conclude that the topic is

not an important issue/concern. From a quantitative or statistical point-of-view, the origins of questionnaire items are not significant. The key is whether or not the items represent the construct or variable in question as measured by reliability and validity scores; not where the items came from.

Padgett (1998) mentions a multimethod combination depicted as qualitative to inform quantitative efforts in developing scales. In this method, the qualitative study comes first and is used to explore concepts and to identify hypotheses. Using qualitative inquiry can be especially useful to researchers in the development of scales. In essence, validity of concepts and inquiries in quantitative research can be enhanced by first being grounded in real life situations and observations through having conversations or interviews from an open perspective.

In addition to psychometric concerns, where the items were first located and how they were shaped or edited, provides an important context that reveals assumptions and theoretical positions of the authors of those items, highlighting what domains of knowledge or expertise they privileged as well as those domains that were omitted. Examining these early stages may also serve as a vehicle for us to see if there may be some yet unexplored or untapped areas of the topic in question (or new informants) that *could* yield specific new items or entire new contexts for questions.

Making transparent the early stages of item development also provides valuable insight for those who seek knowledge, skills, or experience in the process of scale development. The process outlined in this article may also provide an exemplar for others who are looking for templates or guidance on how to develop their own measurement items in their chosen field of interest. Describing this process in detail highlights the advantages and disadvantages of different methods of originating questions for item development. Revealing the processes by which scale items are first located and then refined, grounds those items in a more inclusive context that may add to the confidence we place in those items. In scale development, the primary goal is to create rigorous scales that reliably and validly represent the *best possible questions* we can devise.

In qualitative research, disclosure of choices made by the researcher(s) and the thinking involved in making those choices are essential in clarifying the assumptions and theoretical/philosophical dimensions of the methodology (Denzin & Lincoln, 2000; Patton, 2002). Methods, protocols, and measurement devices emanate from preferred understandings of the world and of what constitutes knowledge. Qualitative research understands the research enterprise as occurring within a context (e.g., academy, organization, governmental agency, industry) that significantly shapes the research itself (Greenwood & Levin, 2000). Making the context explicit aids the reader in better understanding the findings and how they make sense, and to see and understand the larger systems/forces within which the study itself is situated.

Going through a process of outlining and describing these choices and motivations assists the researcher to better comprehend her/his own process as a researcher, improving the current project's focus and rigor, as well as sharpening the researcher's item generation skills in terms of other future research projects. Building in systems of "unpacking" or examining preferences of all choices made in the formal research process (as well as in the earlier pre-formal stages), enhances the researcher's understanding of the validity of her/his efforts and to what extent it may be biased in one

direction or another. Only a careful reflection on each research decision/step will enhance confidence in the effort to come to know authentic lived process(es).

### **Study Domain of Interest**

Formal alcohol and other drug treatment programs utilize twelve-step programs as free and accessible adjuncts that are consistently associated with improved substance abuse outcomes (Emrick, Tonigan, Montgomery, & Little, 1993; Tonigan, Connors, & Miller, 2003; Tonigan, Miller, & Connors, 2000). Hence, it is considered by many to be standard practice for treatment providers to rely on twelve-step programs to supplement treatment and as a primary source of post-treatment support (Borkman, Kaskutas, Room, Bryan, & Barrows, 1998; Humphreys, 1997).

Even with the evidence of improved outcomes associated with consistent involvement in twelve-step programs, it has also been demonstrated that there is a high rate of dropout; estimated at 50% within 90 days and 90% by the end of the first year following their initial experience with Alcoholics Anonymous (Miller & McCrady, 1993). The Project Match Research Group (1997) observed this high rate of dropout and less than regular weekly attendance (sometimes referred to as *disaffiliation*) among those who were treated in twelve-step facilitative methods in the year following treatment (Tonigan et al., 2003). Research evidence suggests that minimal and sporadic twelve-step program involvement or complete noninvolvement places those clients at greater risk for resumption of the problematic behaviors. Though research has demonstrated that treatment can increase post-treatment affiliation with twelve-step programs, little is known about specific factors that discourage affiliation.

This concern has stimulated an increasing interest in research focused on identifying factors that could predict disaffiliation in order to better inform treatment providers who may be able to adjust treatment procedures and methods so as to reduce disaffiliation (Connors, Tonigan, & Miller, 2001; Fiorentine & Hillhouse, 2000; Kelly & Moos, 2003; Mankowski, Humphreys, & Moos, 2001; Tonigan et al., 2003). To date, no research has provided a model of factors and influences that can reliably explain the process of twelve-step program affiliation (or disaffiliation). Also, no research was found that directly seeks the ideas of newly sober individuals about pros and cons of twelve-step program involvement. Thus, this study could contribute to the literature by directly tapping into the perceptions of alcoholics, concerning why they choose to affiliate or disaffiliate with Alcoholics Anonymous in order to better inform items for a scale to measure ambivalence in affiliation.

