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Factors that Influence Screening, Brief Intervention, and Referral to Treatment (SBIRT) Implementation in Non-Medical Settings

Andrew Joseph Flaherty

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Factors that Influence Screening, Brief Intervention, and Referral to Treatment (SBIRT)
Implementation in Non-Medical Settings

by

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DEDICATION

“When they ask you who did this, tell them it was the Wilderpeople.”

This is dedicated to the Wilderpeople...

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There are so many people to acknowledge for assistance in writing this dissertation and for their continued support throughout my whole graduate school experience. Firstly, without the faithfulness of the Lord, it is doubtful I would be writing this.

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ABSTRACT

Screening, Brief Intervention, and Referral to Treatment (SBIRT) is an evidenced-based intervention model designed to reduce substance use. While initially used in a variety of medical settings, SBIRT is increasingly implemented in non-medical settings. Unfortunately, very little is known about SBIRT implementation in non-medical settings. Therefore, the purpose of this exploratory qualitative study is to understand if professionals recently trained in SBIRT are using SBIRT and what factors influence implementation of SBIRT from their perspective.

In-depth qualitative interviews were conducted using a purposive sampling frame comprised of practitioners recently trained in SBIRT. Interviews were recorded and then transcribed verbatim. Transcripts were then analyzed with MAXQDA software. Several rounds of coding were completed to allow for the identification of themes concerning factors that influence implementation of SBIRT. An additional coder was used to enhance the validity of identified themes.

Overall, findings indicate that implementation of SBIRT in these non-medical settings is best categorized as *low*, with a large majority of the sample using just two of the SBIRT components. Eight factors were identified that influence implementation of SBIRT in non-medical settings, including compatibility of SBIRT with the setting, staff training/staffing, client factors and client needs, time, leadership, policy, available resources, policy and, perception of advantage/efficacy of SBIRT. All of these factors were found to occur across both the *High* and *Low* implementation groups. However, the

most notable difference between the two groups is how compatibility was described. In *low* implementation settings, participants reported there was little compatibility between the setting and SBIRT, whereas in *high* implementation settings, participants noted that SBIRT easily was integrated into the structure of service delivery.

Several implications arise from this study, including the need for training to help practitioners anticipate challenges in implementing SBIRT in non-medical settings and the development of technical assistance products to support practitioners who have completed training and who seek to implement all the components, especially the screening component. Future research is needed that focuses on developing knowledge in the following areas: First observations in non-medical settings to accurately gauge SBIRT component use. Second, theory development of the relationship between the factors that influence SBIRT and finally, large scale observational research to explore the prevalence of these factors in a broader sample of non-medical settings implementing SBIRT.

Keywords: SBIRT Implementation, Non-Medical Settings, Implementation Factors

TABLE OF CONTENTS

DEDICATION.....	iii
ACKNOWLEDGEMENTS.....	iv
ABSTRACT.....	v
LIST OF TABLES.....	viii
LIST OF ABBREVIATIONS.....	ix
CHAPTER 1: INTRODUCTION.....	1
CHAPTER 2: REVIEW OF LITERATURE.....	11
CHAPTER 3: METHODOLOGY.....	31
CHAPTER 4: FINDINGS.....	44
CHAPTER 5: DISCUSSION.....	72
REFERENCES.....	80
APPENDIX A: RECRUITMENT EMAIL.....	93
APPENDIX B: FOLLOW UP RECRUITMENT EMAIL.....	94
APPENDIX C: SBIRT IMPLEMENTATION CHECKLIST EMAIL.....	95
APPENDIX D: SBIRT IMPLEMENTATION PRACTITIONER CHECKLIST.....	96
APPENDIX E: SEMI STRUCTURED INTERVIEW GUIDE.....	98
APPENDIX F: FACTORS THAT INFLUENCE SBIRT IN NON-MEDICAL SETTINGS CODEBOOK.....	103
APPENDIX G: MEMBER CHECKING DOCUMENT.....	105
APPENDIX H: MEMBER CHECKING EMAIL.....	107

LIST OF TABLES

Table 2.1 SBIRT Implementation Factors in Medical Settings	28
Table 2.2 Possible SBIRT Implementation Factors Inferred from Feasibility Studies	29
Table 2.3 CFIR Constructs and Domains Adapted from Damschroder et al., (2011).....	30
Table 3.1 Summary of Participant Responses across Wave 1 and 2	41
Table 3.2 Demographic Characteristics of the Sample.....	42
Table 3.3 Participants by Setting Type.....	43
Table 4.1 Use of the Screening Component	64
Table 4.2 Use of Brief Intervention	65
Table 4.3 Use of Referral to Treatment	66
Table 4.4 Use of Motivational Interviewing.....	67
Table 4.5 Sample by Stage/Level in the Implementation Process.....	68
Table 4.6 SBIRT Component Use Matrix	69
Table 4.7 Number of Participants that had Segments Coded with Each Factor and the Total Number of Coded Segments for Each of the Factors	70
Table 4.8 Differences in Factors by Stage of Implementation	71
Table F.1 Codebook of Factors.....	103

LIST OF ABBREVIATIONS

AUDIT	Alcohol Use Disorders Identification Tool
AOD.....	Alcohol and Other Drug
BI.....	Brief Intervention
BNI.....	Brief Negotiated Interview
CAGE.....	Cut Down, Afraid, Guilty, and Eye Opener
CFIR.....	Consolidated Framework for Implementation Research
CRAFFT	Car, Relax, Alone, Forget, Friends, Trouble
MI.....	Motivational Interviewing
SBI	Screening Brief Intervention
SBIRT	Screening Brief Intervention and Referral to Treatment
SAMHSA	Substance Abuse and Mental Health Services Administration
WHO.....	World Health Organization

CHAPTER 1

INTRODUCTION

Overview

While Screening, Brief Intervention, and Referral to Treatment (SBIRT) has become the de facto substance use intervention that is utilized in a range of medical settings (Agerwala & McCance-Katz, 2012; Babor, McRee, Kassebaum & Grimaldi, 2007; Broyles & Gordon 2010; Vendetti et al., 2017), very little is known about the implementation of SBIRT in non-medical settings (Curtis, McLellan & Gabellini, 2014; Prendergast, Cartier & Lee, 2014). Non-medical settings can be defined as any setting in which the primary focus of service provision is not direct medical care. Therefore, this study will explore factors that influence SBIRT implementation in non-medical settings from the perspective of those professionals working in those settings who were recently trained in SBIRT.

Substance Use as a Public Health Crisis

Substance use is a severe public health crisis in the United States (US; Kolodny et al., 2015; Madras et al., 2009). The Substance Abuse and Mental Health Services Administration (SAMHSA, 2016) reported that approximately 25% of adults in the US engaged in at least one day of heavy drinking (defined as five or more drinks for men under 65 and four or more drinks for women) in the past month. Additionally, more than 27 million Americans age 12 or older engaged in current (past month) drug use. Individuals with unaddressed substance use can experience a broad range of complex

health challenges across several bio-psycho-social domains, including physical health complications and premature death, comorbidity with other mental health challenges, and other relational and interpersonal impacts (Babor et al., 2007). Estimates suggest that the total health-related societal cost of substance use is approximately \$510.8 billion (Miller & Hendrie, 2008).

Screening, Brief Intervention, and Referral to Treatment (SBIRT)

Historically, approaches to substance use intervention have focused on helping people with signs of chemical dependency and clinically significant symptoms associated with substance use disorders (Babor et al., 2007). However, many people who never experience any clinically significant symptoms of dependency experience substantial health and social risks because of their pattern of use. Research has documented that tens of millions of people use substances at high-risk or health-influencing levels, and a majority of people are unaware of how their long-term health can be affected (Madras et al., 2009). As such, there has been a movement toward screening all individuals for substance use and providing early intervention to raise individuals' awareness of the connection between their health and their pattern of substance use, as well as offering linkage to additional supports if needed. SBIRT has emerged as one such intervention model. SBIRT consists of several intervention components, including a universal screening, a brief intervention, and a referral to treatment.

Universal Screening

The first component is a universal screening, in which clients are usually asked between one to three questions to ascertain whether they are using any alcohol or other drugs, their rate of use, and the types of alcohol and drugs they most frequently use.

Depending upon the results of these brief screening items, a more in-depth standardized screening tool is subsequently administered based on whether the client is using alcohol, other drugs, or both. Typically, within the SAMHSA SBIRT model, the screening tools are the Alcohol Use Disorders Identification Tool (AUDIT) and the Drug Abuse Screening Tool (DAST; Madras et al., 2009). The scores on these in-depth screening tools classify clients into levels of risk based on their patterns of alcohol or drug use (Babor, Higgins-Biddle, Saunders & Monteiro, 2001; Gavin, Ross & Skinner, 1989; Knight, Sherritt, Harris, Gates & Chang 2002; WHO, 2007).

Brief Intervention

If the results of the screening indicate that the client is in the at-risk category or above (synonymous with levels II, III and IV in the risk associated levels/categories), then a Brief Intervention (BI) follows the screening component. Within the SAMHSA model of SBIRT, the BI used is most typically the Brief Negotiated Interview (BNI). The BNI is a conversation between a practitioner and a client that focuses on encouraging clients to reflect on their pattern of substance use and to consider reducing their pattern of use (D'Onofrio, Pantalon, Degutis, Fiellin & O'Connor, 2005).

Referral to Treatment

Finally, the last component of the SBIRT model is a referral to treatment (RT). In this step, the practitioner connects those clients with elevated health and social risks, and who want support, to appropriate referral sources that can support them in meeting a negotiated goal for reduction.

It also is important to note that Motivational Interviewing (MI), while not a separate or distinct component of SBIRT, is an essential foundation of SBIRT. MI

enables practitioners to help clients in a nonjudgmental way to make self-determined goals and decisions to potentially move towards reduction of substance use (Miller & Rollnick, 2009).

Effectiveness of SBIRT in Medical Settings

Although initially deployed in primary health care settings, SBIRT has been implemented in a wide variety of health and medical care settings (Agerwala & McCance-Katz 2012; Babor, Del Boca & Bray, 2017; Broyles & Gordon 2010; Vendetti et al., 2017). There is substantial evidence from both review studies (Babor, 2007; Bien, Miller & Tonigan, 1993; Kaner, et al., 2009) and meta-analyses of randomized clinical trials (Beich, Thorsen & Rollnick, 2003; Bertholet, Daepfen, Wietlisbach, Flemming & Burnand, 2005) that SBIRT is effective in reducing hazardous drinking in clients presenting in medical settings. Evidence concerning SBIRT's effectiveness at impacting drug use is somewhat mixed (Saitz et al., 2014). For example, Saitz et al. (2014) studied the efficacy of SBIRT specifically for drugs and found there were no statistically significant differences in drug use outcome overall or in additional analyses that stratified participants by drug use severity and type between a treatment and control group.

SBIRT and Non-Medical Settings

Over time, evidence of the effectiveness of SBIRT in medical settings led to implementation of SBIRT in non-medical settings. Non-medical settings can be defined as any setting in which the primary focus of service provision is not direct medical care. While some forms of health care may be provided in a non-medical setting, direct or ongoing treatment of medical problems and conditions is not the primary focus of service delivery. For example, non-medical settings are settings such as high schools, prisons and

jails, homeless shelters, and corporate environments (Curtis et al., 2014; Prendergast, & Cartier, 2013).

To date, there have been a few studies examining the feasibility and effectiveness of SBIRT in non-medical settings, and these have been conducted in schools and jails. However, the results from these studies indicate that SBIRT use in these settings is not as effective as SBIRT use in medical settings (Mitchell, Gryczynski, O'Grady & Schwarz, 2013; Prendergast, McCollister & Wardu, 2017). For example, in a school-based study, Mitchell et al. (2012) found that youth who received SBIRT, and were only using alcohol, did not report statistically significant levels of alcohol reduction after receiving the intervention. Prendergast et al. (2017), in a study of SBIRT in a correctional setting, discovered that when a control group of inmates were given a screening, while a treatment group was given the full SBIRT model, no statistically significant differences could be found between the control group and the treatment group at the six-month follow-up mark. This begs the question as to why SBIRT may not be as effective in these types of non-medical settings.

Factors that Affect the Implementation of SBIRT in Non-Medical Settings

Within the field of implementation science, the phrase “implementation” refers to the process or act of putting an intervention into use in a clinical setting or practice context (Fixsen, Naoom, Blase & Friedman, 2005). Implementation factors are dynamics within an implementation setting that affect the process and integrity of the implementation of a specific intervention (Durlak & DuPre, 2008). Therefore, implementation factors are also commonly conceptualized as barriers and facilitators (Langley et al., 2010). Factors that function as barriers to implementation adversely affect

the implementation effort. In contrast, factors that function as facilitators make it easier to implement the desired intervention and may expedite the implementation process.

A few studies have concentrated on exploring factors that influence the implementation of SBIRT in medical settings (Vendetti et al., 2017). These studies found that committed leaders, inter-organizational communication, practitioner training, and supportive contextual factors such as a mechanism for reimbursement facilitated implementation (Barnes et al., 2016; Muench et al., 2015; Nunes, Richmond, Marzano, Swenson & Lockhart, 2017). These studies also found that not having an electronic medical record system, non-supportive leadership, and a lack of integrated treatment functioned as barriers to implementation (Barnes et al., 2016; Del Boca, McRee, Vendetti & Damon, 2017; Nunes et al., 2017). However, as SBIRT has diffused from medical settings into non-medical settings, it is currently unclear what factors influence SBIRT implementation in non-medical settings.

Overall, findings from the current studies in non-medical settings suggest that implementation is not as successful and that there may be unique factors impacting the success of SBIRT implementation (Prendergast et al., 2017). For example, in studies of school-based and correctional settings, researchers discovered that recipients receiving the intervention were hesitant to discuss their pattern of use, as there were no private spaces in which to have confidential conversations (Maslowsky, Whelan Capell, Moberg & Brown, 2017). Additionally, in non-medical settings, it has been difficult to provide referral sources for those clients who need them (Curtis et al., 2014; Prendergast et al., 2014). There have been challenges associated with addressing other health needs associated with substance use, and there are often no documentation systems to record the

outcomes of the intervention in these non-medical settings (Gelberg et al, 2012; Mitchell et al., 2012; Curtis et al., 2014; Prendergast et al., 2014).

Unfortunately, no study has comprehensively explored SBIRT implementation in non-medical settings (Curtis et al., 2014; Prendergast et al., 2014). SBIRT implementation in non-medical settings is important because it has the potential to expose many more people to SBIRT who would not otherwise benefit from the screening and intervention it provides (Maslowsky et al., 2017; Mitchell et al., 2012). As such, the purpose of this study is to comprehensively explore factors that impact SBIRT implementation in non-medical settings in an effort to ensure that SBIRT implementation in non-medical settings is as effective and sustained as it is in medical settings. Understanding factors that impact SBIRT implementation in non-medical settings can critically inform future research along with best practices and training for professionals who are working in non-medical settings and implementing SBIRT.

