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Scientific Studies of Alcoholics Anonymous: An interview with J. Scott Tonigan, Ph.D.

Introduction

The quantity and methodological quality of research on the prevalence, processes, styles, and stages of addiction recovery have advanced dramatically in recent decades. One area of special interest has been the effects of participation in recovery mutual aid organizations on long-term recovery outcomes. A major contributor to this area of scientific investigation has been Dr. J. Scott Tonigan, Research Professor at the University of New Mexico's Center on Alcoholism, Substance Abuse, and Addictions (CASAA). For more than 25 years, Dr. Tonigan has conducted studies to evaluate the effectiveness of addiction treatment. He is one of the leading authorities on the effects of participation in Alcoholics Anonymous and Twelve-Step-oriented addiction treatment. I recently (April, 2016) had the opportunity to interview Dr. Tonigan about studies he has conducted. Please join us in this engaging conversation.

Background

Bill White: Dr. Tonigan, how did you come to specialize in research on the treatment of alcohol dependence and on Alcoholics Anonymous?

Dr. Scott Tonigan: Well, it's an interesting story that begins with going to potlucks. My wife was a graduate student at Bill Miller's lab at the University of New Mexico and, as a spouse, I attended these potlucks that Bill regularly hosted. I had finished my Ph.D. in measurement statistics and was looking for employment. At one of these potlucks, Bill Miller invited me to join a project of his as an investigator. It happened to be Project MATCH, and I was deeply and quickly immersed into randomized clinical trial methodology. I was encouraged by Bill Miller to include some AA measurement tools in the Project MATCH assessment battery, which turned out to be important as we found post-hoc that the AA involvement of study participants was an important factor in explaining clinical outcomes of the treatment we were evaluating. It became very clear to me as a statistician that more variance in post-treatment drinking outcomes was explained by what happened post-treatment than actually the treatment experience itself. That intrigued me and drew me into looking at what people were doing post-treatment, which led me to what would be a long series of studies on AA. I have been focused on identifying what it is about AA involvement that explains positive outcome.

Bill White: You began this work in the late 1980s. How would you describe the state of treatment of alcohol use disorders at that time?

Dr. Scott Tonigan: Well, in the treatment research world, it clearly was the horse race question of whether treatment A was better than treatment B, with very little thought to the actual process of treatment. The process question came much later, but in the early '80s, the idea was to pit one

treatment against another. While the treatments might be theoretically derived, the actual assessment of the treatment effects was not then considering process variables. Then with Project MATCH, there was some consensus that maybe the horse race question wasn't appropriate and that we should be matching different patient characteristics to different treatments. Again, however, it really was not process-oriented. We collected a great deal of process variables but the main and secondary hypotheses really were patient treatment matching variables. Project MATCH is often considered to have been a failure in the sense of not confirming any of the major matching hypotheses, but I would regard that view as mistaken. In addition to developing a host of standard variables for the field and the use of very rigorous methodologies, the mechanisms of behavioral change movement came as a direct influence of Project MATCH study.

Highlights from Major Studies

Bill White: How did the expectations of outcomes from Project MATCH differ from the actual outcomes?

Dr. Scott Tonigan: I think there was a blithe naiveté on our part that we could actually match clients with particular treatment based on simple variables such as religiosity, anger, or psychopathology. We assumed that such a unidimensional aspect of a client could be matched to a particular treatment to demonstrate increased efficacy. I think that was very naïve. In fact, Dick Longabaugh wrote a wonderful paper after the MATCH study about maybe how we had erroneously thought that we could really pick out unidimensional variables.

Bill White: How did a Twelve-Step Facilitation come to be included within Project MATCH?