### **Researcher Collaboration**

This project was undertaken by three colleagues in the Kent School of Social Work at the University of Louisville subsequent to official approval given by the Institutional Review Board. Noell Rowan was a graduate research assistant and a full-time doctoral student in the Kent School at the time that this study was conducted. Her background is in clinical social work with specializations in substance abuse and chemical dependency treatment as well as gerontology and general mental health practice. She was interested in learning more about both qualitative and quantitative

research methods, and saw this project as an opportunity to learn about both of these approaches with two professors who have significant experiences in each methodology. She is now an assistant research professor at the University of Louisville's Kent School of Social Work.

When the study was conducted Dan Wulff was an associate professor at the University of Louisville's Kent School of Social Work. He is a qualitative researcher with a background in marriage and family therapy. Dan is a co-editor of an online qualitative research journal and teaches qualitative inquiry in the doctoral research sequence.

Rick Cloud is an assistant professor at the University of Louisville's Kent School of Social Work. His primary research interest in improving community based alcohol and other drug treatment outcomes led him to initiate this project. Though his research experience was in quantitative methods, he was interested in the potential of using qualitative research to obtain a more in-depth understanding of affiliation or disaffiliation factors.

### Steps

Originally, this project was conceived by Rick in order to develop a list of pros, cons, and expectations of twelve-step programs from people in treatment settings (the outcomes of this project are reported in Cloud, Rowan, Wulff, & Golder, in press). Noell was given the opportunity to join Rick in this endeavor due to her similar research interests. Rick used a theoretical model (based upon *Motivational Interviewing*), which focused on the belief that ambivalence is a factor influencing motivation and engagement in twelve-step programs (Miller & Rollnick, 2002). This motivational theory could be used to explain why clients do not attend twelve-step programs as prescribed (weekly or more) after treatment. More specifically, these theories would point to ambivalence surrounding attendance at twelve-step meetings as being central in creating their disaffiliation. Ambivalence is characterized as the pros (things people like or would miss if they did not attend) contrasted with the weight of the cons (things they dislike or would gain if they did not attend). Miller and Rollnick suggest that the balance of the pros compared with the cons will create ambivalence and increase the tendency to disaffiliate. Originally developed for use in motivating changes in alcohol abuse, *Motivational Interviewing* has been successfully adapted to explain non-compliance with a wide variety of health behaviors (e.g., smoking, abuse of drugs other than alcohol, diet, exercise, medication compliance, treatment session attendance, HIV risk behaviors).

For Rick and Noell, the initial task involved compiling a detailed list of pros and cons to affiliation/disaffiliation. In order to more concisely capture ambivalence, the list of pros and cons would need to be comprehensive and sensitive to the range/variety of factors involved in decisions to affiliate/disaffiliate. The purpose of developing this composite list of pros and cons was to better understand why people affiliate/disaffiliate and to create a scale which could be used by counselors to assess the likelihood of post-treatment dropout, and, as a result, to make adjustments if possible that could reduce dropout, or alternatively, to offer the newly recovering person some other form of aftercare. Rick and Noell initially planned to use a quantitative survey with a sample of people in treatment to obtain this information. A decision was made to conduct a

qualitative inquiry to prepare for the survey based on discussions with colleagues and review of the literature about mixed method approaches (Monette, Sullivan, & DeJong, 2002; Padgett, 1998). In an effort to produce more detailed and varied responses, they elected to use a qualitative set of interviews to garner this information about affiliation/disaffiliation.

To build in the qualitative interviews, Rick then approached Dan about joining this research team. While Dan preferred a more open ended qualitative interview, Rick remained committed to a semi-structured set of questions due to his perception that an open ended study would be too time consuming. A compromise was reached whereby a semi-structured interview protocol was developed, while including opportunities for the respondents to expand on their responses whenever the interviewer felt it appropriate. Some examples of questions from the interview protocol were: (1) What do you like about twelve-step programs (TSPs)? (2) What would you miss out on if you did not attend TSPs? (3) What do you dislike about TSPs? (4) What would you rather do instead of attending TSPs?