Conceptual Framework

This study will use the Consolidated Framework for Implementation Research (CFIR) as a conceptual framework to identify factors that influence implementation of SBIRT in non-medical settings (Damschroder et al., 2009). Specifically, the CFIR articulates five categories of implementation factors: (A) intervention characteristics, (B) inner setting of the intervention context, (C) outer setting of the intervention context, (D) characteristics of individuals involved with implementation, and (E) implementation process (the activities that occur at the various stages of implementation; Damschroder et al., 2009). Use of the CFIR to understand factors that influence implementation will also serve as a contribution to the research, as a comprehensive conceptual model has not

been used in studies on SBIRT implementation in non-medical settings and only in a very limited number of studies in medical settings. A complete model and detailed review of all the domains of the CFIR is included in Chapter 2.

Additionally, this study will use the CFIR, and specifically the stages of the implementation process, to explore whether there are differences in implementation factors across four stages of implementation (planning, engaging, executing and evaluating). For example, are there differences in the implementation factors that are present in the planning for implementation stage in comparison to the implementation factors that occur in the stage of evaluating ongoing implementation? Using the CFIR in this way will address an additional gap in the current research because no study of SBIRT implementation has considered if, or how, SBIRT implementation factors may differ across stages in the implementation process. It is not known if SBIRT implementation factors remain static through the stages of implementation or if certain factors cluster around specific stages of implementation.

Statement of Purpose

Overall, given the limited studies that have focused on factors influencing SBIRT implementation in non-medical settings, the purpose of this study is to explore and identify factors that influence SBIRT implementation in non-medical settings and to investigate if these factors differ by stage of implementation.

Research Questions

Specifically, this research will address three questions:

1. Are professionals working in non-medical settings who have been previously trained in SBIRT using it in practice? And if so, what stage of implementation are they in?

2. What factors influence implementation of SBIRT in non-medical settings?
3. How do the factors influencing implementation of SBIRT differ based on different stages of implementation?

Significance of the Study

This proposed study is critical for social work research, education, and practice. In terms of social work research, the existing knowledge about factors that impact SBIRT implementation in non-medical settings is limited. Therefore, this study would address a gap in knowledge in terms of identifying factors that impact SBIRT implementation in the types of settings in which social workers most commonly practice. Future research will then be able to build upon this study in terms of empirically exploring ways to reduce barriers to implementation of SBIRT in non-medical settings.

This study also should directly translate to improvements being made to the educational programs that are being used to train large numbers of social workers in SBIRT. As a result of SAMHSA's active SBIRT diffusion strategy, social workers are being trained in large numbers both as practicing professionals in the field and as BSW/MSW students (Osborne, Benner, Sprague & Cleveland, 2016). SAMHSA has invested millions of dollars into social work programs around the US for the development of pedagogical programs to embed SBIRT training into BSW/MSW curricula. Findings from this study could lead to improvements in these educational programs in terms of tailoring them to include information about factors that influence SBIRT implementation in non-medical settings.

This research also has the opportunity to inform social work practice. Findings from this study can be used to describe implementation activities that can be performed

by newly trained social workers that could result in sustained and viable SBIRT implementation. Essentially, the findings from this study will help inform social workers about factors of which to be mindful as they implement SBIRT.

CHAPTER 2

REVIEW OF LITERATURE

This literature review synthesizes information related to 1) SBIRT and its diffusion across the health professions and into non-medical settings, 2) the effectiveness of SBIRT in medical and non-medical settings, 3) implementation factors that influence SBIRT implementation in both medical and non-medical settings, and 4) the Consolidated Framework for Implementation Research, the framework that will be used to guide this study.

SBIRT

SBIRT is an evidence-based screening and intervention model that addresses problematic substance use (both alcohol and other drug use) at both the moderate, health-affecting level and the disordered, or “clinical levels” (Babor et al., 2007). SBIRT is not a manualized treatment but has a delineated screening and intervention structure, which consists of four key components (Agerwalla & McCance-Katz, 2012; Vendetti et al. 2017). The SBIRT core components include a universal screening, brief intervention, referral to treatment, and motivational interviewing.

Universal Screening

The first component of SBIRT is universal screening. Clients are asked up to three questions about whether they are using substances and the types and amounts of substances they use (Williams & Vinson, 2001). If the client answers in the affirmative to the universal screening questions, then a standardized in-depth substance use specific

screening tool is used. Typically, the comprehensive screening tools that are used within SBIRT include the Alcohol Use Disorders Identification Tool (AUDIT), Drug Abuse Screening Test (DAST), Cut Down, Annoyed, Guilty and Eye Opener (CAGE) or Car, Relax, Alone, Forget, Friends, Trouble (CRAFFT; Madras et al., 2009). These screening tools have an extensive evidence base, have been found both valid and reliable across different settings and cultures (Bush, Kivlahan, McDonell, Fihn, Bradley, 1999), and can be administered in several different ways (e.g., completed by the client, by the practitioner verbally, or administered electronically; Agerwalla & McCance-Katz, 2012). These tools are also available in the public domain and can be used in any health or human service setting without a licensing fee (Tindol, Gonzales, Sedarati & Smith, 2015). In SAMHSA sponsored models of SBIRT implementation, the AUDIT and the DAST are the preferred screening tools to assess alcohol use and drug use respectively. Upon completion of the screening tool, a score is calculated which places clients into several “risk” associated categories. These categories include No/Low Risk, At-Risk, Harmful Use, and Dependent Use, with each category corresponding to the levels of risk for negative health and social consequences associated with the client’s pattern of use.

Brief Intervention

The second component of SBIRT is the brief intervention (BI). A BI is used when the client’s standardized screening score indicates their pattern of substance use puts them into one of the categories in which there is elevated risk for adverse health consequences (At-Risk, Harmful Use, and Dependent Use). While there is some variability in the types of brief interventions that are used across SBIRT implementation efforts (Babor et al., 2007), the BI that is recommended by SAMHSA is the Brief

Negotiated Interview (BNI; Madras et al., 2009). The BNI is the component most commonly recognized and sometimes confused with the “SBIRT” model itself. The BNI is a time-limited, structured counseling session that incorporates several techniques from motivational interviewing. In most practice settings, BNI’s are usually performed by non-addiction specialists, and a wide range of different professionals have been trained to use them in their respective health fields (D’Onofrio et al., 2012; Seale et al., 2015). The BNI has been shown to reduce alcohol and substance use, as well as improve overall patient health outcomes (D’Onofrio et al., 2012).

Referral to Treatment

The third component of SBIRT is the referral to treatment. A referral to treatment is conducted only when indicated by the outcome of the screening (i.e. the client is in the dependent range), and through the BNI, if the client expresses interest in being referred to additional resources or supports. Research suggests that around 5% of clients may benefit from being referred to formal alcohol and other drug (AOD) treatment, such as a detoxification program, based on their clinically significant symptoms of either alcohol or drug dependency. Some clients may not be ready to utilize other outside supports and, therefore, may not need a referral to treatment; however, these clients may benefit from a follow-up appointment in order to further explore the goals they discussed within the BNI portion of the intervention (this approach is more commonly known as “brief treatment” (Madras et al., 2009).

Motivational Interviewing

Finally, appropriate utilization of motivational interviewing (MI) is also a critical component of the SBIRT model. MI underpins all aspects of SBIRT (Cole et al., 2012;

Pringle, Kowalchuk, Meyers & Seale, 2012), and while it is not a separate or distinct component of SBIRT, it is best defined as a counseling style that espouses a specific “way of being,” that emphasizes a non-judgmental approach to helping clients resolve issues of ambivalence. It is this “spirit of MI” that practitioners use as an interpersonal style to help clients explore any ambivalence they may be experiencing and to help clients harness motivation to make desired changes (Miller & Rollnick, 2009). MI is critical to the screening, brief intervention, and the referral to treatment components, as MI facilitates and supports the practitioner in helping the client in a manner that is non-judgmental and respects the autonomy of the client in making decisions about their substance use.

The Development and Diffusion of SBIRT

While SBIRT has been utilized for more than three decades (Agerwala & McCance-Katz, 2012; Babor et al, 2007; Babor et al., 2017), in 2003, SAMHSA took an intentional and active role in promoting the widespread adoption of SBIRT (Babor et al., 2017) due to the effectiveness of the model (SAMHSA, 2013; SAMHSA, 2016). SAMHSA developed an initiative focused on funding six states in the US to design and implement their SBIRT training and implementation programs (Babor et al., 2007; Babor et al., 2017). SAMHSA supported these states through awarding five-year grants to various health agencies with the goal of promoting the adoption and sustained implementation of SBIRT in a variety of medical settings (Del Boca et al., 2017).

SBIRT in Non-Medical Settings

As a result of SAMHSA’s diffusion efforts, SBIRT implementation in primary care settings became increasingly common (McCance-Katz & Satterfield, 2012). SBIRT

diffused out from emergency departments and trauma centers, and came to be widely used in primary health care and other medical settings (Rahm et al., 2015). More recently, however, SBIRT diffusion efforts have expanded into non-medical settings (Babor et al., 2017). Non-medical settings can be defined as any setting in which the primary focus of service provision is not direct medical care. While some forms of health care may be provided in a non-medical setting, direct or ongoing treatment of medical problems and conditions is not the primary focus of service delivery. For example, non-medical settings are settings such as high schools, prisons and jails, homeless shelters, and corporate environments (Curtis et al., 2014; Prendergast et al., 2014).

SBIRT implementation in non-medical settings is a critical advancement in the field of substance use prevention and early intervention. Non-medical settings serve large segments of the general population and SBIRT implementation in these settings opens up additional opportunities to provide millions of people with screening and early intervention who otherwise would not receive the benefit of the model (Thom, Herring & Bayley, 2016). The effectiveness of SBIRT implementation in medical settings will be reviewed next, followed by a discussion of the effectiveness of SBIRT implementation in non-medical settings.

Effectiveness of SBIRT in Medical Settings

Reducing Alcohol Consumption

Research demonstrates that SBIRT has been effective in reducing levels of alcohol consumption for patients in primary care settings who are screened for substance use (Madras et al., 2009). In a comprehensive meta-analysis on the effectiveness of SBIRT in emergency settings between 1996 and 2016, findings indicate that SBIRT does

positively influence the alcohol use patterns of patients (Barata et al., 2017). In 37% of the studies that were analyzed, statistically significant differences were observed between the control and intervention groups regarding the numbers of days without drinking and number of units consumed per day. Interestingly, Barata et al. (2017) noted that in some studies, a brief intervention was shown to be efficacious only with those patients whose screening results indicated that their use was low or moderate and not with those patients with severe and high-risk patterns of alcohol use. Among adolescents, research has demonstrated the impact of SBIRT in the reduction of drinking and driving because participation in the intervention likely prompts participants to reflect on the health and social consequences of their pattern of alcohol use (Young et al., 2014). Segatto et al. (2011) discovered positive effects for SBIRT on adolescent patients presenting in emergency rooms regarding days of alcohol use, number of days with moderate or heavy use, and overall consequences of alcohol use.

Reducing Drug Use

While overall there is substantial research that points to the effectiveness of SBIRT in reducing clients' patterns of alcohol use within primary care and similar medical settings, the evidence about the impact of SBIRT upon the drug use of patients remains less clear (Saitz et al., 2014). Bernstein et al. (2005) conducted a randomized trial of SBIRT with young adults with cocaine or heroin use. These young adults were screened in women's health, homeless, and urgent care clinics. Results indicated that opioid abstinence was 9% greater and that cocaine abstinence was 5% greater in the brief intervention groups compared to a control group. The WHO (2012) conducted a randomized trial of SBIRT in five countries, with the treatment group receiving a

screening and brief intervention and the control group only receiving a screening. Of 731 adults who engaged in “risky” drug use, minimal differences in favor of the BI treatment group were detected (Humeniuk et al., 2012). Gelberg et al. (2015) reported on a randomized trial of the impact of SBI in primary care with patients who used drugs. Patients received screening, brief intervention, a psychoeducational video, and two follow up Brief Treatment (BT) sessions. Results indicated a more significant reduction in drug use days in the intervention versus the control group (screening alone), particularly among those patients who used drugs the most frequently. Saitz et al. (2014) explored the efficacy of SBIRT for drugs with a treatment group receiving a brief intervention provided by a health educator and an additional motivational interviewing booster session, with the control group receiving just a screening. At the six-month follow-up point, and with a 98% response rate, there were no statistically significant differences in drug use outcome overall or in additional analyses that stratified participants by drug use severity or drug type.

Effectiveness of SBIRT in Non-Medical settings

SBIRT implementation in non-medical settings is relatively new, and, therefore, there is a limited body of research about SBIRT implementation in non-medical settings. The next section will review what is known about the effectiveness of SBIRT implementation in different non-medical settings.

Schools

There is minimal and somewhat mixed evidence for the effectiveness of SBIRT in school-based settings. Mitchell et al. (2013) reviewed studies into SBIRT used with adolescents and discovered that only three of 14 studies were conducted in school

settings. Additionally, there have been only a few other studies exploring the effectiveness of SBIRT in middle or high schools (Dunn, Deroo, & Rivara, 2001; Curtis et al 2014), with the results of these studies being mixed. For example, in a controlled trial with 97 adolescents participating in a school-based SBIRT intervention to reduce marijuana use, Walker et al. (2006) found significant marijuana use reductions at the 3-month follow-up point for 9th and 10th grade students, but only among those who were also assessed to have been in the preparation/action stage of change category. Similarly, a study of 79 14- to 17-year-old adolescents referred by school officials for alcohol or marijuana problems (therefore not identified through universal screening) compared assessment only, brief intervention only, or brief intervention plus parental involvement (an added component). The brief-intervention-plus-parental involvement group had significantly lower alcohol use, binge drinking, and drug use outcomes than the assessment only group, and fewer days of drinking than the brief-intervention-only group (Winters & Leitten, 2007). However, the addition of parental involvement is an adaptation to the SBIRT model.

Mitchell et al. (2012), in the largest study of SBIRT implementation in schools (N=629), found that for youth who received SBIRT who were using substances and drinking to the point of intoxication experienced statistically significant levels of reduction in a six-month follow-up screening. However, for those students who only used alcohol, no statistically significant levels of reduction were detected. The authors concluded that more research is needed to explore SBIRT implementation in schools because it is likely that implementation factors explain the difference in the effectiveness

of SBIRT with youth in schools versus youth in primary care settings (Mitchell et al., 2012).

Correctional Settings

There are also mixed findings regarding the effectiveness of SBIRT in correctional settings. In probationary settings, two randomized studies indicate that receiving a BI did lead to positive change among probationers, both for alcohol only (Wells-Parker & Williams, 2002) and alcohol and drugs (Davis, Baer, Saxon & Kivlahan, 2003). However, a large (N = 525) randomized and multisite study of SBIRT for harmful alcohol use in probation settings in England found no statistically significant effect on alcohol use at the 12-month follow-up mark, although participants in the intervention group did have a lower reconviction rate than those in the screening-only group (Newbury-Birch et al., 2014). For individuals who were incarcerated, one randomized study of SBI (with no referral to treatment) for women in jail found improved effects for drug and alcohol use at the follow-up point two months following release (Begun, Rose, & Lebel, 2011). However, the study found no difference between the treatment and control group (screening only) in the rates at which participants engaged with treatment supports after receiving the intervention. Another study provided a BI (with up to two brief treatment sessions) to women who were incarcerated and found increased reduction for the treatment group at the three-month follow-up, but this positive treatment effect was not present at the six-month follow-up point (Stein, Caviness, Anderson, Herbert & Clarke, 2010). The most current study of the impact of SBIRT on the substance use of offenders also reported mixed results about the efficacy of SBIRT (Prendergast et al., 2017). A control group of inmates was given a screening, while a treatment group was

given the screening, the intervention, and a referral to treatment if appropriate. No statistically significant differences were reported between the control and treatment groups at the six-month follow-up mark. Prendergast et al. (2017) concluded that despite the limitations of the study, it might be the case that SBIRT implementation in correctional settings is subject to unique implementation considerations and may require specific adaptations.