Dr. Scott Tonigan: The Twelve-Step Facilitation (TSF) treatment was selected for a number of reasons. It was the prevailing treatment model in the United States, and to have not included it would have been a tremendous oversight. There was also a feeling that TSF would serve as a good control group. We thought of it as a treatment as usual control group since NIAAA understandably did not want to have a control group in our experimental design that withheld all treatment. The Twelve-Step treatment was thought to be an alternative to a no treatment control group. Third, while there were certainly advocates for the Twelve-Step treatment model, they were greatly outnumbered by the Principal Investigators (PIs) who were more interested in motivational enhancement treatment (MET) and cognitive behavioral treatment (CBT). It has often been misinterpreted that the TSF trial within Project MATCH was done with less fidelity than the other treatment, but that is not true. TSF was manual guided based on the core AA literature, and the fidelity of the therapy provided within TSF was as closely monitored as the CBT and MET interventions. So we had rigorous monitoring of TSF, CBT, and MET, with the predominant TSF model in the United States assumed to be a form of control group to which CBT and MET could be compared.

Bill White: There seemed to be quite a surprise when the initial MATCH findings were reported and the Twelve-Step facilitation intervention was comparable to the other interventions and, in terms of abstinence outcomes, even superior.

Dr. Scott Tonigan: There were two surprises. The biggest surprise, of course, was the failure of the matching hypotheses. We had approximately 30 PIs and co-PIs in a room who had all been working for four years on this study. We were all quite excited about having the first MATCH results finally unveiled by the primary statisticians, Bob Stout and Philip Wirtz, who did an exemplary job. Bob Stout stood up and said, "Not all of the matching hypotheses were supported" and then went on to say virtually none of them were supported, other than a brief glimmer of support for the anger matching hypothesis." That was a really big letdown. Once that shock faded, the next surprise was that Twelve-Step treatment had fared as well as CBT and MET. When they looked at the measure of total abstinence, TSF was significantly superior. It made a difference of about 10 percent.

Bill White: One of the other areas assessed in Project MATCH was that of therapist effects on outcomes even when delivering the same intervention. Could you comment on the findings on this?

Dr. Scott Tonigan: Some of the largest effects in the MATCH trial were therapist effects and that was true in all modalities. There are several surprising factors about that. First, MATCH was conducted with such fidelity that you'd think that the rigorous fidelity monitoring of therapist behavior would have minimized therapist effects rather than maximized them, but that was not the case. That's quite a finding in itself to show you that therapist effect is so robust that it could withstand the rigorous standardization of protocols and therapist behavior. On the other hand, we found that there tended not to be a superior therapist but one that was less than superior—ones not associated with positive outcomes. We have to be careful saying that because clients were not randomized to therapists. There were therapists who were always associated with a poorer outcome within each treatment condition, but it's possible they had been assigned the more difficult clients and actually could have been, quote unquote, "the better therapists." We can't speak firmly yet of therapist effects, but the general pattern we saw was a tight packing of outcomes associated with each therapist and then one or two therapists that didn't have as good of outcomes with their clients.

Bill White: Historically, Project MATCH was such an important study within the modern history of addiction treatment research. How did your participation in MATCH influence your subsequent research career?

Dr. Scott Tonigan: Oh, it fundamentally reshaped it, and I think that would be true of all people who were closely involved with MATCH. It launched my career into mutual help research. We saw in doing the MATCH analyses the importance of mutual aid participation, not only within Twelve-Step condition but also within the CBT and MET conditions. In-treatment and post-treatment Twelve-Step attendance accounted for treatment outcome. It was very clear. It was also very clear that we didn't know why. We had very coarse measures of AA attendance, for example, and a few measures of involvement but, again, very coarse measures. It was clear that we needed to know a lot more about what people were involved and how such involvements mobilized change mechanisms. My work with Project MATCH inspired my subsequent research on mechanisms of change in general and how that applies to Twelve-Step experience in particular.

Bill White: Could you comment on the most important research questions you've explored?

Dr. Scott Tonigan: The most productive research questions are those questions that may be theoretically driven but are also prompted by practitioner experience and practitioner views. In our silo mentality within the research communities, we can miss the mark badly sometimes. We might confirm hypotheses but yet provide practitioners with information that is of little value to them clinically. In fact, that's one thing that we're pushing right now. The mechanisms of behavioral change movement within research is making great strides in identifying some of the mechanisms of change within AA and within other treatments, but we are continuing to explore how to convey these findings to make them more meaningful to service practitioners. One of the most elusive things Bill Miller and I have worked on together is what we called chasing the dragon--the distinction within Twelve-Step programs between sobriety and abstinence. That's a very pivotal key issue in Twelve-Step programs but one that's very elusive from a measurement perspective.