These interviews would be conducted by Noell and Rick and the transcribed responses would then be coded by each of the three researchers independently of one another. A grounded theoretical context would be used to guide the coding process. As in grounded theory, it is important that the researchers learn from the abstract data in terms of what problems might emerge instead of forcing an agenda (Glaser, 1992). The process of coding would begin with open coding, where an initial constant comparative analysis occurs prior to naming the codes and placing them into categories (Glaser). The coding would be conducted from a descriptive perspective without any prior conceptions of what the codes might be. The terms codings and themes are used interchangeably as they are meant to describe the important codes or themes derived from the interview data. The three codings/themes would then be compiled by Rick, noting the differences among the three sets. More specifically, all three researchers were to analyze the list of pros and cons and compose sets of codes/themes independently of each other. Rick would then view each of the three lists and make note of the differences in the lists. Therefore, the specific qualitative methodology is based in grounded theory to create codings/themes. The interview information as represented in the three sets of codes/themes would provide the necessary voice from the interviewees. Hence, the data gathered from the interviews would speak through the three sets of codes and their compilation.

Rick was familiar with what the current literature would offer as reasons for disaffiliation and affiliation. This information would be compared to the composite list that the research team would generate from the interviews, to see what the interviews added (if anything) beyond the already existing literature (see Cloud et al., in press, for a full discussion of how the literature compares to results of the study).

### **The Interviews**

“To be means to communicate” highlights the deep human need to talk with another person (Bakhtin as cited in Gergen, 1999, p. 131). In these interviews, Noell felt gifted to travel with the interviewees on their road to co-construct understanding of their individual experiences in recovery. A unique connection was made with the interviewees in asking them to describe in depth their positive and negative experiences with twelve-

step meetings; questions not typically asked of addicted people who are engaged in a formal twelve-step focused treatment or recovery process. Perhaps the reasoning for this is that in chemical addiction treatment there is typically a heavy emphasis on becoming involved with twelve-step recovery as a life and death matter (and consequently less concern for likes and dislikes).

Many of the interviewees were homeless and represented cultures different from the experiences and background of Noell. To keep in mind the power of listening, really listening, to another person (particularly persons whose voices are not usually included prominently in research) creates a powerful moment for the researcher of doing something really meaningful. Not only does the interviewer come to know many new points-of-view and appreciate the person in new ways, the interviewee can also have a validating experience of having someone (a researcher) genuinely take an interest in her/his viewpoint in some detail. The verbatim recording of the words of each interviewee as well as the use of active listening techniques assisted the interviewer in going deeply into the specifics of each interviewee's story.

The interviewees were informed that their words were going to be used in the development of a scale to help other at-risk clients in the future. Being able to include the interviewees in this scale development process was gratifying to them. Many of the interviewees commented on how they appreciated being asked about their experiences from a researcher who was going to give their ideas significant influence. (Subsequent to this study, the scale that these interviews helped develop was used by Noell and Rick in a large quantitative study. Several of the interviewees who had provided information that led to items for the scale were themselves given the scale and were noticeably pleased to see that many of their responses were included in the scale.)

### **The Process Continued**

After each day of interviews conducted by Noell, Dan met with her to debrief her interviewing experience, looking for any instances of where she might have changed her interview style or process (or desired to). Debriefing was only conducted with Noell because Rick only conducted three interviews subsequent to Noell's eleven to assure a point of saturation. There were instances when Noell altered her style of interviewing. For example, she found that when she began the interview with questions about their dislikes of AA or other twelve-step groups, there was more discomfort and a sense of holding back from sharing information. However, when she began the interviews with questions about their likes of AA or other twelve-step groups, a sense of ease in their sharing of detailed information was experienced. It was then much easier to talk about their dislikes.

Eventually, a point of saturation was reached wherein no new properties, dimensions, or other information was being contributed in the interviews (Strauss & Corbin, 1998). Rick then went out to another treatment facility and conducted three more interviews in an effort to determine if any new ideas would be generated from these additional interviews. No significantly different ideas came from these additional interviews. Saturation was then determined based solely on reflections on the interviews.

### **Description of Interviewees**

The sample of interviewees consisted of 14 newly recovering individuals enrolled in six treatment and recovery programs in the Louisville, Kentucky metropolitan area. The treatment and recovery programs were based on methods which focused on the same objectives of Twelve Step Facilitation (TSF; Nowinski, Baker, & Carroll, 1992). Purposive and convenient sampling was utilized in this study. The interviewees were intentionally balanced, with three being from two different outpatient programs (one was non-profit and the other for-profit) and six others represented non-profit inpatient long-term residential treatment and recovery programs.