In conclusion, SBIRT implementation in non-medical settings, such as schools and correctional settings, has not been found as effective at helping clients rethink their patterns of substance use when compared to SBIRT implementation in medical settings. Several researchers have posited that one reason for this difference is the impact of implementation factors that are unique to non-medical settings (Heather, 2016; Thom et al., 2016; Curtis et al., 2014). For example, issues of client confidentiality may be present in non-medical settings, as typically these settings may not have secure and private areas in which screenings can take place. Another example would be the importance of supportive leadership, as SBIRT implementation is unlikely to be sustained and robust if a high school principal does not understand and support a public health model of addressing substance use within their school. Unfortunately, however, no study to date has explored factors that influence SBIRT implementation in non-medical settings.

Factors that Influence Implementation

Implementation refers to the process and act of putting an intervention into use in a practice setting (Fixsen et al., 2005). Implementation factors are distinct influences in a setting that affect how an intervention is implemented or delivered (Durlak & DuPre 2008; Ross, Stevenson, Lau & Murray, 2016;). For example, both patient and community

level characteristics, practitioner characteristics, change readiness, and integration of new programming have been previously identified as factors that influence implementation of a wide variety of health-related interventions (Durlak & DuPre, 2008; More et al., 2015). Broadly speaking, implementation factors can be divided into two categories – facilitators and barriers (Fixsen, Blasé, Naoom & Wallace, 2009; Forman, Fagley, Chu, & Walkup 2012). Factors that act as facilitators support and help lead to successful and sustained implementation of an intervention. In contrast, factors that act as barriers to implementation have a negative or detrimental impact, as these factors impede and interrupt the implementation process.

The next section will review factors identified in the research that act as barriers and facilitators of SBIRT in medical settings. Table 2.1 contains a list of factors identified as barriers and facilitators to SBIRT implementation in medical settings.

SBIRT Implementation Factors in Medical Settings

Facilitators

In many primary health care settings, the practice of universal screening acts as a facilitator of SBIRT implementation (Smith, Schmidt, Allensworth-Davies & Saitz, 2010). Because of the prevalence in primary care settings of a universal screening approach to a variety of health issues, SBIRT implementation is at an advantage in these environments because questions concerning substance use can easily be added to health screening questions that already are posed to clients about their health care needs (Bush et al., 1999).

Another factor that acts as a facilitator is supportive clinical leadership. Supportive clinical leadership is vital for sustained implementation and without

supportive leadership, implementation efforts can be impeded (Barnes et al., 2016; Muench et al., 2015; Nunes et al., 2017). Settings in which practitioner workflow is part of an integrated treatment team and that have a comprehensive EMR (electronic medical records) system facilitate SBIRT implementation (Broyles et al., 2010; Nunes et al., 2017). In a similar manner, in medical settings where there are strong inter-collaborative and inter-professional team-based approaches to delivering SBIRT, the likelihood that implementation will be sustained increases (Broyles et al., 2010). Likewise, prior research into SBIRT implementation in medical settings indicates that successful SBIRT implementation is facilitated through adequate SBIRT training and ensuring minimum competency standards in screening and intervening for all professionals and practitioners within an implementation setting (Gordon & Alford, 2012).

Barriers to Implementation

Prior research into SBIRT implementation in medical settings has identified several barriers to implementation. The SBIRT model may be less effective and more difficult to implement with clientele who have symptoms of clinical dependency and with clients who use drugs instead of alcohol (Siaz et al., 2014). Emerging research suggests that such patients, whose screening scores indicate that they have symptoms of clinical dependency, may need additional supports in addition to the standard SBIRT model and that practitioners using the intervention may need additional competency in addressing these challenges with clinically dependent clients (Hingson & Compton, 2014; Saitz et al., 2014; Roy-Byrne et al., 2014). Those settings without a consistent means of securing reimbursement for performing SBIRT face a pronounced barrier in consistently using the model (Melek et al., 2016).

Research has also identified implementation barriers at the practitioner level. For instance, when SBIRT was first used in primary care settings, it was exclusively delivered by physicians with only limited support from nurses (Broyles, Rosenberg, Hanusa & Kraemer, 2012, Makdissi & Stewart. 2013). Research discovered that physicians were explicitly concerned that SBIRT was not relevant to their work and was perhaps even beyond the scope of their practice. A number of physicians believed that they lacked sufficient time to complete all the components of the intervention and that they lacked appropriate support from other healthcare professionals in the delivery of the intervention (Broyles et al., 2012). Additionally, physicians had concerns about damaging the patient-practitioner relationship as well as serious concerns about upholding/respecting client's rights to privacy (Broyles et al., 2012; Chambers et al., 2016; Gordon & Alford, 2012). This acted as a barrier as it meant that physicians were less inclined to perform the intervention.

Factors that Influence Implementation of SBIRT in Non-Medical Settings

In contrast to the SBIRT implementation literature in medical settings, considerably less is known about factors that influence SBIRT implementation in non-medical settings.

Overall, there have only been seven feasibility studies of SBIRT implementation in non-medical settings. Through these studies, lack of adequately trained personnel, logistical factors around ensuring confidentiality, referral sources, and appropriate follow up have been identified as factors that impact the integrity of piloted implementation efforts (Begun et al., 2011; Curtis et al., 2014; Gelberg et al. 2012; Mitchell et al., 2013; Maslowsky et al., 2017; Prendergast et al., 2017). However, little is definitively known

about which factors influence SBIRT implementation in non-medical settings and, specifically, which factors act as barriers and facilitators to implementation in these settings. This study aims to address this gap in the literature by comprehensively exploring and identifying which factors impact SBIRT implementation across non-medical settings from the perspective of practitioners working in these settings. Table 2.2 contains a list of possible SBIRT implementation factors that can be inferred from the few feasibility studies that have been conducted.

Conceptual Frameworks and SBIRT Implementation

In addition to the limits of studies exploring factors that influence SBIRT implementation in non-medical settings, no study focused on non-medical settings has used a comprehensive framework to understand factors influencing SBIRT implementation. Using a conceptual model of implementation is vital, as a conceptual model of implementation can help to classify factors that are identified as influencing SBIRT implementation.

The CFIR

The conceptual model of implementation that will be used in this study is the Consolidated Framework for Implementation Research (CFIR; Damschroder et al., 2009). The CFIR was developed from a review of the 19 models of implementation most frequently used in the health sciences (Damschroder et al., 2009). Development of the CFIR involved actively distilling and consolidating the best features of prior implementation frameworks into one conceptual model that could be used as a taxonomy to identify and classify factors across multiple domains of implementation and multiple stages of the implementation process (Damschroder et al., 2009; Damschroder et al.,

2011). The CFIR is helpful when initially exploring implementation factors because it provides domains and sub-domains that have been identified from other studies as distinct factors that influence implementation.

The CFIR has been widely used across the health sciences to explore the implementation of a variety of interventions. Kirk et al. (2015) concluded that the CFIR can be used for both evaluation and assessment of successful implementation efforts, or it can be used formatively to evaluate current implementation efforts because it conceptually accounts for various stages of implementation. Powell, Proctor and Glass (2014) used the CFIR to explore the implementation of clinical innovations in health and mental health. They noted the advantage of using the CFIR is that it provides a consistent taxonomy for understanding domains of implementation.

The Five Core Domains of the CFIR

The five core domains within the CFIR are as follows: 1) Intervention Characteristics, 2) Outer Setting, 3) Inner Setting, 4) Characteristics of Individuals, and 5) The Process of Implementation. Each domain consists of sub-domains as well. Figure 3 contains a list of the five CFIR implementation domains with their requisite sub-domains.

First, intervention characteristics are comprised of several sub-constructs that encompass factors concerned with the structure and suitability of the intervention itself (Damschroder et al., 2009). For example, some interventions are inherently “easier” to implement than others. They may be less complicated, cheaper, and have been refined for ease of implementation. The second domain, outer setting, encompasses the external demands that impact the implementation of an intervention. For example, unique patient

needs, agency resources, and policy constraints are all factors that may externally impact an implementation effort (Damschroder et al., 2009). Third, inner setting, groups together sub-domains that are unique to the agency and its organizational context (Damschroder et al., 2009). For example, change readiness, leadership, available resources, and capacity are all internal factors within an agency setting that may impact the implementation of a specific intervention. The fourth domain, characteristics of the individuals involved, encompasses constructs concerning the individuals implementing and delivering the intervention, specifically, their disposition, behavior, personality, beliefs, and levels of training (Damschroder et al., 2009; Damschroder et al, 2011).

The final implementation domain, the process of implementation, encapsulates the idea that the implementation of any intervention is a multiphasic process. Within the CFIR conceptual model, implementation is advanced through a series of four phases/stages, described as implementation activities. These phases or stages of implementation include Planning, Engaging Leaders, Executing, and Reflecting & Evaluating.

In addition to no study specifically exploring factors that influence SBIRT implementation in non-medical settings, no study of non-medical SBIRT implementation has explored whether factors vary between stages of implementation. Therefore, this study will focus on the implementation experiences of professionals in non-medical settings who have completed a SAMHSA sponsored training in the SBIRT model and are attempting to integrate and translate SBIRT into their practice contexts. As varying amounts of time have elapsed since they completed their training, different practitioners will hopefully be at different stages in the implementation process. Therefore, some

practitioners will be beginning activities connected to planning for implementation, whereas some practitioners should already be executing and delivering the SBIRT intervention model. This variability in stages of implementation within the sample will allow for an analysis that will explore if specific barriers and facilitators to implementation vary depending upon the stage in the implementation process. Table 2.3 depicts the CFIR constructs and domains adapted from Damschroder et al. (2011).

Conclusion

Overall, after reviewing the literature, no study could be identified that has comprehensively explored factors that influence SBIRT implementation in non-medical settings using the CFIR and no study has explored if implementation factors differ depending on the stage in the SBIRT implementation process. As such, this research will address the following three questions:

1. Are professionals working in non-medical settings who have been previously trained in SBIRT using it in practice? Of the professionals trained and using it in practice, in which stage of implementation are they?
2. What factors influence implementation of SBIRT in non-medical settings?
3. How do the factors influencing implementation of SBIRT differ based on different stages of implementation?

Table 2.1 *SBIRT Implementation Factors in Medical Settings*

Implementation Factors	Barrier or Facilitator	Study
Clinical leadership	Facilitator	Barnes et al., 2016; Nunes et al., 2017; Muench et al., 2015
Embedded SBIRT in EMR	Facilitator	Broyles & Gordon, 2010; Nunes et al., 2017
Inter-collaborative approaches to SBIRT delivery	Facilitator	Broyles & Gordon, 2010
SBIRT is difficult to implement when serving clients with pronounced substance use issues.	Barrier	Roy-Byrne et al., 2014; Hingson et al., 2014; Saitz et al., 2014
Training gaps in the knowledge base of those delivering the intervention/Minimum competency standards.	Barrier	Gordon et al., 2012
No mechanism for reimbursement	Barrier	Melek et al., 2016

Table 2.2 *Possible SBIRT Implementation Factors Inferred from Feasibility Studies*

Implementation factors	Type of Non-Medical Setting	Source
Students/Prisoners hesitant to discuss SA in non-medical setting	Prison High school	Mitchell et al., 2012 Prendergast et al, 2017
Lack of confidentiality/private space in setting	Prison High school	Curtis et al., 2014 Prendergast et al., 2017 Mitchell et al., 2012
Lack of medical infrastructure	Prison High school	Prendergast et al, 2017
Lack of referral resources	High School Prison Homelessness resource	Prendergast et al., 2014 Curtis et al, 2014 Gelberg et al, 2012
Difficult in using/recruiting a behavioral specialist.	High school Prison	Maslowsky et al., 2017
Client factors	Homelessness support settings	Gelberg et al., 2012

Table 2.3 *CFIR Constructs and Domains Adapted from Damschroder et al., (2011)*

CFIR Domains of Implementation	Composite Constructs by Domain
INTERVENTION CHARACTERISTICS	Intervention Source Evidence Strength & Quality Relative Advantage Adaptability Triability Complexity Design Quality & Packaging Cost
OUTER SETTING	Patient Needs & Resources Cosmopolitanism Peer Pressure External Policy & Incentives
INNER SETTING	Structural Characteristics Networks & Communications Culture Implementation Climate Tension for Change Compatibility Relative Priority Organizational Incentives & Rewards Goals and Feedback Readiness for Implementation Leadership Engagement Available Resources Access to Knowledge & Information
CHARACTERISTICS OF INDIVIDUALS	Knowledge & Beliefs about the Intervention Self-efficacy Individual Stage of Change Individual Identification with Organization Other Personal Attributes
PROCESS	Planning Engaging Opinion Leaders Formally Appointed Internal Implementation Leaders Champions External Change Agents Executing Reflecting & Evaluating

CHAPTER 3

METHODOLOGY

Introduction

The overall purpose of this study was to explore factors that influence SBIRT implementation in non-medical settings. This chapter provides an overview of the methodology, including a detailed description of the procedures, participants, and data analysis strategy.

Procedures

This study used a qualitative methodology in which in-depth interviews were conducted with professionals from a range of non-medical settings who were trained in SBIRT through a SAMHSA sponsored SBIRT training grant at the University of South Carolina College of Social Work. All study procedures were subject to review by the Institutional Review Board (IRB) at the University of South Carolina.

In terms of sampling frame, this study used a structured purposive approach. Study participants were drawn from a population of (N=241) social workers and other health and human service professionals (such as licensed professional counselors, clinical managers, clergy and chaplains, school counselors, case managers, and community health specialists, etc.) that completed SBIRT training between February 2017 and February 2019. The SBIRT training consisted of four hours of in-person instruction and covered five modules: 1) What is SBIRT? 2) Motivational Interviewing, 3) Screening, 4) Brief Negotiated Interview, and 5) Referring to Treatment. The training was conducted by a

MINT (Motivational Interviewing Network of Trainers) certified trainer, who is a national expert in SBIRT. At the end of the training, trainees were asked if they would be willing to participate in a follow-up discussion about the training they received.

Trainees who indicated they would have a follow-up discussion about SBIRT implementation (n=107) were randomly assigned to two sampling groups – Wave 1 or Wave 2. The potential participants were split into these two waves since the prospective sample was particularly large for a qualitative study. The 53 participants in Wave 1 were invited by email on 6/26/2019 to take part in a telephone interview, and a follow-up email was sent on 7/10/2019. A copy of these emails is located in Appendix A and B.