Studies of Alcoholics Anonymous

Bill White: How has the methodological quality of AA-focused research evolved over the course of your career?

Dr. Scott Tonigan: I can speak directly to that. We're just finishing a meta-analysis on AA research, and the quality of studies has improved dramatically on every front from a study design perspective, from a measurement perspective, from a follow-up perspective, from a study compliance perspective, and from the nature of questions posed. The improved theoretical underpinnings of more recent studies have been dramatic. That's not to nay-say the early work on AA, but the quality of research improved dramatically when NIH started funding research specifically focused on AA. Now, the irony of this, Bill, is that many of the meta-analytic estimates of the magnitude of the association between AA attendance and outcome compare quite favorably to the poorer research. We can have more confidence in these numbers now but they're not dramatically different from the earlier estimates.

Bill White: And how in 2016 would you summarize research findings on the overall effectiveness of AA on improved drinking outcomes and enhanced quality of life?

Dr. Scott Tonigan: From the later studies, I would say that referral to AA is now an evidence-based practice. We have clear evidence that there are modest but positive associations between AA attendance and positive outcome, meaning increase abstinence, for many but not all problem drinkers. We clearly see that the affiliation profiles developed in the '70s have been largely upheld in the sense that problem severity predicts interest in and commitment to Twelve-Step practices and that higher frequency of attendance predicts more positive outcomes. I think we can be very clear that this is an evidence-based practice. I think the question we will be exploring in the next ten years is whether that statement generalizes to other mutual help programs. And by that, I don't mean sister programs like NA and CA, but to groups such as Women for Sobriety, SMART Recovery, Celebrate Recovery, and others. There's been less work there.

As for the second part of your question, it is less clear how AA attendance affects larger quality of life issues. On this dimension, we see a lot more heterogeneity in outcome I think, in large part, because of the wide variation of measures being used. We see very little relationship, for example, between AA attendance and purpose in life, but we do find positive associations between AA attendance and some other quality of life measures. We have not had standard measures across studies on quality of life compared to the measures we have used on drinking outcomes.

Bill White: One of the observations that you've made in your studies is that all AA meetings are not the same. I think this notion of group differences has such import for clinicians referring to recovery mutual aid groups. Could you comment on such group differences and the varieties of AA experience?

Dr. Scott Tonigan: We're preparing a grant right now to look at this in detail. Historically, we as a research community have looked at AA attendance as a dose response model. One meeting is half as good as two meetings, is half as good as four meetings, and we've assumed that all AA meetings are alike. Clearly, that's not the case. Through our research, we've attended hundreds of open A.A. meetings and introduced ourselves as researchers interested in learning more about AA. You can hear people say that you can travel anywhere in the country—in fact, the world, and that AA's the same wherever you go. Then after the meeting, someone will come up to us and say, "I'll take you to a really good meeting." So we realized early in that there is a difference between AA as a program and difference between the program and the fellowship as practiced in particular meetings. Montgomery, Miller, and I got very interested in this in the mid-'90s and we clearly showed that individuals perceived AA meetings differently on such key dimensions as cohesiveness, supportiveness, and aggressiveness. What we found was that those groups that were seen as more cohesive also tended to endorse the Steps more and were associated with more positive outcomes. We've continued to pursue this line of research and what we're now looking at is how those perceived differences in group dynamics predict outcome over and above the frequency of attendance. We are now finding the important of such dynamics as they differ across meetings. This is not too surprising since a lot of the peer-reviewed social support literature and group therapy literature shows the importance of the social group dynamics.

The research challenge is that we're dealing with people's perceptions and we have no objective way of saying group A is more cohesive than group B. My feeling, however, is that it doesn't really matter; it's the perception of the individual that's important. When you think about the Twelve-Step experience, it's about the affective reaction; it's about the mutual identification; it's about hope. Those are things that are very hard for us to measure as scientists, but we're grappling with it because ultimately the group dynamics may be one of the most important ways that AA involvement influences recovery outcomes.