In the sample, there were ten males and four females. The mean age was 40 with nine Caucasians and five African Americans. Four reported that they were homeless, four had a place of their own, two had arranged transitional living, and four were moving in with a friend or family member. The average length of time in the current treatment program was 13 weeks. Most of the participants (N=10) reported annual income from all sources of less than \$15,000 per year, two between \$15,000 and \$30,000 and two over \$30,000. A majority (78% or N=11) of the sample reported alcohol as their primary drug of choice, with only two reporting crack cocaine and one reporting marijuana. Other sample characteristics included: eight (57%) reported 12 years of education; two less than 12 years and four reporting more than 12 years. Half of the participants identified as single, three reported being married or partnered, while four reported being divorced. All 14 of the respondents reported an acceptance of religious beliefs and none reported being agnostic, atheist, or spiritual. Also, all participants reported that they could see themselves as a member of AA or NA either now or after discharge from their current treatment or recovery program.

Impressions were that most of the interviewees were open about their experiences and their opinions about twelve-step recovery. The interviewees were easily engaged in the process of talking about their likes and dislikes for the most part. One of the participants, however, seemed to be wary of the professionals of the treatment center finding out about what she had to say. The written preamble consent seemed to ease her discomfort once reviewed several times and discussed. Once the interviewees were asked to talk about themselves and their experiences, most of them were very verbal and it took some swift handwriting and recording to keep up with their enthusiastic pace of sharing pertinent information. Hence, many times the interviewees were asked to slow down or to repeat their words as they were informed of the value and importance of recording verbatim each statement that they had to share. Once the likes and dislikes were written verbatim, the interviewees were asked to review each statement and to rank the importance of each statement as either very important, somewhat important, or not that important.

### **Description of the Amount and Nature of the Data Collected**

After Noell conducted eleven interviews, a list of the participants' 152 pros (likes) and 180 cons (dislikes) was derived and then sent out electronically to the other two researchers for their perusal. This list was created by Noell after the fourteen interviews were transcribed. All of the words for the list were taken verbatim from the transcribed

interviews. All three researchers then merged this long list by examining the list for repetitive statements, which created a new list with only 85 pros and 111 cons. The next step was to look for patterns in the data and then group the pros and cons under specific codes or themes. Each of the three researchers (Rick, Dan, and Noell) did this work independently and then met to compare their three generated lists.

### **The Three Processes of Creating the Lists**

Three analytic strategies guided by grounded theory were employed with the interview data. We selected these strategies in an effort to analyze the data independently of each other and to provide more in depth analysis given the varied backgrounds of the three researchers. The processes of analyzing the data are described in the following paragraphs. Table 1 presents the three researcher approaches to analyzing this data (Constas, 1992).

The process that Noell used to create a list of likes and dislikes, which were grouped under specific thematic titles, first consisted of reading the list through several times to get a sense of the meanings or themes underneath the actual words. More specifically, there were themes that emerged through an overlap of words or specific groupings of comments made by the interviewees. Out of this process came several domains or categories. Noell had a distinct advantage in this process as she was able to recall the conversation with the interviewee and reflect upon their intonation and explanation of their likes and dislikes. In essence, the fruitful discussions held about their likes and dislikes provided much in the way of an expanded understanding apart from mere words on paper.

There were initially five themes which emerged for Noell.

1. *Message*, which referred to the content of the message in the meetings.
2. *People*, which referred to the descriptions of the people involved in twelve-step programs, their attitudes, personalities, and behaviors.
3. *Change*, which referred to the specific changes from old behaviors and thinking brought about in the recovery process by obtaining skills/tools such as positive attitude, desire to change, learning to work the steps, personality changes, helping others, etc.
4. *Safe place*, which referred to descriptions of the actual meeting place(s) and the feeling of safety and security within the program and specific meeting(s).
5. *Spirituality*, which refers to the gifts and benefits of involvement with TSPs such as blessings, miracles, and spiritual connection(s).

### **Pros by Noell**

1. The meetings have strong, powerful, and honest messages.
2. People are welcoming in TSP's.
3. The people help me to not go back to drinking and using.
4. I like mixing with different walks of life in TSP's.
5. TSP's help me to change my life.
6. Going to TSP's helps me to get outside of myself and know others.

7. My thinking is better when I go to meetings.
8. I like the spiritual environment in TSP's.

### **Cons by Noell**

1. People talk negatively in TSP's.
2. I feel like an outsider in meetings.
3. I feel pressure to participate in meetings.
4. The meetings are uncomfortable for me to attend.
5. Meetings interfere with too many other things.
6. The actions suggested in TSP's are difficult for me.
7. The meetings are too crowded.
8. People talk about God too much in meetings.