As fewer than 20 participants from Wave 1 responded to the invitation to participate, participants in Wave 2 were drawn upon. The initial recruitment email was sent to the 54 participants in Wave 2 on 7/24/2019. The follow up email was sent on 8/8/2019. The process of recruitment and interviewing of participants continued to take place until no more affirmative responses to the email invitations were received. Recruitment ended when no more participants responded to the email requests for an interview. Table 3.1 depicts a summary of participant email responses across Wave 1 and Wave 2.

Once an interview was scheduled to take place with a participant, the interviewer sent the participant a confirmation/reminder email (see Appendix C) that included a description of the purpose of the interview and a SBIRT implementation checklist (see Appendix D). Participants received a copy of the checklist in advance of their scheduled interview in order to aid their thinking about how they may be implementing SBIRT in their practice settings.

The interviewer then called participants at the prearranged time and conducted the phone interview. Consent to participate in the study was established verbally at the start of the interview. The interviewer read the consent to participate form to all participants before working through a semi-structured interview guide (see Appendix E).

Interview Guide

The interview guide consisted of three parts, including 1) the SBIRT Implementation Checklist, 2) questions about factors that influence SBIRT implementation, and 3) demographic questions. The SBIRT Implementation Checklist comprised the first 15 questions and asked participants about their use of all four of the SBIRT components, including Screening, Brief Intervention, Referral to Treatment, and Motivational Interviewing. The SBIRT Implementation Checklist included both close-ended dichotomous items about the use of each SBIRT component and open response items in order to elicit richer detail about the use of that particular component.

After completion of the SBIRT implementation checklist portion of the interview, participants were then asked to identify barriers and facilitators to SBIRT implementation. Participants were asked different questions depending upon the extent of SBIRT implementation they had reported in their responses to the checklist items. For example, participants who reported extensively using the components were asked to identify factors that made it easier and harder to implement SBIRT. In contrast, participants who reported not using specific SBIRT components were asked to identify barriers to implementation of SBIRT and also to then identify factors that would make future implementation possible.

The final section of the interview guide included demographic questions that asked about the participant's age, gender, length of time in their setting, terminal degree, and job title. In addition, while there was not a specific demographic question used to identify the type of setting in which the participant worked, there was an item about whether or not their setting was a non-medical setting. This question led to discussion between the researcher and the participant about how best to describe their setting. The last question of the interview asked participants whether they would be willing to engage in a member check of the findings to ensure validity.

The first interview was used to pilot the interview guide, and the recording of the first interview was reviewed by the researcher and his committee chair to ascertain any issues with the structure or questions contained in the interview guide. After the completion of the first interview, the interview guide was determined to be satisfactory, and no revisions were made.

Participants

A total of 17 people completed interviews, including 11 people from Wave 1 and six people from Wave 2. However, upon completion of the telephone interviews, it was determined that the settings in which two of the participants worked did not fully meet the criteria of non-medical. In these cases, participants were providing non-medical services; however, they were providing services within a hospital system. The decision was made to exclude these two participants from the study. Therefore, the total sample size for this study is 15. Of those 15 included in the sample, 94% were female. The mean age of the sample was 41 years old. On average, these individuals practiced in their settings for almost seven years. In terms of education, 100% had at least a Bachelor's

degree, 93% (n=14) had a MSW degree, and 13% (n=2) of participants had a Ph.D. in addition to an MSW. Table 3.2 below presents the demographic characteristics of the participants.

Participants also practiced in a range of different non-medical settings. In terms of setting, 33% (n=5) practiced in education settings, 27% (n=4) practiced in child and family settings, 13% (n=2) practiced in homeless shelters, 13% (n=2) in mental health settings, 6% (n=1) practiced in client home settings, and 6% (n=1) practiced in correctional settings. Table 3.3 below depicts the range of settings included within the sample.

Data Analysis Strategy

Qualitative data from each of the interviews were audio-recorded and transcribed verbatim. All qualitative data (i.e., transcripts) were then uploaded into MaxQDA. Several cycles of coding were then conducted (Saldana, 2015). First, provisional coding was conducted, as this type of coding is an optimal strategy that allows for the development and emergence of broad initial codes (Saldana, 2015). Specifically, in this study, the following provisional codes were used: Use of the SBIRT components, implementation activities including *Planning*, *Engaging*, *Executing*, and *Evaluating* (i.e. stage in the implementation process according to the CFIR model), and factors that influence implementation. Once the provisional codes were used, different analysis strategies were used to explore the data within each of these codes and to answer the research questions for this study. Each of these strategies is described next.

Use of SBIRT Components

Each participant's responses to all the items on the SBIRT implementation checklist were coded as either "yes" or "no." Then, the frequency of each code was counted. This allowed for a calculation of the percentage of participants implementing each of the respective SBIRT components. In order to ensure accuracy, implementation component use (Yes or No) was also validated in the transcript. In a few instances, participant's verbal answers to the checklist items were unclear, as they had provided contradictory answers about use of a specific component during the course of the interview. Therefore, codes were assigned based on analysis of the entirety of the information that they revealed in the interview and not solely on the initial answer to the dichotomous question. For example, one participant answered in the negative to the question, "Do you use universal screening?" However, the participant later revealed that all new students who come to the school are given a substance use screening. In this instance, this participant was coded as *yes* to universal screening use.

Stage in the Implementation Process

Originally, the proposed methodology for determining stage in the implementation process had been to code according to the CFIR stages of implementation (Planning, Engaging, Execution, and Evaluation). Yet, once coding for implementation stage began through provisional coding of implementation activities (e.g., planning, engaging leaders, actively using the intervention, and evaluating the efficacy of the intervention), it became clear that the CFIR stages were not distinct enough to accurately represent the data. Implementation activities from across the various CFIR stages co-occurred in the same settings. For example, participants reported actively implementing

(which is consistent with Execution) some of the SBIRT components while concurrently planning for the implementation of the other components.

So the question remained as how best to capture the stage of implementation of those participants. Rather than being able to understand/categorize stage in the implementation process from the predetermined stages in the CFIR, a more emergent way of understanding the extent of implementation developed through inductive coding. The code *Implementation Level* was developed as a proxy for stage in the implementation process because it could capture how many SBIRT components were being implemented. In a prior study of SBIRT implementation, Maynard et al. (2015) also developed a similar code to implementation level, and coded for *High*, *Partial*, or *Low* implementation. In this study, two sub-codes were used under the *Implementation Level* code, *Low Implementation* and *High Implementation*. *Low Implementation* was applied to those settings in which none to two of the SBIRT components were being used, whereas *High Implementation* was applied to those settings in which three to all of the SBIRT components were implemented. Similar coding was used in this study, with those participants who reported using 0-2 of the components being assigned the code of *Low Implementation* and those participants who reported 3-4 of the components being assigned the code *High Implementation*.

Factors that Influence SBIRT Implementation

Factors that influence SBIRT implementation were coded through an emergent process through careful reading of the transcripts, with a concentrated focus on the answers to the open-ended questions that specifically asked about factors that influenced SBIRT implementation and all of the open-ended items from the SBIRT Implementation

Checklist section. An inductive coding methodology was utilized and several cycles of coding were conducted to gain an understanding of factors that influence SBIRT implementation and to develop a codebook that could be used to classify factors (Saldana, 2015).

After the provisional coding cycle was complete, all segments of text coded with *Factors that Influence SBIRT* were reviewed to identify more specific implementation factors. An initial list of specific factors was inductively developed based on the review of the transcripts, and a codebook containing definitions for each code was drafted. Then, each of the documents was reviewed, and the codes were applied to all relevant passages. An additional coder was used at this point, and inter-rater reliability was examined (the inter-rater reliability process is discussed in detail below). Through this process, code definitions continued to be refined. The final step, once the codebook was finalized, was a final review of all the documents to ensure consistent application of the codes. The following codes were included in the final codebook: *Available Resources*, *Compatibility of SBIRT with the Setting*, *Perception of Advantage/ Efficacy of SBIRT*, *Time*, *Staff Training and Staffing*, *Policy*, *Client Factors*, and *Leadership*. A copy of the Codebook (Table F.1) is included in Appendix F.

Finally, to address the third research question (i.e., How do these influential factors differ based on the stage of implementation?), the newly developed *Implementation Level* codes were used along with the document variable feature within MAXQDA 20. The document variable feature enabled a comparative analysis of factors that influence SBIRT implementation across the two levels of implementation (i.e., high and low) identified within the sample. Specifically, the Document Analysis by Groups

function in MAXQDA was used in order to explore differences in the distribution and clustering of identified implementation factors across the two levels of implementation. Specifically, MAXQDA generates a quantitative comparison table that shows the occurrence of each of the factors at the participant level across the two groups, which were used to qualitatively compare and contrast similarities and differences across the groups.

Trustworthiness/ Data Quality Insurance

Multiple coders ensure high levels of data trustworthiness in qualitative studies (Huberman & Miles, 1994; Huberman & Miles, 2002; Yin, 2003; Yin, 2016), and ensuring inter-coder reliability is an important part of ensuring the trustworthiness of qualitative data. Specifically, in this study, an additional coder was utilized. One coder was the primary coder, and a second coder coded a randomly selected subset of five interview text documents with the codebook established by the primary coder (Zhang & Wildemuth, 2009). Cohen's (1968) Kappa was used to statistically analyze the level of consistency between the primary and secondary coder. Cohen's (1968) Kappa prevents the inflation of reliability scores by adjusting for the impact of chance agreement. The Kappa analysis is one of the most robust statistical tests for inter-rater reliability and is widely used by qualitative researchers aiming to ensure inter-coder reliability. The Kappa statistic produces values that can range from 1 to -1, with one signaling perfect agreement and values around 0 signifying agreement not better than chance (Libertrau, 1983). Landis and Koch (1977) proposed the following guidelines for translating Kappa scores into meaningful cutoffs for qualitative research: 0.81-1=Almost Perfect; 0.61-0.80=Substantial agreement; 0.41-0.60=Moderate Agreement; 0.21-0.40=Fair Agreement;

0.00-0.20=Slight Agreement; <0.00=Poor). After the initial round of coding was completed, the resulting Kappa score of 0.07 indicated only slight agreement and was determined not to have reached an acceptable threshold. Therefore, a debriefing meeting took place between coders in which it was determined that coding parameters should be strictly set to coding at the paragraph level, and codes should be applied to only those passages where the participant clearly is discussing an influential factor related to SBIRT implementation in general or the implementation of one of the SBIRT components more specifically. Both coders ensured that their application of codes met the new coding parameters, and another round of coding took place. In the second round of coding, the secondary coder recoded the initial five transcripts and coded two more randomly selected transcripts. After the second round of coding was completed, an additional Kappa analysis was performed on the recoded transcripts, which yielded a score of .63. An additional debriefing meeting took place to achieve consensus about the overall suitability of the codes, to explore notable areas that were coded differently by the two coders, and to determine if any themes concerning influential factors had been missed. The conclusion of this final debriefing meeting was that no other notable themes could be identified, and final refinements to the codebook and coding were made.

The final method for ensuring trustworthiness of the data was that at the completion of the study, a member check was conducted to ensure that conclusions and findings were representative of the experiences of participants (Creswell, 1994; Shenton, 2004)

Table 3.1 *Summary of Participant Email Responses across Wave 1 and Wave 2.*

	Total Emails Sent	Email Address Not Active	Expressed Desire to Participate	Declined Participation/Did not Respond	Completed Interviews
Wave					
Wave 1	53	5	12	2	11
Wave 2	54	11	7	1	6
Total	107	16	19	3	17

Table 3.2 *Demographic Characteristics of the Sample*

Sample Characteristics	Full Sample	
Age (Years)		
Mean	41.1	
Standard Deviation	12.9	
Range	24-59	
Years in Agency Setting		
Mean	7.4	
Standard Deviation	7.7	
Range	1.5-25	
	N	%
Gender		
Female	14	93.3
Male	1	6.7
Job Title		
Social Worker	11	73.3
Manager/Director	2	13.3
Other	2	13.3
Education Concentration		
MSW	12	80
PhD (and MSW)	2	13.3
Other	1	6.7
Training Cohort		
Cohort 1 February 2017 to August 2017	8	53.3
Cohort 2 February 2018 to August 2018	4	26.7
Cohort 3 August 2018 to February 2019	3	20

Table 3.3 *Participants by Setting Type*

Setting Type	Full Sample	
	N	%
Educational setting	5	33.3
Child and family services	4	26.7
Homeless shelter	2	13.3
Mental health	2	13.33
Correctional facility	1	6.7
Client home settings	1	6.7

CHAPTER 4

RESULTS

Question 1: Part 1: Are professionals working in non-medical settings who have been previously trained in SBIRT using it in practice?

The SBIRT Implementation Checklist contained dichotomous items that enabled quantification of the use of the SBIRT components. Results indicate that there is variability in the use of each of the SBIRT components. Some of the components are implemented by a majority of participants, whereas other components are implemented by only a few participants. Each of the components is considered below in the order that they appeared in the checklist.

Screening Use

Of the 15 participants, 40% (n=6) reported that they used the screening component, 33.3% (n=5) reported that they used universal screening, and 26.7% (n=4) reported that they do conduct an in-depth screening. Additionally, of the 15 participants, 13.3% (n=2) reported that they use the AUDIT and 20% (n=3) reported that they use the DAST. Table 4.1 depicts use of the screening component.

Brief Intervention Use

Participants were asked two questions about their use of the Brief Intervention (BI) component. First, they were asked if they use the BI, and then they were asked if they use a BI that is based upon a screening score. Of the 15 participants, 47.7% (n=7) use the BI in addressing substance use with clients. The percentage of participants who

provide a BI based on a screening score is lower, as only 20% (n=3) of the participants reported they provide clients with a BI based on their screening score. Table 4.2 depicts brief intervention use.

Referral to Treatment

Participants answered two items about use of referral to treatment (RT). Of the 15 participants in the sample, 66.7% (n=10) use referral to treatment. Additionally, 66.7% (n=10) reported actively referring those clients who need or request referral to additional sources of support. Table 4.3 depicts referral to treatment use.

Motivational interviewing

Participants were asked two questions about their use of the motivational interviewing (MI) component. Of the 15 participants, 93.3% (n=14) report use of MI and MI core skills. Table 4.4 depicts motivational interviewing use.

Question 1: Part 2: In what stage in the implementation process are they?

In terms of implementation stage, 10 participants out of 15 (66.7%) were categorized as *Low Implementation*, as they were implementing zero to two of the SBIRT components. In contrast, five of the 15 (33.3%) participants were characterized as *High Implementation*. Three of these five participants were implementing three of the SBIRT components, and two participants were implementing all four SBIRT components. Table 4.5 depicts the percentage of participants characterized in each implementation level. Table 4.6 depicts SBIRT component use, implementation level, and setting by participant.

Question 2: What factors influence implementation of SBIRT in non-medical settings?

Qualitative analysis revealed the following eight factors as influencing SBIRT implementation in non-medical settings:

- Compatibility of SBIRT with the Setting
- Staff Training/Staffing
- Client Factors and Client Needs
- Time
- Leadership
- Policy
- Available Resources
- Perceived Advantage/Efficacy of SBIRT

Table 4.7 below depicts the number of participants who had segments coded with each factor and the total number of coded segments for each of the factors. Below is a detailed discussion of each of the identified factors that influences SBIRT implementation in non-medical settings.