We have found, for example, that AA sponsorship is a clear predictor of positive outcome. A clear role of the sponsor is to help individuals work through the Twelve Steps, and an outcome of working the steps is a spiritual experience. So, one would expect that having a sponsor would be related to having a spiritual experience. But actually, we find it's more related to meeting attendance. Sponsorship is related to behavioral aspects of the Steps. Having a sponsor predicts that you will do a Fourth Step and a Fifth Step, that you will make amends, that you'll do some of the behavioral prescriptions in the Twelve Steps, but the actual change in spiritual practices of AA members seems to be predicted more by AA meeting attendance than

sponsorship. It's that connection between people at meetings that seems to matter most. So, this is what's so fun about Twelve-Step research: there's always a twist; there's always something that you think is going to go one way but goes another.

We're very interested in the dynamics of groups. Until we get a real handle on that, we will not fully understand the process of AA and the mechanisms through which AA involvement influence drinking and related outcomes. It's a fascinating field right now.

Bill White: Your research has challenged a lot of folk wisdom or popular conceptions about who does and does not do well in AA. There was, for example, a time in the field when many believed that Twelve-Step programs were ineffective for women, youth, people of color, people with co-occurring disorders, and atheists and agnostics. You and your colleagues tested those propositions. What did you find?

Dr. Scott Tonigan: Largely, none of them are supported. I'm cautious here because between 1993 and 2013, there were 643 empirical papers published on AA. So we have a massive volume of publications and, through selective sifting of these publications, one can demonstrate almost what one wants to. If one has an agenda, one can probably find a paper where there are gender differences in outcome or there are ethnic differences. But when you look at the weight of the literature, when you look at the ten or fifteen studies that looked at particular moderating variables, such as atheism or gender or, most recently, we looked at Native Americans participation in AA, we find there are not differences in engagement or outcomes based on such characteristics. It's been tremendous fun and even shocking at times. For example, in our most recent study of urban Native American AA participation, we found that, if anything, they attended more frequently, dropped out less often, and had equivalent outcomes as non-Hispanic whites. This challenged the popular wisdom. I think the question of whether AA is appropriate for special populations is no longer a question. For further example, we've just done a meta-analysis looking at dual diagnosis and Twelve-Step attendance and we find there is no difference between dual diagnosis outcomes compared to non-dually diagnosed outcomes and that they also affiliate as readily as persons within co-occurring disorders. This is not to say they wouldn't benefit from programs such as Double Trouble, but for those who do affiliate with Twelve-Step programs, they fare just as well.

Bill White: Critics of AA have cited a high drop-out rate within AA and the oft-cited statement that the AA "success rate" is only 5 percent. What does the actual research on AA reveal about retention and drop-out?

Dr. Scott Tonigan: When we look at Twelve-Step attendance among community samples and treatment-seeking samples, between 50 and 60 percent remain in AA for twelve months. Now, we also have that funding difficulty that studies typically don't extend beyond a twelve-month follow-up, but for the one-year data we don't see anything like 5 percent; we see retention in the 50 to 60 percent range. That means that 40 to 50 percent do discontinue AA participation but here's a further twist. Many people who discontinue AA meetings nevertheless report continuing AA-related practices such as reading the literature and helping other alcoholics. Now, are those drop-outs or not? We would say if someone attended formal twelve sessions of CBT and they stopped treatment and continued to use those skill-based things that they learned in treatment that they were a success. So, we have to be very careful what we even mean by drop-

out. We tend to think that if they discontinue AA meeting attendance, they're an AA drop-out. I think that might be a premature assessment.

Bill White: Yes, it would also seem that a number of so-called dropouts will later return to regular AA attendance and that a number of people after initial AA exposure may disengage but maintain positive recovery outcomes.

Dr. Scott Tonigan: Exactly, I think we will have to change our conceptualization of what constitutes a "drop-out." As researchers, we like our constructs to be very cleanly dissected so we know something is or is not present. Our research in CASAA and I purposely want to include a lot of investigators: Michael Bogenschutz, Bill Miller, Judy Arroyo, and myself who are involved in Twelve-Step research are finding that it's not clean. AA experience is not dichotomous; it's a very rich and varied experience that allows us to reveal more general patterns than clear distinctions.