The process used by Dan was also to examine the data for themes. The initial data (the written lists provided by Noell) that Dan was given was examined for content similarities between items. Dan was only using the written lists provided by Noell; he had no background in the actual interviews (as Noell had). When similarities were found, those items were grouped under a label or code that seemed to fairly represent all items so grouped. The responses were initially reduced to 36 pros and 44 cons. If specific items were sufficiently different than the other items, they were given a code of their own. Several iterations of grouping codes (axial coding from the methodological basis of grounded theory) resulted in a set of themes that could not be further combined without losing some of the richness of the data. Six categories of pros and six categories of cons were then constructed based on the themes rising from the data and they were represented by statements.

### **Pros by Dan**

1. I receive support or validation.
2. I can help others.
3. I like the positive atmosphere among the attendees.
4. I appreciate the spiritual dimensions.
5. I receive helpful information.
6. The meetings help me achieve and maintain sobriety.

### **Cons by Dan**

1. The physical setting is uncomfortable.
2. Social interaction is problematic.
3. Going to meetings is too inconvenient.
4. I feel intruded upon in these meetings.
5. I disagree with this overall approach.
6. Attendees are too self-centered or uppity.

Rick had studied two research textbooks from teaching a foundational research class for MSSW students (Monette et al., 2002; Padgett, 1998) that guided his coding. He was particularly influenced by the coding methods advanced by Monette et al., which provided more specific guidance on coding methods that can be used to derive thematic codes. The primary objective of the coding process was to create themes that were exhaustive and mutually exclusive. The resulting coding process could best be described as an iterative process of developing codes and then testing codes for fit against new or different qualitative items. While most coding activity occurred at initiation, the process of refining final codes continued for several months and was influenced by several factors including codings of Dan and Noell, quantitative research literature reviewed on the topic of affiliation, new insights derived from repeated reading of the data and codes, thoughts and opinions of others who were consulted along the way, and writing a grant application that sought to develop a model of affiliation. The initial codings included separate yet similar codes for pros and cons, as follows.

### Coding Definitions for Pros

**Identification:** *Awareness, appreciation, understanding, openness* to others that have shared the common problem of addiction, which has influenced and shaped their lives in similar ways.

**Support:** *Feeling* accepted/welcome/esteemed/loved/cared for, *receiving* encouragement, *having a forum* to process significant feelings/events, *receiving* guidance and help. This is contrasted with various TSP practice designed to help people feel supported that would be included under “format/culture” category.

**Spirituality:** *Feeling* connected by some transcendent being or experiencing some sense of meaning and purpose outside of self. *Being rewarded* by helping another person or a group. This is contrasted with TSP spiritual practice that would be included under “format/culture” category.

**Effective:** *Belief* that TSP’s increase motivation to change, instill hope, reduce substance use, or improve biopsychosocial functioning.

**Format/Culture:** Referring to established TSP *values and normative practices*.

### Coding Definitions for Cons

**Identification:** Does not identify with group members.

**Support:** Perceived or real (1) *rejection* by TSP members or (2) *social discomfort* (social phobic reactions). (2 themes)

**Spirituality:** *Discomfort* with spiritual or religious beliefs or practices of TSP.

**Effective:** Unwilling to invest and involve oneself sufficiently in AA/NA because (1) one *cannot see significant benefit* in involvement or (2) due to *placing greater value* on competing demands for time.

**Format/Culture:** *Dislikes* TSP normative practices and values including abstinence.

**Logistics:** Issues relating to physical or fundamental barriers to attending meetings (e.g., location, childcare, health and safety issues, handicap needs).

**Intolerance:** Difficulty acculturating or mixing with different types of people.

Table 1

*Documentational Table for the Development of Codings/Themes/Domains*

Noell	Rick	Dan
1. Compile the list of pros and cons based on transcribed interview data 2. Merge the list by eliminating repetitive statements to produce a smaller list 3. Analyze the list to create specific codings/themes which may later be used as domains for the scale. 4. Create a list of pro and con exemplar statements based on the themes.	1. Merge the list by eliminating repetitive statements to produce a smaller list 2. Analyze the list to create specific codings/themes which may later be used as domains for the scale.	1. Merge the list by eliminating repetitive statements to produce a smaller list. 2. Analyze the list to create specific codings/themes which may later be used as domains for the scale. 3. Create a list of pro and con exemplar statements based on the themes.
	3. Review the three researchers' lists of codings/themes/and exemplar statements and construct the final list of seven themes. These seven themes became the seven domains for the resulting scale.	