Compatibility of SBIRT with the Setting

Eleven out of 15 participants identified *compatibility* as a factor that influences SBIRT implementation in non-medical settings. *Compatibility of SBIRT with the Setting* refers to the extent to which SBIRT implementation complements and matches existing structure, practices, values, and priorities of the agency setting. Within the sample, compatibility as a factor was discussed along a spectrum, with very high levels of compatibility at one end, where SBIRT matches and complements the pre-existing

practices, structures, values, and priorities of the agency setting, and low compatibility at the other end.

For example, one participant noted that their agency only does referrals, so the entire SBIRT model does not fit within the practices of their agency setting.

“I’d have to be working with a different agency because our goal is to only do referrals to other agencies and not really do the intervention. So I think that’s where, but I also think it’s beneficial, though, for people in my job and in my role to have that SBIRT training because I feel like then we can understand that further piece that our clients may be experiencing when we refer them somewhere else.”
(Participant 9, Education)

This issue of low compatibility can also be seen in the responses of Participant 15 (Correctional facility) who discussed that SBIRT does not complement the existing structure, practices, and priorities of the agency setting.

“Well, the thing about it, it’s kind of a, my hands are tied, too, sometimes because the thing about our program, our drug program at the different – ‘cause we can refer them, but they are taking the ones who have a year or less. So if this person doesn’t have a year or less on his extensions, then we can’t refer them to the ATU (Addiction Treatment Unit) program, which is, you know, a crutch for us. I mean, it’s crippling for us when we really do have inmates in the program that need some type of treatment.”

The image of the participant’s hands being tied conveys their inability to provide their clients with a substance use intervention because of various restrictions and differences in service priorities in the setting. Therefore, the RT component is at odds with the structure and priorities of the correctional setting in which this person works.

Participant 6 (Child and Family) described in detail that the brief intervention component of SBIRT is beyond the purview and scope of their agency and, therefore, is not compatible:

“So our job is not to necessarily to do an intervention with the family. Our job is to make sure that we refer them to an agency that can do the full intervention... that they’re trained in that, because we see substance abuse, but we see all other factors that involve abuse and neglect with children. So, there’s no way that we

could specialize in every single area, so instead of us handling it, that's why we refer out. Like, we do it lightly, like I said, where we may ask them a couple of questions, but we don't have the ability to do any kind of intervention, so that's why."

In contrast to the low levels of *compatibility* described by the majority of the sample, for some participants, *compatibility* was actually a facilitator of implementation. For example, one participant described that in their setting there are few barriers to SBIRT and that implementation is facilitated by the overall "fit" of SBIRT to the focus of practice in their setting:

"I don't think our specific agency has any barriers... It already fits into a process we had already. And to need five extra minutes of doing this is no different. I already have the DAST, the CRAFFT, the screening, all of that, the AUDIT, all of that in pre-made folders ready to go, so it's not gonna take time for me to print these out. And then I already have an Excel chart that documents these things to be able to communicate with X (redacted name of educational institution). So because I already have these in process and ready, it just fit in perfectly."
(Participant 10, Education)

Therefore, not only did SBIRT "fit," but the participant quickly discovered implementation strategies to ensure consistent use of SBIRT that complimented existing practice strategies. Another participant discussed a similar aspect of compatibility. Specifically, Participant 14 (Child and Family) described the advantage of being able to place SBIRT screening protocols into their pre-existing assessment:

"I definitely am working on building in using those screening tools, and I think because our case management tool that has that built in assessment is going away, that's a perfect time because now we're kind of having to create our own assessment on our own until they figure out what they're gonna replace it with. So I definitely plan on putting those SBIRT tools in right with the consent forms. And we also ask them to fill out the ACES questions, so I'm gonna put that in there as their packet to fill out, and then I think the, as far as the second part, the piece we need, I think I definitely need to create, like you had mentioned earlier, a protocol so that, we have to ring down, 'cause we're having an intern this year as well. So we kind of all have the same plan. And then that way I can share it with others when they ask, what are you guys doing on your end, because you screen for this, then we already have it, like planned out, and I think that will help also

with my own confidence that I've already preplanned. If someone is positive I know exactly what steps I'm gonna follow with them every time."

This participant describes a setting in which SBIRT implementation is built into the existing assessment practice structure and reflects a value within the setting that the SBIRT screening tools should be used and are compatible with the work that is being done with clients.

Staff Training/Staffing

In total, 10 out of 15 participants identified *Staff Training/ Staffing* as a factor that influences SBIRT. *Staff Training/Staffing* refer to any description of factors about staff training in SBIRT, the numbers of trained staff, or having enough staff competent in using the SBIRT components in the setting. For example, Participant 4 described that lack of trained staff is a barrier to SBIRT implementation, stating, "*First number one, the majority of our staff at our agency don't have the education or training to implement the SBIRT.*" On the contrary, adequate numbers of trained staff and expanded staff knowledge about brief interventions is a facilitator of SBIRT. Specifically, having access to adequate training resources can lead to additional staff being trained on how to use SBIRT in the participant's setting. Specifically, Participant 10 (Education) reported that a stakeholder in a partner agency had expertise in training others in SBIRT: "*My executive director at X (Redacted name of agency) is a TOT (Trainer of Trainers) of SBIRT, and we're trying to really utilize her to come and start educating SROs, school resource officers.*" In contrast, Participant 9 (Education) identified that lack of training in MI can undermine the goals of SBIRT implementation, as other staff in the setting may use different methodologies and draw from different knowledge bases in addressing substance use issues that are not compatible with SBIRT. Specifically, this participant

talked at length about the impact that differing levels of staff competence in MI can have on clients when addressing substance use issues:

“So one of my jobs is to create a better or increase people’s capacity and skills as far as just the ability to build relationships. And one of the biggest lacking skills is MI. Like, I don’t feel like people do a good job in asking open-ended questions, and I think we have a hard time listening... I don’t wanna say that as a district we have a poor culture of communication, but I do think that, you know, individually, that we can all benefit by better communication skills around communication, and I think MI does a great job in building those skills.”

Other participants describe SBIRT as a complex intervention that requires lots of advanced/specialized knowledge that will only come from multiple trainings and opportunities to develop skills:

“If you’re really gonna use it and put it into practice, it’s too much for one day, and it needs to be... I’ve learned very quickly, with even Master’s level students and workers, one day is not enough. You have to have for anything that you’re implementing, a continuation and refresher about three to six months.”
(Participant 1 Homelessness)

Client Factors and Client Needs

Nine out of 15 participants described the influence of *Client Factors and Client Needs* upon SBIRT implementation. *Client Factors and Client Needs* are defined as needs and challenges experienced by clients that impact a participant’s ability to deliver SBIRT. Participants identified clients experiencing very high levels of stress, material needs, and/or possible cognitive limitations as influencing their ability to implement SBIRT. For example, one participant described their clients as having particular needs that influenced their perception of the suitability of using SBIRT:

“What I see is that it doesn’t really fit clients who are in the complete crisis mode we have, and it doesn’t quite fit with folks we work with [who have] an extremely low IQ, even lower education on average than the overall population.”
(Participant 1, Homelessness)

Participant 1 described how they perceive that many of their clients are actively experiencing very high levels of mental stress, and, therefore, SBIRT may not be the appropriate intervention:

“I mean, they’re going through trauma, 100%, 100% of the people I serve are in trauma currently. And so you don’t wanna really overwhelm or do too much, and so we do just a little bit at a time and build from that. And so you have to have tools and ways that you’re working with people to do things really quickly and build on it and be supportive. And too many questions or assessments are scary. We’re not in a clinical setting. And when I think of that tool, I think of someone who’s actually decided, *I’m going to a therapist to work on this and I’m trying to see where I am in this level.* I hardly ever have clients that get to that point, that they’re like, *hmm, you know I really need to see someone to really work on this.* It does happen; it’s just very rare. Most of our clients are just at the desperate beginning stages of, like, how do I get back on my feet?”

However, several participants mentioned that their use of the BI and MI components compliments many of the specific needs with which their clients present. Participants perceive that a brief intervention utilizing MI can help clients make connections between their trauma histories and substance use. For example, Participant 7 stated:

“I think that the other thing that happens is we’ll have a client who, you know, maybe didn’t understand kind of their own connections, hadn’t thought about how this trauma history might’ve been why ‘I was still using all of these substances.’ So you can kind of get them on board with an initial process and get them on board with why even reducing their use before they get to treatment might be beneficial. So we can get through all of that change conversation, and it’s helping them to be a participant member of their own treatment; [that] is our goal.”
(Participant 7, Child and family services)

For those participants who work with adolescents, parents of the client were a unique client factor. For example, one participant delineated that parents can act as a barrier to youth getting the substance use support that they need:

“I think I hit on maybe barriers to screening, but a barrier in referral to treatment can often, you know, be actually getting participation from the parent, from the guardians. That can be a big barrier if that’s not, if we’re not receiving that.”
(Participant 2.)

Time

Nine out of 15 participants identified time as a factor that influenced SBIRT implementation. *Time* refers to the chronological time that participants have available to use SBIRT, in addition to the overall amount of time that must be devoted to SBIRT implementation. For example, Participant 14 explained, “Some of the things that kind of prevent us from being able to do the full assessment would be time constraints.”

Likewise, Participant 5 stated, “I guess I would say time of staff.”

Participant 1 discussed the amount of time that they have to complete all services with clients versus the amount of time that it takes to complete SBIRT:

“So it’s called brief, but to be honest when you’re working with someone in crisis, it’s too long. You gotta be a lot briefer than that, and you gotta be able to do it in multiple sessions really quickly, like a couple minutes here. Most of our meetings with individuals until they’re with us for even over a month, don’t usually last more than 15 minutes. That’s about all they can take unless we’re really getting into something that they’re getting upset about and really wanna talk through.”

In addition, Participant 17 discussed that existing demands on time faced by participants to be productive (i.e. all the things they have to do with clients in limited time) make it difficult to implement SBIRT in addition to all the tasks that are required of them:

“You know, the first thing that comes to mind is just the assessment process here is a couple hours, so there’s so much to do already that, you know, there’s paperwork, initial paperwork to get the case opened, and that takes a bit of time. And then the actual assessment that we have taken at least an hour and a half with most folks, it can go for two hours. But I would say time is a huge issue of completing it. So like I said the substance use piece is in there, and so it is addressed, and I just think it’s time. But you know, I think it’s also a way for it to be integrated and not be any more overwhelming, I think it’s [going to] be a very useful tool. But I think time is the hugest issue there.”

Participants also described how they must be intentional about their use of SBIRT and devote time to its implementation. For example, Participant 9 discussed the

importance of specifically devoting time to SBIRT implementation so that its use does not become de-prioritized:

“I think sometimes just time can be a major barrier, which if you don’t intentionally build these things into the practice, then the default reaction sometimes is just, you know, more, I guess not as standardized [a] way of doing an assessment, and so they just fall to the wayside.”

The number of people who are both trained and available to complete the intervention with clients magnifies the *time* that it takes to complete the SBIRT intervention. If there are just a handful of staff or maybe only the participant is trained and available to complete the intervention, then it is unlikely that implementation will be successful. Participant 4 described this issue connected to time as being a “capacity issue”:

“I have considered using the SBIRT with clients that are coming into our housing programs; however, there’s a capacity issue with me being able to do that with every client coming into the housing program.”

Leadership

Leadership was a specific theme that was described by seven out of 15 participants. Specifically, *Leadership* was defined as the influence and impact that leaders (i.e., managers, directors, supervisors etc.) have on the implementation of SBIRT. For example, when describing the likelihood of expanded future SBRT implementation, Participant 5 (Child and family) reflected, “*I’d say just some commitment by leadership, which would be me, [could] make it happen.*”

Participant 11 (In home) described challenges with unsupportive and discouraging leadership, in a setting in which they were the lone social worker and sole provider of psychosocial services:

“Yeah. I was the only social worker, and so I didn’t have a supervisor who was social, like wasn’t trained in social work at all. So a lot of the things that I, wanted

to implement weren't supported in the way of, sounds bad to say, but... I don't think the role of a social worker was really valued. It was just the fact that they had to keep a social worker on staff per Medicare guidelines."

However, in contrast to the negative impact that leaders can have on implementation in non-medical settings, Participant 14 (Child and family) reported that a supportive and active leader could facilitate SBIRT implementation:

"I think one other thing would just be that...the program I work in is also pretty new, and I'm the only one in it, so I'm a manager who does oversee the program. But I do feel like I'm out here on my own. So with not having a strong, well really much of any, substance use disorder background, I always feel a little bit vulnerable diving into that because I don't have a huge background, and I don't have, really, a lot of support. So I've got a very supportive manager, but that's also, like I have to go back to, like find timing, [to] do some consultation with them on where to go. And I know, like out in the middle of someone's home, I can't do that right then. I have to know what to do."

Participant 17 (Mental health) delineated the perspective that they are not able to make a decision about expanding SBIRT implementation independently of the layers of leadership in their setting:

"Anything is possible I'll say, but I know that wouldn't be something that I could do independently on my own. That would be a process that would have to go through our system, clinical department, and all that. So while I think it could be a useful tool, I think that the process of just getting it implemented would be difficult, because like I said, there's so many levels that that would have to be agreed upon to become a part of the intake process."

Policy

Seven out of 15 participants identified *policy* as a factor that influences SBIRT implementation. *Policy* is defined as any pre-existing policy, mandate or established procedure within the setting that influences the course of implementation. Specifically, *policy* is conceptualized as the existing rules, regulations, service terms, established expectations, job description, and scope of practice that influence SBIRT implementation. The *compatibility* code generically refers to the participant's perception

that SBIRT did or did not “fit” the values, priorities, practice structures, and focuses of the practice setting, whereas in contrast the *policy* code was used when participants identified specific established written policies and procedures that influenced implementation.

The influence of *Policy* is tied to the fact that it creates and establishes certain conditions (often in writing) under which SBIRT is implemented. For example, one participant acknowledged that clearly defined policies about SBIRT are likely to lead to expedited and robust implementation, and reported that as a “leader” in their setting, they are responsible for designing policy to facilitate SBIRT implementation:

“So I think that I could get the endorsement—well, I know I could--the endorsement of all. It’s just a lot of it will be, to me, even as we were talking, setting up some, I don’t know, policies, expectations, sorta like a service plan of how we’re going, sorta like how we would be able to approach this issue... making sure staff are trained, but also having the resources available to them that provide the knowledge, the resources, and information they need to be able to feel comfortable in approaching this with families.” (Participant 4, Child and family)

Specifically, in some settings, there are specific rules about the types of interactions that practitioners can have with their clients, and that these requirements must be followed in spite of the desire of participants to use SBIRT. For example, one participant identified two components of agency policy concerning their job description and limitations around scope of practice concerning interactions with clients that influence SBIRT implementation:

“I think one of the barriers is the fact that we are, like it’s intentionally designed that our role is not as clinicians, as we’re not to serve as clinicians within the school district. And I think sometimes those lines can get very blurry when you start using tools like that. And so going back to, especially with the younger students, it is not our role, and we’re necessarily not allowed to use some of those screenings outside of a specific consent from a parent. You know, we’re there to educate.” (Participant 9, Education)

Participant 2 (Education) also reflected the theme of policy outlining the participant's job role and scope of practice being a barrier to implementation. Specifically, Participant 2 reported that as a school social worker, they must comply with policies set out by the school district in determining what is, and what is not, within the scope of practice and purview as school social workers:

“So anything that's very formal that would go into, let's say, like a specific questionnaire, it'd have to be approved, and then, of course, the parents would have to give us approval. It's almost like Special Ed. What, they're gonna do the Special Ed testing? A parent has to give permission for the child to get tested before the school psychologist could come and give them the test they need to determine their education level.”