Bill White: A related issue to engagement and retention is the question of styles of long-term AA involvement. Have you found sub-groups with varying styles of AA involvement?

Dr. Scott Tonigan: I'm not the best person to talk about that, although we have done one ten-year follow-up study that is informative on this. Lee Ann Kaskutas and her group has done considerable work on this question. From our perspective, we see drop-off patterns. The largest attrition occurs between three and six months, if we define attrition as non-attendance. You then, of course, see it stabilize at about a year and then you see a second kind of drop-off point at about five years. But we have to be careful when we say this because if we take a group of a hundred people who are all initially attending AA, we're going to always see over time a quadratic curve of increased and then decreased meeting attendance. It's easy to interpret that as drop-off or lack of compliance, but when we think about it, AA attendance is likely to decline in a positive way as members are doing better and becoming more fully integrated into society. In our dose response model, we look at decreased levels of participation as lack of compliance when the reality is that decreased meeting attendance might be the best fit for that individual once they have a home group, a sponsor, are re-engaged in family and work, and have achieved more balance in their life. We have to be very careful how we look at those things. One would expect that as one gets a more engaged in other things, you have competing activities and families and children so we may see a natural decline in meeting attendance.

Bill White: You referenced mechanisms of change within AA, such as sponsorship, social network support, and spirituality. What are your general findings about these mechanisms?

Dr. Scott Tonigan: We have what we would call common mechanisms and then we have Twelve-Step-specific mechanisms. The NIAAA-funded mechanisms grants have allowed us to study both. Speaking of the specific AA mechanisms first, a cursory review of the core AA literature suggests a number of them, such as anger and selfishness. These must change or the core literature predicts you're ultimately bound for relapse. So one would think selfishness would change among members, anger would change among members, and depression would change among members. The larger concept would be that negative affect itself is a change mechanism. Now what is very unique here is that most mechanisms of change generally speak of

mobilizing new behaviors. In contrast, AA mechanisms often involve decreases, which is interesting because it's harder to extinguish a behavior than it is to initiate a new behavior.

What we and others found—and John Kelly's done tremendous work in this area--is that anger really didn't change much among AA members over a twelve-month period; depression decreased but it was more related to reductions in drinking than it was the Twelve-Step practices, and my recent work found that changes in selfishness (measured as narcissism) was high and didn't change much in early recovery. All these negative affect measures initially were very high among the Twelve-Step samples but they did not seem to be related to drinking outcome contrary to prescribed core literature.

So, it's a mixed bag. I do think the literature is appealing to people with these attributes because as the literature suggests, we're angry, we're selfish, we're depressed, we're self-seeking, and self-will run right, if you will. So the literature has an immediate appeal to people who are high on these characteristics. But does change on these characteristics predict positive outcome? Our work and the work of others indicate it doesn't. So some of the Twelve Steps specific mechanisms do not seem to operate as indicated in the literature, with the key exception of spiritual gains. Here, there must be half a dozen studies now, maybe even more, that have very formally investigated how gains in spiritual practices are both predicted by AA tenets and in turn, predict positive outcomes. That's a pretty consistent finding. And when we talk about spiritual gains, the studies tend to use such measures as prayer and meditation that are linked to abstinence or reduced drinking. What remains in question that we are now examining is the precise path from spiritual gains to reduced drinking. One possibility we are examining is that prayer and meditation may lead to a reduction in impulsivity.

So, spirituality is the one AA specific mechanism of change. On the common mechanism side, there are such factors as social support and increased self-efficacy that are powerful mechanisms of change. The latter is a bit of an anomaly to Twelve-Step ideology. Outwardly, you'd think that the message of powerlessness and a loss of control would lead to a reduced sense of self-efficacy, but there are interesting ways that AA leads to increased self-efficacy through the increased confidence that I will not and cannot drink today, but should I drink, I will experience loss of control and its consequences. AA members seem to integrate those two messages as one of the paradoxes of AA involvement. And when you look at the meta-analyses, it's one of the most powerful mechanisms of change within AA.