**The Process of Combining the Lists**

Rick’s list was similar in content to Noell’s five themes. For example, Noell’s “change” theme is very close to Rick’s “effective” theme. Given similarity in Rick’s pros and the cons codings, they were next combined into one set of codings that could exhaust all qualitative items, both pros and cons. To improve validity and confidence in the codings, Rick compared his codings to Noell’s and Dan’s, which created some minor

changes in definitions, and provided some degree of confidence in validity of the resulting codings. This comparison occurred because Rick was most familiar with the extant knowledge from the literature and could use that grounding to see if, and how, the codings from Noell and Dan were producing anything different (or not). Noell's initial codes were in a comparable format as Rick's with code names and definitions (see above), which made a direct comparison of code consistency possible. However, Dan's codings were in a different format (i.e., an exemplar statement format, described above), which made direct comparison more difficult. Since Noell's format was similar, Rick compared, contrasted, and considered the fit of his codings on qualitative items to those produced by Noell. Dan's exemplar statements were then coded and evaluated for goodness of fit. Per a request to review Dan's codes, Noell later provided her own set of exemplar statement codings (similar to Dan's and described above) that were similarly tested for fit to Rick's final list of codes. Noell perceived that it might assist the process if she coded her responses similar to Dan's. Noell's and Dan's exemplar statement codes fit the final coding system developed and are reported by Cloud et al. (in press).

According to Faul and Van Zyl (2004), the process of scale development must include a preliminary process of analyzing a problem enough to clearly establish a need for a scale. This predevelopment stage is crucial in an effort to establish the theoretical framework and to justify the need for a new measurement tool. Once the initial stages are complete, it is crucial to identify the construct to be measured in a clear, unambiguous manner. In this study, as stated earlier, the construct to be measured was the ambivalence related to involvement in twelve-step programs. The development phase is next wherein the following occurs: (a) the design of the particular items for the scale, (b) the scale length is determined, (c) scaling of the items, (d) developing a scoring formula, and (e) instructions are written for the respondents (Faul & Van Zyl, 2004). This next paragraph presents an overview of the process of converting the themes into the scale domains. The final seven themes were used in constructing the seven domains of the resulting scale. These thematic domains later summarized by Cloud et al. (in press) were placed into three broad categories consisting of (1) *beliefs*: congruence of personal beliefs with twelve-step recovery beliefs, values, and normative practices; (2) *socialization*: the reaction of the participant to the social environment of twelve-step recovery groups; and (3) *competing needs*: the degree to which twelve-step program attendance fits with the other perceived needs. Attempts were made to eliminate any overlap among specific categories. The final thematic coding categories minimized the categorical overlap although overlap could not be completely avoided (e.g., the category positive expectancies included statements that described assessment of recovery group support). However, the broader categories of congruence with beliefs, socialization process factors, and competing needs appear to stand on their own as independent categories.

### **The Resultant Scale**

The Twelve Step Ambivalence Scale (TSAS) was developed as a result of this qualitative research process. Rick's seven primary themes were used to test separate scales measuring domains of ambivalence related to affiliation. Another manuscript has

been submitted for publication, which provides a detailed description of this scale and its psychometric properties (Cloud, Golder, Rowan, & Van Zyl, 2007). The instrument was developed to provide direct service providers with a scale to measure unresolved ambivalence and risk of underutilization of twelve-step programs.

The TSAS provides a new beginning of exploration into the particular make-up of ambivalence with twelve-step recovery. The aforementioned description of literature on motivation theory (Miller & Rollnick, 2002) and another article written to describe the literature on affiliation with twelve-step recovery groups (Cloud et al., in press) provide a review of quantitative literature used to support a motivational-socio-cultural model focused on behaviors representing the process of assimilation and acculturation into twelve-step groups. Motivation related to specific behaviors is posited as necessary, but not sufficient for assimilation/acculturation; rather, engagement in the behaviors of (a) internalizing the norms, values, and beliefs, (b) involvement in formal or informal mentoring relationships, and (c) attending meetings with a sense of comfort and a positive attitude contributes to a process of affiliation.

Results of this research provide support for unresolved ambivalence related to these three behaviors. Unresolved ambivalence was noted in the long and varied list of dislikes, the observation that there were far more dislikes than likes, and the emergence of a “competing needs” theme in the analysis that suggested a conflict with spending their limited time attending meetings as opposed to other demands, such as childcare or work responsibilities. These results emerged as new information that we had not seen in the literature.

Increasing awareness of clients who have unresolved ambivalence with discussions of likes and dislikes of twelve-step programs is a first step toward assisting clients in alternative solutions to possibly avoid future relapse with chemical abuse. Alternative solutions can involve assisting with parenting needs, linking with a mentor who can help with exploring belief systems, or many other options to expand support networks.