In some settings, one of the specific *policy* barriers to implementation is that universal screening protocols and standardized brief intervention components within SBIRT are considered “formal (i.e. clinical intervention)” as opposed to generic educational or psychosocial interventions. Therefore, policies established by the school district (in the example of Participants 2 and 9) require interventions to be preapproved with only clinical staff being empowered to use “clinical” interventions (i.e. psychologists). As a result of these policies, participants in such settings are not permitted to implement SBIRT as a standardized intervention delineated by SAMHSA. In addition to *policy* affecting the type of interventions that can be used by participants practicing in schools, school district policies also require that parental consent be acquired before any intervention takes place with a high school student. Therefore, because of a blanket ban on non-“clinicians” using “clinical interventions” and the policies around securing parental consent, which leads to logistical challenges, some participants are not able to implement all components of SBIRT as intended.

For other participants, *policy* does not prohibit the use of “clinical interventions” in their settings; however, specific policies still limit how they use certain SBIRT components. For example, one participant, when asked to clarify how the policies of their external funding agencies influenced future SBIRT implementation, and specifically their inability to use the RT component in their setting, described their challenges in the following terms:

“So we can give them (clients) options for how they could self-refer if they wanted, but we can’t make the referral; we can’t make that connection. In addition, we just have to encourage them to run it through their caseworker...”
(Participant 7, Child and family)

In this example, while Participant 7 is permitted to use clinical interventions, they do not make final decisions about the client’s treatment. They are only responsible for providing clinical services under specific policies set by their funding agency that are overseen by a case manager. Therefore, Participant 7 is not able to implement all the SBIRT components because establishing treatment goals and providing referrals would fall under the purview of the case manager.

Available Resources

Five out of the 15 participants identified Available Resources as a factor that influences SBIRT. Specifically, *Available Resources* refer to the extent that resources in a setting influence implementation. For example, Participant 5 (Child and family) identified the need for expanded resources as being a key factor that influenced the likelihood of future implementation, stating, “...making sure staff are trained but also having the resources available to them that provide the knowledge, the resources and information they need to be able to feel comfortable in approaching this with families.”

Low levels of available resources act as a barrier to implementation. For example, Participant 15 (Correctional facility) reported that in their setting it was not client factors (in this case stigma) that were the barrier to implementation, but the lack of referral resources available to their setting made it impossible to implement several of the components:

“I don’t think it’s a stigma for, it’s a stigma for mental health, but I don’t think it’s a stigma for substance abuse. You do have a lot of inmates that are requesting substance abuse treatment coming through, but like you said before, it’s the limited resources, you know, to give it to them. So you know, I think they would be more willing to go to a program if there was more programs available for that treatment.”

Limited referral resources was also echoed by Participant 4 (Homelessness), who in working in a rural environment, reported that many of her colleagues avoid addressing substance use issues because of a lack of available resources to which to connect clients after providing them with SBIRT:

“Yeah, so one of the common mindsets that I come across is with some clients, you can see it, so why would you need to ask about it? Why is it needed? Also, in rural settings what I’m coming across [is] my colleagues don’t want to ask for any additional information if they cannot connect them not only to an accessible provider but to a quality provider.”

Ample available resources were described as a facilitator of implementation. For, example, Participant 1 (Homelessness) identified in-house referral resources and other specific supports that had been developed as very clear facilitators of the RT component of SBIRT:

“So it’s really helpful for us as we’re making referrals for treatment that we’re talking to the client about that first, even as part of a sobriety contract we want whatever, there’s still choices. So we work with that client to take the best fit for them, and we make sure as a facility we really work to have as many partners onsite as possible so clients can start seeing people and choosing the providers they want for them. We have X (redacted name of practitioner) onsite three days a week from LRADAC. I have X (redacted name of practitioner) onsite five days a week, part-time, and she does recovery and mental health support. She does

substance abuse classes. And then, of course, we have our peer supports and our AA classes that are happening. So we have more than one every day... classes onsite to link you into support. But it's really helpful to have that onsite X (name of partner agency) because she really helps work with the clients as a peer support specialist to direct them to the options that LRADAC has in-house and with its partners to what the client feels is their best next step. And she is very relatable. The clients really enjoy working with her, and it goes back to that nonjudgmental peer support is so helpful to have."

In addition to the resources identified here, one participant specifically identified the HOPES SBIRT Pocket Card as an available resource that facilitated use of the intervention and the development of practitioner competence:

"...the little cards that you guys gave us were just really, a really cool thing to even show the clients and just specifically show them, what a drink is. You know, a drink is this, you know, just physically to show them a picture, you know, a 12 ounce can of beer or a glass of wine or, you know, a 1.5 ounce shot, you know, those things. And even the ruler is nice to just say... so you're at a 5, it's just the physical aspect of looking at those things, too, to me has been helpful."
(Participant 16, Mental health)

Perception Advantage/Efficacy of SBRT

Perception of Advantage/Efficacy of SBIRT was the least occurring code across the sample, as it was only applied to four out of the 15 participants. *Perception of Advantage/Efficacy of SBIRT* refers to the extent to which participants perceive that implementing SBIRT provides an advantage and/or favorable outcome contrasted with not using the intervention, using a different intervention, or not using any intervention to address client substance use. This code also refers to the extent that the SBIRT intervention provides an efficacious outcome that reinforces the participants' use of SBIRT.

Multiple participants reported that SBIRT provided them with an advantage over other interventions because of positive outcomes they associated with use of the MI

component. For example, Participant 6 (Child and family) reported that they perceive multiple advantages connected to MI use:

“So that’s why we use that positive approach. And I think motivational interviewing covers some of that, like strength-based, like focusing on the strengths of the family and the strengths of the individual, so we use a lot of that to try to bring a positive experience for the families when they’re going through such a negative time.”

Additionally, the *Perception of Advantage/Efficacy of SBIRT* code was assigned when participants reported that there was a clear advantage to using SBIRT in comparison to a previous intervention. For example, Participant 7 (Child and family) reported that their use of SBIRT is influenced by the strong “evidence base” concerning positive client outcomes that is associated with SBIRT use and their perception of the effectiveness of SBIRT in other practice settings. Additionally, Participant 10 (Education) described the relative advantage of using SBIRT in their setting in terms of client outcomes:

“Well, if I look at just the difference before we were using SBIRT now and last, I would say, 2017/2018 year, we had in 2018/2019 about 26 students that came through the program, which was about half of what it was the year before. So the year before we had about right under 50 come through this program; they were referred over. And if we look at our measurements of “they’re likely to change some of their behaviors,” our overall end of the year percentage was about 79%, and our goal is to have 75% or higher say that they’re gonna change behavior. So we met our goal, but 79% still isn’t the best; we wanna see 100%. And if you look at the year for 2018/2019, we were between 90% and 100%, so if that helps you as far as the difference of utilizing SBIRT, it’s been significant with our outcome.”

Question 3: How do the factors influencing implementation of SBIRT differ based on different stages of implementation?

There are some notable differences in these influential factors across the *Low* and *High* implementation level groups. These differences between the two groups manifest in terms of both the percentage of participants that identified these factors and the

qualitative descriptions of these factors by participants. Table 4.8 depicts the differences in the number of participants from each implementation group who identified each factor.

In the *High* implementation level group, the factors identified by the most participants were *time* (80%; $n=4$), *perception of advantage/ efficacy of SBIRT* (60%; $n=3$) and *compatibility* (60%; $n=3$). In the *Low Implementation* group, *compatibility* (80%; $n=8$), *staff training and staffing* (80%; $n=8$), and *client factors and client needs* (70%; $n=8$) were the factors identified by the most participants.

Similarities between the Groups

In terms of the similarities between the two groups, *leadership* occurred at a similar rate across both groups with 40% of participants in the *High Implementation* and 60% percent of participants in the *Low Implementation* group identifying this as a factor that influences SBIRT. Likewise, participants from both of the groups mentioned *policy* at a similar rate, with 40% of the participants in the *High Implementation* group and 50% of participants in the *Low Implementation* group identifying this factor.

Participants in both groups also qualitatively described both of these factors in similar ways. Participants across both implementation levels typically described policy as a barrier to implementation; however, on some occasions, members of both groups did describe how supportive policies facilitate implementation. Across both groups, leadership was described as being a facilitator of implementation when the leader or leadership structure was supportive and being a barrier to implementation when leadership was unsupportive.

Differences between the Groups

While *compatibility* as a factor occurred at very high rates across the groups, with 60% of participants in the *High Implementation* group and 80% of participants in the *Low Implementation* group, there were important and notable differences in the way that this code was typically described in the *High* versus the *Low* implementation group. In *High Implementation* settings, *compatibility* was typically described as being a facilitator of SBIRT. This is in contrast to *Low Implementation* settings in which lack of *compatibility* was frequently described as a barrier to SBIRT implementation. Specifically, in *Low Implementation* settings, participants described that it was very difficult to use the standardized screening components and that these components did not “fit” within with the priorities, values, and focuses of their setting. In contrast, in *High Implementation* settings, the participants were much more apt to describe how SBIRT “fit” into their setting and how SBIRT was integrated into their pre-existing screening, intervention, and practice protocols.

Client factors and client need was identified by only 40% of the participants in the *High Implementation* group, yet it was identified by 70% of the participants in the *Low Implementation* level group. Therefore, it appears as though *client factors* may be more commonly perceived as an influential factor by participants from *Low Implementation* settings. In a similar manner, staff training and staffing were identified by 80% of the participants in *Low Implementation* settings in contrast to only 40% of the *High Implementation* group. In spite of these quantitative differences, however, in the rate at which these factors were observed in the two groups, there were no notable differences in how these issues were qualitatively described. *Client factors* were

consistently described as a barrier to implementation as participants delineated various facets of their clients' lives that influenced their ability to use SBIRT with them. *Staff training and Staffing* was also described similarly across the two groups, in that *staff training* is perceived as a facilitator of SBIRT and the lack of *staff training and staffing* is perceived as a barrier to implementation.

Table 4.1 *Use of the Screening Component*

Screening Use Variables	Full Sample	
	N	%
Do you use Screening?		
Yes	6	40
No	9	60
Do you use Universal Screening?		
Yes	5	33.3
No	10	66.7
Do you conduct an in-depth screening?		
Yes	4	26.7
No	11	73.3
Do you use the AUDIT?		
Yes	2	13.3
No	13	86.7
Do you use the DAST?		
Yes	3	20
No	12	80

Table 4.2 *Use of Brief Intervention*

BI Use Variables	Full sample	
	N	%
Do you use Brief Intervention		
Yes	7	47.7
No	8	53.3
Do you provide clients with a brief intervention based on their screening score?		
Yes	3	20
No	12	80

Table 4.3 *Use of Referral to Treatment*

Referral to Treatment Use Variables	Full Sample	
	N	%
Do you use referral to treatment?		
Yes	10	66.7
No	5	33.3
Do you provide clients that need or request additional treatment with referral to treatment?		
Yes	10	66.7
No	5	33.3

Table 4.4 *Use of Motivational Interviewing*

MI Use Variables	Full sample	
	N	%
Do you use Motivational Interviewing?		
Yes	14	93.3
No	1	6.7
Do you use the MI Core Skills?		
Yes	14	93.3
No	1	6.7

Table 4.5 *Sample by Stage/Level in the Implementation Process*

Stage in the Implementation Process	Full Sample	
	N	%
Level of Implementation		
Low Implementation	10	66.7
High Implementation	5	33.3

Table 4.6 *SBIRT Component Use Matrix*

ID	Implementation Level	Screening	BI	RT	MI	Type of Setting
01	Low	No	No	Yes	Yes	Homeless
02	Low	No	No	Yes	Yes	Education
04	Low	No	No	Yes	Yes	Homeless
05	Low	No	No	Yes	Yes	Education
06	Low	No	No	Yes	Yes	Child and family
09	Low	No	No	Yes	Yes	Education
11	Low	No	No	No	No	In home
12	Low	No	No	No	Yes	Education
14	Low	Yes	No	No	Yes	Child and family
15	Low	No	No	No	Yes	Correctional
07	High	Yes	Yes	No	Yes	Child and family
08	High	Yes	No	Yes	Yes	Education
10	High	Yes	Yes	Yes	Yes	Education
16	High	Yes	Yes	Yes	Yes	Mental health
17	High	Yes	No	Yes	Yes	Mental health

Table 4.7 *Number of Participants that had Segments Coded with Each Factor and the Total Number of Coded Segments for Each of the Factors*

Influential Factors	# of Participants that had Segments Coded	# of Total Coded Segments
Compatibility	11	24
Staffing and Staff Training	10	28
Client Factors/Client Need	9	15
Time	9	12
Leadership	7	11
Policy	7	17
Available Resources	5	7
Perceived Advantage/Efficacy of SBIRT	4	5

Table 4.8 *Differences in Factors by Stage of Implementation*

Implementation Factor	Percentage of Participants in the High Implementation Group coded for this factor (N=5)	Percentage of Participants in the Low Implementation Group coded for this factor. (N=10)
Available Resources	20% (n=1)	40% (n=4)
Compatibility and Suitability	60% (n=3)	80% (n=8)
Perception of Advantage Efficacy of Using the SBIRT Intervention	60% (n=3)	20% (n=2)
Policy	40% (n=2)	50% (n=5)
Time	80% (n=4)	50% (n=5)
Staffing/Staff Training	40% (n=2)	80% (n=8)
Client Factors/Client Need	40% (n=2)	70% (n=7)
Leadership	40% (n=2)	60% (n=6)

n.b. The sum of each of the rows is not 15, as not all of the participants described all of the factors.

CHAPTER 5

DISCUSSION

The purpose of this study was to determine the extent to which practitioners in non-medical settings were using SBIRT, to explore factors that influence SBIRT implementation in non-medical settings, and to identify whether these factors differ according to stage in the implementation process. Overall, in terms of SBIRT implementation, findings from this study demonstrate that a majority of participants are using two or fewer of the SBIRT components. And, of those components being used, Referral to Treatment (RT) and Motivational Interviewing (MI) are the most common. The finding that overall SBIRT implementation is low among the sample is consistent with prior literature in medical settings that SBIRT use is variable (Maynard et al., 2015). In addition, these findings confirm prior literature concerning RT and MI. Specifically, both of these components have independently diffused apart from SBIRT (Miller & Rollnick, 2009; Pace et al, 2018), so, therefore, it is not surprising that MI and RT are being used at higher rates in comparison to the other two components.