Bill White: There's this growing secular wing within AA and other Twelve-Step fellowships. This seems to reflect a form of secular spirituality beyond traditional definitions of spirituality—embracing things like life meaning and purpose or meditation practices. Is that evident in the spirituality research that you and others have done on AA?

Dr. Scott Tonigan: We had an NIAAA-funded grant in which we used twelve different measures of spirituality, from very narrow to very broad definitions of spirituality. We administered all these measures and each measure had three or four scales and some of them had eight or nine subscales. This got us into such esoteric areas as forgiveness of partner. When we did a factor analysis of all these scales, we found three primary factors. For all of our academic scholarly work defining these very discreet dimensions of spirituality, participants responded to what were three main dimensions that were reflected in practices within their daily lives. One was one's spiritual practices such as prayer and meditation; a second one was one's relationship with God or a Higher Power; and the third one involved religious practices. It was very inspiring

to see this because our message at the end of the paper was to not develop more religiosity or spirituality instruments. We have enough, and in fact, have too many.

Bill White: As someone who has invested so much time in AA-related research, how do you view AA critics and their highly publicized claims that AA is ineffective and that AA involvement may actually be harmful?

Dr. Scott Tonigan: I actually take the position of AA itself in welcoming research on questions raised by critics. I think there are clearly issues to be concerned about within Twelve-Step programs, such as the risk posed by thirteenth-stepping (potential sexual exploitation of new members). Professional practitioners need to make those they refer to AA and other mutual aid groups aware of such potential risks. To the larger group of critics, I encourage them to do research to test what they are alleging. To be candid, opinions on Twelve Step programs are like a tower of Babel--strong opinions pro and con with very few of them based upon scientific evidence. So, If the critics want to come and do research on the questions they are raising, I'd love to work with them. And then we can let the data speak for themselves. Part of the problem is confusing AA-influenced treatment as practiced in local communities with AA itself. Bill, the biggest misnomer of community-based AA is that AA is confrontational. That impression comes from treatment, not from AA.

Another misconception has been the characterization of AA as "self-help" program. I fought and continue to fight bitterly against that terminology on the grounds that AA is not self-help but mutual help. One of my triumphs is that the mutual help or mutual aid language is finally beginning to replace the self-help language within the research community. We now have a very well-developed body of scientific literature on AA and a core of researchers focused on studies of recovery mutual help groups. Advocates and critics of AA must both face the litmus test of cumulative AA research findings. It's a very well-developed literature that somehow goes unnoticed by a lot of people.

Bill White: I hear references to people doing summaries of the research talking about AA and other Twelve-Step programs. There an implication that what we've learned about AA can be indiscriminately applied to other Twelve-Step programs or to secular and religious alternatives to AA. Is that a bad assumption?

Dr. Scott Tonigan: I think so. There's been very little work done on NA or CA, and less on some of the other groups. The issue is compounded by the heavy migration across sister programs. When you sample an AA meeting, as many as a third of those attending also attend other sister programs. We need independent research on these other recovery mutual help groups.

Bill White: What are your thoughts about future directions of research on AA and other recovery mutual aid groups?

Dr. Scott Tonigan: It ties back to your incisive question about the dynamics of AA groups and the differences; I think the quantitative researchers are finally catching up with the qualitative researchers. The qualitative researchers, for a long time, focused on the mechanisms and the variety of the AA experience. This is the wellspring of their work. We quantitative people have

tried to create little boxes and use a dose response model and use very rigid mechanisms assuming that AA meetings are the same everywhere, but we're finding that is obviously not the case. So, I think in the next ten years we will start modeling that richness and the varieties of the AA experience in our data collection and analyses, as well as in our conceptualization of models of AA influence.