### **The Relative Value of this Study**

Now that the detailed qualitative process of developing items for an instrument has been revealed, the relative value of this process is presented. It should be noted that the resulting instrument has since been developed and other than one sub-scale (logistical needs) reliability of the instrument is outstanding (Cronbach Alpha  $>.87$  on the six sub scales; see Cloud et al., 2007), suggesting that this form of item development holds promise. A scale is known to be reliable when the instrument has a high Cronbach Alpha coefficient.

Each of the three researchers reflected upon how their involvement in the project was meaningful to them. This project was very important to Rick, as it met his goal of adding to his theoretical work about posttreatment disaffiliation from twelve-step programs. Rick reported that conducting this qualitative study was important to advancing theory of disaffiliation with twelve-step recovery groups. The lack of an a priori research protocol and the subjective nature of when one reaches “saturation” in responses were aspects of this qualitative study that Rick found problematic. Rick’s quantitative leanings would lead him to interview more subjects to assure all of the less

frequent responses and themes had emerged before stopping, although, in hindsight the responses he obtained fit neatly within the codes developed prior to collecting these additional observations, suggesting that Noell's subjective assessment of "saturation" was an accurate assessment.

The involvement that Noell had in working on this project was instrumental in her educational process in a myriad of ways. She learned about working with two researchers coming from varied approaches to research and how to glean knowledge from both ways of thinking and approaching a study. Her goals of learning about qualitative methods and being involved in pioneering addiction research were met.

This work was valuable to Dan, as it met his goal of working with colleagues who were unfamiliar with the process of qualitative research. It was a hoped-for experience of "seeing what happens" that Dan desire; it was almost a guarantee that something interesting would transpire. There were struggles and differences of opinion on how to proceed, but the process of working out these issues and moving forward was gratifying.

### **Lessons Learned**

While all three researchers agree that the research went well and were pleased with the outcomes, there were lessons learned. Rick identified a desire to have pushed for a better method to reconcile and report differences in coding while it was fresh on the minds of the researchers instead of waiting until later to complete the process. He also wished that 30 interviews had been conducted, as this larger number may have identified "those less frequent responses and themes that may have not yet emerged" even though a point of saturation had occurred with only 14 interviews. Including more women in the sample would also have been advisable, since the whole logistical domain appears to arise out of the concerns of women.

The process of working separately from the other researchers turned out to be a positive experience. We worked on the same project, but separately. We each did our parts in isolation from one another. This seemed to work well. In fact, it afforded us the opportunity to put together truly different ideas and codes from the data. With more interaction throughout the study, we may have missed some of the significant differences that were apparent in our working separately. Conjoint work oftentimes blurs differences that exist among individuals.

### **Concluding Remarks**

In this world of immediate gratification and an underwritten sense that a speedy journey is superior to a slower, more reflective one, this study has taught us all in many ways. It has been frustrating to all three researchers that we have taken this process so slowly and written this article in such a way that we have had to meet many times after the completion of the research to reflect on our process of many months ago. This study and the subsequent written part of this process have taught us about reflection, merging of three different ways of thinking about approaches to research, and patience with the process. It is one thing to imagine goals for research and design an appropriate study. It is quite another to bring together three very different researchers and work together, yet separately, to complete a project that had never been attempted before. On the surface, it

appeared that the rewarding elements of this study were giving power to otherwise silenced voices in research or possibly the creating of a scale to assist treatment providers and their clients. However, after so much reflection and attention to details of the actual process of conducting the research, it has become evident that our process is another rewarding element of the study. This article serves as a testimony to that rewarding process with value we wish to transmit to the readers. After reading this manuscript, we hope that the readers will now have more of a transparent understanding of the process of using qualitative methods to create instruments for research as well as an enriched view of the value of this collaborative work. Furthermore, it is recommended that replication of a triangular mixed-methods approach to constructing scales be implemented. Findings from this study indicate that using a qualitative interview strategy with three independent analytic approaches can have a profound impact on the development of a scale.