Another main finding of this study is that eight factors were identified as influencing SBIRT implementation in non-medical settings. These factors were *available resources, compatibility of SBIRT with the setting, perception of advantage/efficacy of SBIRT, time, staffing and staff training, policy, client factors and client needs, and leadership*. All of these factors, with the exception of *perception of advantage/efficacy of SBIRT*, are representative of the *Inner Setting* and *External Setting* domains of

implementation influence as outlined in the CFIR (Damschroder et al., 2009; Damschroder et al., 2011). Specifically, these factors are all concerned with the structure of the practice setting both internally and externally, as opposed to representing either the characteristics of the intervention itself or being concerned with the practitioners responsible for implementation. Many of these factors (e.g., *compatibility, client needs and client factors, staff training and staffing, time, leadership, and available resources*) have all been previously identified in SBIRT implementation studies in medical settings (Barnes et al., 2016; Muench et al., 2015; Nunes et al., 2017.) Additionally, *compatibility, client factors, and available resources* have been identified in preliminary studies into SBIRT use in non-medical settings as well (Begun et al., 2011; Curtis et al., 2014; Gelberg et al. 2012; Mitchell, 2012; Maslowsky et al., 2017; Prendergast, 2017).

Of the factors influencing implementation of SBIRT identified in this study, two, however, are notable extensions to the literature: *perception of advantage/efficacy of SBIRT* and *policy*. These factors have not been previously identified as influencing SBIRT implementation in either medical or non-medical settings but are consistent with the CFIR domains *Inner and Outer Setting* and *Characteristics of the Intervention*. A likely explanation for the emergence and identification of *Perception of Advantage/Efficacy of SBIRT* in this study is the fact that SBIRT has diffused widely as an evidence-based practice, and now practitioners are beginning to critically compare and evaluate SBIRT to other approaches used when addressing client substance use, along with monitoring the relative advantage that SBIRT provides to their clients..

Policy is the other factor unique to this study and an important new finding, as prior studies have only noted practitioners' concerns about scope and limits of practice in

medical settings as influencing SBIRT implementation. However, the participants of this study delineated specific policies, procedures, protocols, and constraints placed on them that influence the extent to which they can implement SBIRT. This finding underscores the reality that non-medical settings often have very different policies and practice procedures than medical settings. For example, in school settings, the primary focus of service delivery is on promoting academic achievement. Because of this, participants in this type of setting may not be able to implement all of the SBIRT components because policies are not designed to focus on screening for substance use among students.

In terms of the differences between participants from the low implementation and high implementation level groups, findings from this study suggest that while there are some overall interesting differences between the groups, there are many more notable and important similarities. Because of the small sample size and the exploratory nature of the study, it is important to note that it is difficult to draw definitive conclusions about how factors that influence implementation manifest differently in *low implementation* versus *high implementation* settings. However, the most notable difference between the two samples is the issue of *compatibility*. While participants across both implementation level groups frequently mentioned issues concerning compatibility, there were notable differences in the way that *compatibility* was described across the two groups. While prior research has shown that compatibility is a factor that influences SBIRT implementation, this study builds on the literature and provides a clear way of understanding *compatibility* or “fit” between SBIRT and the non-medical settings as being a continuum from low *compatibility* through to high *compatibility*. As a result of this study, it is clear that participants from higher *compatibility* settings integrate SBIRT

into the flow practice, that SBIRT “fits” with the core services that practitioners provide in these settings, and that these practitioners perceive SBIRT as matching the values and priorities of their settings.

Limitations

This study has several limitations. First, the sample was homogenous. Overwhelmingly, participants were female and had MSW degrees (n=14). As such, the perspectives, and opinions of other professionals (such as administrators, teachers, and faith congregation leaders) concerning SBIRT implementation in non-medical settings are underrepresented in the study. A larger and more diverse pool of participants may have elicited different findings concerning factors influencing SBIRT implementation in non-medical settings. Also, the sample is comprised of participants who not only invested the time to complete the HOPES SBIRT training but who also then agreed to complete a follow-up interview. This commitment to complete an interview without compensation may indicate a high level of interest and investment in the subject of SBIRT implementation. As such, this limits the generalizability of the findings of the study.

Another limitation is that these data were self-reported and not corroborated with direct observation. As such, there is no way to objectively verify the extent to which participants were implementing SBIRT.

Social desirability bias is also a limiting factor affecting the study. The author and researcher was employed by the HOPES project in a project managerial capacity for the duration of the grant. Some of the participants had pre-existing relationships with the researcher because of SBRT training, and a small number of the participants had pre-existing relationships with the researcher because of his role in delivering social work

field education across the state of South Carolina. Therefore, it is possible that participants may have experienced pressure to present positive information about their perspective of, and experiences with, SBIRT implementation. Data from the interviews suggests participants discussed both positive and negative experiences, but this could have influenced what participants chose to share.

Another limitation to the study relates to the fact that participants were not specifically questioned about pre-existing agency attempts to implement MI and RT separately from SBIRT implementation. Given this, it is unclear the extent to which RT and MI use should be classified as SBIRT implementation, or if the use of these components represents pre-existing agency practices and are not specifically related to SBIRT implementation.

The final limitation of the study relates to the approach to coding utilized in this study. Factors were only coded if they were discussed within the context of SBIRT implementation. This is important because other factors were identified in the transcripts that appeared to be factors that influenced participants' practices in general, but it was not clear whether it influenced SBIRT implementation specifically. Therefore, factors were only coded based on a conservative approach to coding, and, therefore, future research is needed that continues to explore factors that impact participant's ability to use SBIRT within non-medical settings.

Implications

Implications for Research

Several implications emerge for research, training/education, and practice. Future research would benefit from addressing the limitations noted above. Specifically,

observational research in these (or similar) non-medical settings should be a priority. Observational research would help to fully capture and describe the extent of SBIRT implementation fidelity. Second, future research should prioritize interviews with participants to explore the extent to which RT and MI are implemented as components distinctly and separately from SBIRT implementation. As with a number of the *Low Implementation* participants, it is not clear the extent to which use of these two components constitutes very limited SBIRT implementation or if these two components are being used distinctly from SBIRT implementation because these components may have diffused independently into these settings. Third, survey research into the factors that influence SBIRT in non-medical settings is needed to gauge the magnitude of these factors in terms of their relative impact on SBIRT implementation across a range of non-medical settings. Further research is also needed that leads to the development of theory about how these factors that influence SBIRT implementation cluster together, especially those factors that appear to be closely connected like *policy* and *compatibility*. Finally, building on this study, further research is needed into understanding how *policy* influences SBIRT in non-medical settings, the identification of common types of policies that influence the implementation of SBIRT and, how these key policies manifest differently across subtypes of non-medical settings. Such research would help provide insights into how the effect of such policies may be mitigated and minimized to reduce their impact on SBIRT implementation in non-medical settings.

Implications for Education and Training

There are several notable implications for education and training arising from the study as it pertains to the implementation of SBIRT in non-medical settings. Given the

finding that so few participants are using screening in the SAMHSA prescribed manner and that it is difficult for many participants to implement any type of screening in their non-medical setting, training and education for practitioners to facilitate and support the use of this component should be provided. Providing such capacity-building can help practitioners maximize opportunities for developing a universal screening protocol as opposed to reliance on “ad hoc” screening. Given the high rates of use of the MI and RT component, future trainings should maximize this existing resource and build upon practitioners’ pre-existing knowledge and experience using these components. Perhaps more time should be focused on the other areas, as mentioned previously, in relation to screening.

In addition, the factors identified in this study could be the focus of trainings that help practitioners consider what may help or hinder SBIRT implementation. For example, future training topics could include engaging and recruiting leaders early in the implementation process, training in understanding issues connected to compatibility between their setting and SBIRT, and training in how to use best practices to mitigate the impact of common implementation factors such as time, staff training, and available resources.

Implications for Practice

Several implications for social work practice arise from this study. Large numbers of social workers have been trained in SBIRT and are practicing in non-medical settings. In spite of the challenges associated with implementation of SBIRT in non-medical settings, social workers should not prematurely abandon their efforts and should persist with SBIRT implementation, especially given SBIRT has great potential to help their

clients resolve substance use issues. Practically, social workers should also work towards the use and integration of the screening component, particularly the implementation of universal screening protocols into their systems and protocols for the assessment and the intake of new clients. Additionally, social workers who use MI and RT should recognize that they have significant skills and practice resources that can help them implement SBIRT because of their likely prior knowledge of these components.

Conclusion

Overall, this study explored factors that influence the implementation of SBIRT in non-medical settings. While overall SBIRT implementation was fairly low across the sample, qualitative data revealed eight factors that influence SBIRT implementation in non-medical settings. Given this is the first study to explore factors influencing SBIRT implementation in non-medical settings, future research is needed in this area to help advance SBIRT implementation and uncover the associated challenges and opportunities of using SBIRT in non-medical settings.

REFERENCES

- Agerwala, S. M., & McCance-Katz, E. F. (2012). Integrating screening, brief intervention, and referral to treatment (SBIRT) into clinical practice settings: A brief review. *Journal of psychoactive drugs, 44*(4), 307-317.
- Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). AUDIT. The Alcohol Use Disorders Identification Test (AUDIT): Guidelines for use in primary care. Geneva. *World Health Organization*.
- Babor, T. F., McRee, B. G., Kassebaum, P. A., Grimaldi, P. L., Ahmed, K., & Bray, J. (2007). Screening, Brief Intervention, and Referral to Treatment (SBIRT) toward a public health approach to the management of substance abuse. *Substance Abuse, 28*(3), 7-30.
- Babor, T. F., Del Boca, F., & Bray, J. W. (2017). Screening, brief intervention and referral to treatment: implications of SAMHSA's SBIRT initiative for substance abuse policy and practice. *Addiction, 112*, 110-117.
- Barata, I. A., Shandro, J. R., Montgomery, M., Polansky, R., Sachs, C. J., Duber, H. C., ... & Macias-Konstantopoulos, W. (2017). Effectiveness of SBIRT for alcohol use disorders in the emergency department: A systematic review. *Western Journal of Emergency Medicine, 18*(6), 1143.

- Barnes, A. J., Xu, H., Tseng, C. H., Ang, A., Tallen, L., Moore, A. A., ... & Ettner, S. L. (2016). The Effect of a Patient–Provider Educational Intervention to Reduce At-Risk Drinking on Changes in Health and Health-Related Quality of Life Among Older Adults: The Project SHARE Study. *Journal of substance abuse treatment, 60*, 14-20.
- Beich, A., Thorsen, T., & Rollnick, S. (2003). Screening in brief intervention trials targeting excessive drinkers in general practice: systematic review and meta-analysis. *BMI, 327*(7414), 536-542.
- Begun, A. L., Rose, S. J., & LeBel, T. P. (2011). Intervening with women in jail around alcohol and substance abuse during preparation for community reentry. *Alcoholism Treatment Quarterly, 29*(4), 453-478.
- Bernstein, J., Bernstein, E., Tassiopoulos, K., Heeren, T., Levenson, S., & Hingson, R. (2005). Brief motivational intervention at a clinic visit reduces cocaine and heroin use. *Drug and alcohol dependence, 77*(1), 49-59.
- Bertholet, N., Daeppen, J. B., Wietlisbach, V., Fleming, M., & Burnand, B. (2005). Reduction of alcohol consumption by brief alcohol intervention in primary care: Systematic review and meta-analysis. *Archives of internal medicine, 165*(9), 986-995.
- Bien, T. H., Miller, W. R. & Tonigan, J. S. (1993) Brief interventions for alcohol problems: A review. *Addiction, 88*, 315–336.
- Broyles, L. M., & Gordon, A. J. (2010). SBIRT implementation: Moving beyond the interdisciplinary rhetoric. *Substance Abuse, 31*(4), 221-223.

- Broyles, L. M., Rosenberger, E., Hanusa, B. H., Kraemer, K. L., & Gordon, A. J. (2012). Hospitalized patients' acceptability of nurse-delivered screening, brief intervention, and referral to treatment. *Alcoholism: Clinical and Experimental Research, 36*(4), 725-731.
- Bush, K., Kivlahan, D. R., McDonell, M. B., Fihn, S. D., & Bradley, K. A. (1998). The AUDIT alcohol consumption questions (AUDIT-C): An effective brief screening test for problem drinking. *Archives of Internal Medicine, 158*(16), 1789-1795.
- Chambers, J. E., Brooks, A. C., Medvin, R., Metzger, D. S., Lauby, J., Carpenedo, C. M., ... & Kirby, K. C. (2016). Examining multi-session brief intervention for substance use in primary care: research methods of a randomized controlled trial. *Addiction science & clinical practice, 11*(1), 8.
- Cole, B., Clark, D. C., Seale, J. P., Shellenberger, S., Lyme, A., Johnson, J. A., & Chhabria, A. (2012). Reinventing the reel: an innovative approach to resident skill-building in motivational interviewing for brief intervention. *Substance Abuse, 33*(3), 278-281.
- Cohen, J. (1968). Weighted kappa: Nominal scale agreement provision for scaled disagreement or partial credit. *Psychological bulletin, 70*(4), 213.
- Creswell, J. W. (1994). *Research design: Qualitative and quantitative approaches*. Thousand Oaks, CA: SAGE Publications.
- Curtis, B. L., McLellan, A. T., & Gabellini, B. N. (2014). Translating SBIRT to public school settings: An initial test of feasibility. *Journal of Substance Abuse Treatment, 46*(1), 15-21.

- Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation Science, 4*(1), 50.
- Damschroder, L. J., & Hagedorn, H. J. (2011). A guiding framework and approach for implementation research in substance use disorders treatment. *Psychology of Addictive Behaviors, 25*(2), 194.
- Davis, T. M., Baer, J. S., Saxon, A. J., & Kivlahan, D. R. (2003). Brief motivational feedback improves post-incarceration treatment contact among veterans with substance use disorders. *Drug and Alcohol Dependence, 69*(2), 197-203.
- Del Boca, F. K., McRee, B., Vendetti, J., & Damon, D. (2017). The SBIRT program matrix: A conceptual framework for program implementation and evaluation. *Addiction, 112*, 12-22.
- D'Onofrio, G., Pantalon, M. V., Degutis, L. C., Fiellin, D. A., & O'Connor, P. G. (2005). Development and implementation of an emergency practitioner-performed brief intervention for hazardous and harmful drinkers in the emergency department. *Academic Emergency Medicine, 12*(3), 249-256.
- D'Onofrio, G., Fiellin, D. A., Pantalon, M. V., Chawarski, M. C., Owens, P. H., Degutis, L. C., ... & O'connor, P. G. (2012). A brief intervention reduces hazardous and harmful drinking in emergency department patients. *Annals of Emergency Medicine, 60*(2), 181-192.