Bill, the area where we've seen the most success of mechanisms of behavior change being used by practitioners is in the area of motivational interviewing. In MI, you have these very micro-views of therapist-client behaviors that predict positive outcomes in terms of increased readiness to change. That model has worked very well. In behavioral treatment and community-based AA research, we have these big macro-views where we're doing baseline, three-month, and six-month assessments, but a lot happens in between those points of measurement that we have no knowledge of. I think a trend is going to be the use of EMA-based [ecological momentary assessment] approaches, mobile technology, and other ways of honing in on a very micro-level behaviors within AA and their immediate effect on decision-making and subsequent behaviors. I turned 60 this year, and I'm not going to be able to contribute as much as I'd like to finally to get into the engine of AA-facilitated recovery to see how it really works. I encourage other people to get involved in this future generation of Twelve-Step research.

Career-to-Date Reflections

Bill White: What are some of the greatest challenges and rewards that you've experienced doing AA-focused research?

Dr. Scott Tonigan: I think one challenging aspect has been how to ethically approach and recruit people who are new to community-based AA programs. I think that's not given enough attention. We have developed a model where, for example, we never approach anyone within their first 30 days of interaction with AA simply because we don't want to have our research efforts confuse the newcomer. We also respect the autonomy of AA as an organization and always recruit as Keith Humphreys beautifully described it "on the edges of AA"--outside the meetings. We also respect the autonomy of the groups by never recruiting during what AA members refer to as the meeting before the meeting and the meeting after the meeting. We'll never recruit within 15 minutes of a meeting beginning or ending simply to allow the members to engage as they wish to engage. I think that's very important and we go to great lengths in our IRB protocols and NIH studies to observe these things to keep a very light footprint. And I have to say we have not had one adverse event to date resulting from our research; we've never had a complaint about how we've approached it and AA communities have been very open and accepting of Twelve-Step research. While this is the greatest challenge of sampling from community-based AA, one of the most enriching things is when you go back to home groups and report what you have found. For the most part, they look at us like that's not very enlightening—"We knew that. You should read the chapter on how it works; it's all right there." There are sometimes anomalies that they are a little startled with. I think the other challenge that I've really had would be myself not reaching as far as I possibly could. You have to push the envelope to really get the kind of research done that you want to.

One of the biggest rewards would be mentoring. When I started in '89, I mentored John Kelly and did an early paper with him when he was a student. It has been quite fulfilling for me to work with this growing nucleus of young researchers interested in AA and to help them

professionally mature, acquire funding, and address questions that I never would have thought of. This new generation is getting very productive results that will be of great help to practitioners. Being part of their development has been most rewarding to me.

Bill White: Would you have any guidance for someone reading this who was interested in pursuing further research on AA or other recovery mutual aid groups?

Dr. Scott Tonigan: Well, I'm clearly in the quantitative research camp and I see value in that, but I also recognize its limitations. The research methodologies used to study AA have become quite sophisticated, and people entering this area need to have very strong quantitative skills. So for the pre-doctoral student, I'd say, get as much quantitative research methods as you can, but to both the pre- and the post-docs, I would recommend finding a mentor interested in this topic. Such mentoring is so critical to the acquisition of NIH funding. And until one acquires NIH funding, it's very difficult to do studies of a scale and with sufficient rigor to contribute in a fundamental way to the thrust of the research. I encourage people who are interested in Twelve-Step research to find a mentor, learn grant-writing skills, enmesh yourself in the research literature, and, frankly, to be willing to work long hours. As we all know, NIH-funded research is hard to get and its pursuit is not for everybody. One of the nicest things about having good mentoring is it builds one's confidence to ask the questions of really fundamental importance instead of playing it safe and asking the safe questions. I can't imagine having had a better mentor than Bill Miller. He was just terrific in giving his time and his resources.

Bill White: Scott, thank you for taking this time to review your work.

Dr. Scott Tonigan: Thanks, Bill, I loved it! I really want to thank you for taking up this task of interviewing so many people in the field. It's a tremendous contribution.

Bill White: Thank you. I have a dream that someone in the future is going to write the modern history of addiction treatment and research. I'm hoping these interviews are going to be part of the raw materials that will help construct such a history. It will have to be someone far younger than me to take on such a project.

Dr. Scott Tonigan: I hope someone will accept that challenge.

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Sampling of AA-related Research Studies

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