### References

- Baker, M. P., Sellman, J. D., & Horn, J. (2001). Developing a God/higher power scale for use with twelve step treatment programs. *Alcoholism Treatment Quarterly*, 19(2), 45-59.
- Borkman, T. J., Kaskutas, L. A., Room, J., Bryan, K., & Barrows, D. (1998). A historical and developmental analysis of social model programs. *Journal of Substance Abuse Treatment*, 15, 7-17.
- Cloud, R. N., Golder, S., Rowan, N. L., & Van Zyl, M. A. (2007). *Measuring risk of Alcoholics Anonymous and Narcotics Anonymous dropout: Initial development and psychometric testing of the twelve-step ambivalence scale (TSAS)*. Manuscript submitted for publication.
- Cloud, R. N., Rowan, N. L., Wulff, D., & Golder, S. (in press). Literature review and qualitative exploration used to develop a theoretical model of posttreatment twelve-step program affiliation and dropout. *Journal of Social Work Practice in the Addictions*.
- Connors, G. J., Tonigan, J. S., & Miller, W. R. (2001). A longitudinal model of AA affiliation, participation, and outcome: Retrospective study of the Project MATCH outpatient and aftercare samples. *Journal of Studies on Alcohol*, 62, 817-825.
- Constas, M. A. (1992). Qualitative analysis as a public event: The documentation of category development procedures. *American Educational Research Journal*, 29(2), 253-266.
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2000). *Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.
- Emrick, C. D., Tonigan, J. S., Montgomery, H., & Little, L. (1993). Alcoholics Anonymous: What is currently known? In B. S. McCrady & W. R. Miller (Eds.), *Research on Alcoholics Anonymous: Opportunities and alternatives* (pp. 41-78). New Brunswick, NJ: Rutgers Center of Alcohol Studies.
- Faul, A. C. & Van Zyl, M. A. (2004). Constructing and validating a specific multi-item assessment or evaluation tool. In A. R. Roberts & R. Y. Kenneth (Eds.), *Desk reference of evidence-based practice in health care and human services* (pp. 564-584). New York: Oxford University Press.

- Fiorentine, R., & Hillhouse, M. (2000). Drug treatment and 12-step program participation: The additive effects of integrated recovery activities. *Journal of Substance Abuse Treatment* 18, 65-74.
- Gergen, K. J. (1999). *An invitation to social construction*. London: Sage.
- Glaser, B. G. (1992). *Basics of grounded theory analysis*. Mill Valley, CA: Sociology Press.
- Greenwood, D. J., & Levin, M. (2000). Reconstructing the relationships between universities and society through action research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 85-106). Thousand Oaks, CA: Sage.
- Humphreys, K. (1997). Clinicians' referral and matching of substance abuse patients to self-help groups after treatment. *Psychiatric Services*, 48, 1445-1449.
- Kelly, J. F., & Moos, R. (2003). Dropout from 12-step self-help groups: Prevalence, predictors, and counteracting treatment influences. *Journal of Substance Abuse Treatment*, 24, 241-250.
- Mankowski, E. S., Humphreys, K., & Moos, R. H. (2001). Individual and contextual predictors of involvement in twelve-step self-help groups after substance abuse treatment. *American Journal of Community Psychology*, 29, 537-563.
- Miller, W. R., & McCrady, B. S. (1993). The importance of research on Alcoholics Anonymous. In B. S. McCrady & W. R. Miller (Eds.), *Research on Alcoholics Anonymous: Opportunities and alternative* (pp. 3-12). New Brunswick, NJ: Rutgers Center of Alcohol Studies.
- Miller, W. R., & Rollnick, S. (2002). *Motivation interviewing: Preparing people to change addictive behavior* (2nd ed.). New York: The Guilford Press.
- Monette, D. R., Sullivan, T. J., & DeJong, C. R. (2002). *Applied social research: Tool for the human services* (5th ed.). Toronto: Wadsworth Thomson Learning.
- Nowinski, J., Baker, S., & Carroll, K. (1992). *Twelve-step facilitation therapy manual. National institute on alcoholism and alcohol abuse Project MATCH monograph series* (Vol. 1). Rockville, MD: US Government Printing Office.
- Padgett, D. K. (1998). *Qualitative methods in social work research: Challenges and rewards*. Thousand Oaks, CA: Sage.
- Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Project MATCH Research Group. (1997). Matching alcoholism treatments to client heterogeneity: Project MATCH posttreatment drinking outcomes. *Journal of Studies on Alcohol*, 58, 7-29.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.
- Tonigan, J. S., Connors, G. J., & Miller, W. R. (2003). Participation and involvement in Alcoholics Anonymous. In T. F. Babor & F. K. Del Boca (Eds.), *Treatment matching in alcoholism* (pp. 184-204). New York: Cambridge University Press.
- Tonigan, J. S., Miller, W. R., & Connors, G. J. (2000). Project MATCH client impressions about Alcoholics Anonymous: Measurement issues and relationship to treatment outcome. *Alcoholism Treatment Quarterly*, 18, 25-41.
- Weiss, R. W. (1994). *Learning from strangers: The art and method of qualitative interview studies*. New York: The Free Press.

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### Article Citation

Rowan, N., & Wulff, D. (2007). Using qualitative methods to inform scale development. *The Qualitative Report*, 12(3), 450-466. Retrieved [Insert date], from <http://www.nova.edu/ssss/QR/QR12-3/rowan.pdf>

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