- Dunn, C., Deroo, L., & Rivara, F. P. (2001). The use of brief interventions adapted from motivational interviewing across behavioral domains: a systematic review. *Addiction, 96*(12), 1725-1742.
- Durlak, J. A., & DuPre, E. P. (2008). Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American Journal of Community Psychology, 41*(3-4), 327.
- Fixsen, D. L., Naoom, S. F., Blase, K. A., & Friedman, R. M. (2005). Implementation research: A synthesis of the literature. University of South Florida, Louis de la Parte. *Florida Mental Health Institute*
- Fixsen, D. L., Blase, K. A., Naoom, S. F., & Wallace, F. (2009). Core implementation components. *Research on Social Work Practice, 19*(5), 531-540.
- Forman, S. G., Fagley, N. S., Chu, B. C., & Walkup, J. T. (2012). Factors influencing school psychologists' "willingness to implement" evidence-based interventions. *School Mental Health, 4*(4), 207-218.
- Gavin, D. R., Ross, H. E., & Skinner, H. A. (1989). Diagnostic validity of the drug abuse screening test in the assessment of DSM-III drug disorders. *British Journal of Addiction, 84*(3), 301-307.
- Gelberg, L., Andersen, R. M., Arangua, L., Vahidi, M., Johnson, B., Becerra, V., ... & Shoptaw, S. (2012, October). Screening, brief intervention, and referral to treatment among homeless and marginally housed primary-care patients in Skid Row. *Addiction Science & Clinical Practice* (Vol. 7, No. 1, pp. 1-1). BioMed Central.

- Gelberg, L., Andersen, R. M., Afifi, A. A., Leake, B. D., Arangua, L., Vahidi, M., ... & Baumeister, S. E. (2015). Project QUIT (Quit Using Drugs Intervention Trial): A randomized controlled trial of a primary care-based multi-component brief intervention to reduce risky drug use. *Addiction, 110*(11), 1777-1790.
- Gordon, A. J., & Alford, D. P. (2012). Screening, brief intervention, and referral to treatment (SBIRT) curricular innovations: Addressing a training gap. *Substance Abuse, 33*(3), 227-230.
- Heather, N. (2016) Spreading alcohol brief interventions from health care to non-health care settings: Is it justified? *Drugs: Education, Prevention and Policy, 23*(5), 359-364.
- Humeniuk, R., Ali, R., Babor, T., Souza-Formigoni, M. L. O., de Lacerda, R. B., Ling, W., ... & Simon, S. (2012). A randomized controlled trial of a brief intervention for illicit drugs linked to the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) in clients recruited from primary health-care settings in four countries. *Addiction, 107*(5), 957-966.
- Hingson, R., & Compton, W. M. (2014). Screening and brief intervention and referral to treatment for drug use in primary care: back to the drawing board. *JAMA, 312*(5), 488-489.
- Huberman, M., & Miles, M. B. (2002). *The qualitative researcher's companion*. Sage Publications, Inc.
- Huberman, A. M., & Miles, M. B. (1994). Data management and analysis methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 428-444). Sage Publications, Inc.

- Kaner, E. F., Dickinson, H. O., Beyer, F., Pienaar, E., Schlesinger, C., Campbell, F., ... & Heather, N. (2009). The effectiveness of brief alcohol interventions in primary care settings: A systematic review. *Drug and Alcohol Review, 28*(3), 301-323.
- Kirk, M. A., Kelley, C., Yankey, N., Birken, S. A., Abadie, B., & Damschroder, L. (2015). A systematic review of the use of the consolidated framework for implementation research. *Implementation Science, 11*(1), 72.
- Kolodny, A., Courtwright, D. T., Hwang, C. S., Kreiner, P., Eadie, J. L., Clark, T. W., & Alexander, G. C. (2015). The prescription opioid and heroin crisis: A public health approach to an epidemic of addiction. *Annual Review of Public Health, 36*.
- Landis, J. R., & Koch, G. G. (1977). An application of hierarchical kappa-type statistics in the assessment of majority agreement among multiple observers. *Biometrics, 33*(2), 363-374.
- Liebetrau, A. M. (1983). *Measures of association* (Vol. 32). Sage Publications, Inc.
- Madras, B. K., Compton, W. M., Avula, D., Stegbauer, T., Stein, J. B., & Clark, H. W. (2009). Screening, brief interventions, referral to treatment (SBIRT) for illicit drug and alcohol use at multiple healthcare sites: Comparison at intake and 6 months later. *Drug and Alcohol Dependence, 99*(1-3), 280-295.
- Makdissi, R., & Stewart, S. H. (2013). Care for hospitalized patients with unhealthy alcohol use: A narrative review. *Addiction science & clinical practice, 8*(1), 11.
- Maslowsky, J., Whelan Capell, J., Moberg, D. P., & Brown, R. L. (2017). Universal school-based implementation of screening brief intervention and referral to treatment to reduce and prevent alcohol, marijuana, tobacco, and other drug use: Process and feasibility. *Substance abuse: research and treatment, 11*.

- Maynard, S., Campbell, E., Boodhoo, K., Gauthier, G., Xenocostas, S., Charney, D. A., & Gill, K. (2015). From policy to practice: Implementation of treatment for substance misuse in Québec primary healthcare clinics. *Healthcare Policy, 11*(2), 86.
- McCance-Katz, E. F., & Satterfield, J. (2012). SBIRT: A key to integrate prevention and treatment of substance abuse in primary care. *The American Journal on Addictions/American Academy of Psychiatrists in Alcoholism and Addictions, 21*(2), 176.
- Melek SP, Creten N, Davenport S, Matthews K. *SBIRT Analysis: Financial impact for practices that implemented Screening, Brief Intervention, and Referral to Treatment (SBIRT) for Substance Use*. Denver, CO: Milliman, Inc; September 2016.
- Miller, T., & Hendrie, D. (2008). Substance abuse prevention dollars and cents: A cost-benefit analysis. *Center for Substance Abuse Prevention (CSAP)*, Substance Abuse and Mental Health Services Administration. *DHHS Pub*, (07-4298).
- Miller, W. R., & Rollnick, S. (2009). Ten things that motivational interviewing is not. *Behavioural and Cognitive Psychotherapy, 37*(2), 129-140.
- Mitchell, S. G., Gryczynski, J., Gonzales, A., Moseley, A., Peterson, T., O'Grady, K. E., & Schwartz, R. P. (2012). Screening, brief intervention, and referral to treatment (SBIRT) for substance use in a school-based program: Services and outcomes. *The American Journal on Addictions, 21*, S5-S13.

- Mitchell, S. G., Gryczynski, J., O'Grady, K. E., & Schwartz, R. P. (2013). SBIRT for adolescent drug and alcohol use: Current status and future directions. *Journal of substance abuse treatment, 44*(5), 463-472.
- Muench, J., Jarvis, K., Vandersloot, D., Hayes, M., Nash, W., Hardman, J., ... & Winkle, J. (2015). Perceptions of clinical team members toward implementation of SBIRT processes. *Alcoholism Treatment Quarterly, 33*(2), 143-160.
- Newbury-Birch, D., Coulton, S., Bland, M., Cassidy, P., Dale, V., Deluca, P., ... & McGovern, R. (2014). Alcohol screening and brief interventions for offenders in the probation setting (SIPS Trial): A pragmatic multicentre cluster randomized controlled trial. *Alcohol and Alcoholism, 49*(5), 540-548.
- Nunes, A. P., Richmond, M. K., Marzano, K., Swenson, C. J., & Lockhart, J. (2017). Ten years of implementing screening, brief intervention, and referral to treatment (SBIRT): Lessons learned. *Substance Abuse, 38*(4), 508-512.
- Osborne, V. A., Benner, K., Sprague, D. J., & Cleveland, I. N. (2016). Simulating real life: Enhancing social work education on alcohol screening and brief intervention. *Journal of Social Work Education, 52*(3), 337-346.
- Pace, C. A., Gergen-Barnett, K., Veidis, A., D'Afflitti, J., Worcester, J., Fernandez, P., & Lasser, K. E. (2018). Warm handoffs and attendance at initial integrated behavioral health appointments. *The Annals of Family Medicine, 16*(4), 346-348.
- Powell, B. J., Proctor, E. K., & Glass, J. E. (2014). A systematic review of strategies for implementing empirically supported mental health interventions. *Research on Social Work Practice, 24*(2), 192-212.

- Prendergast, M. L., & Cartier, J. J. (2013). Screening, brief intervention, and referral to treatment (SBIRT) for offenders: Protocol for a pragmatic randomized trial. *Addiction Science & Clinical Practice, 8*(1), 1-10.
- Prendergast, M., Cartier, J., & Lee, A. B. (2014). Considerations for introducing SBIRT into a jail setting. *Offender Programs Report, 17*(6), 81.
- Prendergast, M. L., McCollister, K., & Warda, U. (2017). A randomized study of the use of screening, brief intervention, and referral to treatment (SBIRT) for drug and alcohol use with jail inmates. *Journal of Substance Abuse Treatment, 74*, 54-64.
- Pringle, J. L., Kowalchuk, A., Meyers, J. A., & Seale, J. P. (2012). Equipping residents to address alcohol and drug abuse: The national SBIRT residency training project. *Journal of Graduate Medical Education, 4*(1), 58-63.
- Rahm, A. K., Boggs, J. M., Martin, C., Price, D. W., Beck, A., Backer, T. E., & Dearing, J. W. (2015). Facilitators and barriers to implementing Screening, Brief Intervention, and Referral to Treatment (SBIRT) in primary care in integrated health care settings. *Substance Abuse, 36*(3), 281-288.
- Ross, J., Stevenson, F., Lau, R., & Murray, E. (2016). Factors that influence the implementation of e-health: A systematic review of systematic reviews (an update). *Implementation Science, 11*(1), 146.
- Roy-Byrne, P., Bumgardner, K., Krupski, A., Dunn, C., Ries, R., Donovan, D., ... & Joesch, J. M. (2014). Brief intervention for problem drug use in safety-net primary care settings: A randomized clinical trial. *JAMA, 312*(5), 492-501.

- Saitz, R., Palfai, T. P., Cheng, D. M., Alford, D. P., Bernstein, J. A., Lloyd-Travaglini, C. A., ... & Samet, J. H. (2014). Screening and brief intervention for drug use in primary care: The ASPIRE randomized clinical trial. *JAMA*, *312*(5), 502-513.
- Saldaña, J. (2015). *The coding manual for qualitative researchers*. Sage Publications, Inc.
- Seale, J. P., Johnson, J. A., Clark, D. C., Shellenberger, S., Pusser, A. T., Dhaliwala, J., ... & Clemow, D. (2015). A multisite initiative to increase the use of alcohol screening and brief intervention through resident training and clinic systems changes. *Academic Medicine*, *90*(12), 1707-1712.
- Segatto, M. L., Andreoni, S., Souza e Silva, R. D., Diehl, A., & Pinsky, I. (2011). Brief motivational interview and educational brochure in emergency room settings for adolescents and young adults with alcohol related problems: A randomized single blind clinical trial. *Brazilian Journal of Psychiatry*, *33*(3), 225-233.
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, *22*(2), 63-75.
- Smith, P. C., Schmidt, S. M., Allensworth-Davies, D., & Saitz, R. (2010). A single-question screening test for drug use in primary care. *Archives of Internal Medicine*, *170*(13), 1155-1160.
- Stein, M. D., Caviness, C. M., Anderson, B. J., Hebert, M., & Clarke, J. G. (2010). A brief alcohol intervention for hazardously drinking incarcerated women. *Addiction*, *105*(3), 466-475.
- Substance Abuse and Mental Health Services Administration. *Systems-Level Implementation of Screening, Brief Intervention, and Referral to Treatment*.

- Technical Assistance Publication (TAP) Series 33. HHS Publication No. (SMA)13-4741. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2013.
- Substance Abuse Mental Health Services Administration [SAMHSA], (2016). SBIRT: Screening, brief intervention, and referral to treatment. Retrieved from <http://www.integration.samhsa.gov/clinical-practice/sbirt>
- Thom, B., Herring, R., & Bayley, M. (2016). The role of training in IBA implementation beyond primary health care settings in the UK. *Drugs: Education, Prevention and Policy*, 23(5), 374-381.
- Tindol, G. A., Gonzales, K., Sedarati, K., & Smith, C. (2015). Incorporating validated alcohol and drug screening instruments in the electronic health record. *Addiction Science & Clinical Practice*, 10(S2), O47.
- Vendetti, J., Gmyrek, A., Damon, D., Singh, M., McRee, B., & Del Boca, F. (2017). Screening, Brief Intervention and Referral to Treatment (SBIRT): Implementation barriers, facilitators and model migration. *Addiction*, 112, 23-33.
- Walker, D. D., Roffman, R. A., Stephens, R. S., Wakana, K., & Berghuis, J. (2006). Motivational enhancement therapy for adolescent marijuana users: A preliminary randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 74(3), 628.
- Wells-Parker, E., & Williams, M. (2002). Enhancing the effectiveness of traditional interventions with drinking drivers by adding brief individual intervention components. *Journal of studies on alcohol*, 63(6), 655-664.

- Williams, R., & Vinson, D. C. (2001). Validation of a single screening question for problem drinking. *Journal of Family Practice, 50*(4), 307-307.
- Winters, K. C., & Leitten, W. (2007). Brief intervention for drug-abusing adolescents in a school setting. *Psychology of Addictive Behaviors, 21*(2), 249.
- WHO Expert Committee on Problems Related to Alcohol Consumption, & World Health Organization. (2007). *WHO Expert Committee on Problems Related to Alcohol Consumption: Second Report* (No. 944). World Health Organization.
- Yin, R. K. (2016). *Qualitative research from start to finish*. Guilford Publications.
- Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). Sage.
- Young, M. M., Stevens, A., Galipeau, J., Pirie, T., Garritty, C., Singh, K., ... & Porath-Waller, A. (2014). Effectiveness of brief interventions as part of the Screening, Brief Intervention and Referral to Treatment (SBIRT) model for reducing the nonmedical use of psychoactive substances: A systematic review. *Systematic Reviews, 3*(1), 50.
- Zhang, Y., & Wildemuth, B. M. (2009). Qualitative analysis of content, applications of Social Research Methods to Questions. *Information and Library Science, 308*, 319.

APPENDIX A

RECRUITMENT EMAIL

Dear (Name of Field Community Member)

We need your expertise as a past participant of one of our HOPES SBIRT trainings. We are looking to hear from practitioners who are currently working in non-medical settings, as we want to know more about your experiences with SBIRT. Non-Medical settings are defined as setting in which the primary focus of service provision is not direct medical care (e.g., high schools, criminal justice settings, homeless shelters, child and family services, etc).

Specifically, we are conducting interviews as part of a research study to increase our understanding about factors that influence the implementation of SBIRT in non-medical settings. The interview will take around 30-45 minutes, and your response to the questions will be kept confidential. Your participation is so important as it can help lead to a greater understanding of SBIRT implementation in non-medical settings.

If you are willing to participate in an interview, please let me know and we can then coordinate a time that works best for you. If you have any questions, please do not hesitate to ask. You can reach me by email at andrewjflaherty@email.sc.edu or by telephone at 530-646-5690.

Thank you,

Andrew J Flaherty

PhD Candidate

College of Social Work

University of South Carolina

APPENDIX B

FOLLOW UP RECRUITMENT EMAIL

Dear (Name of Field Community Member)

We need your help and expertise because you are a past participant of the HOPES SBIRT Training at the College of Social Work at the University of South Carolina (U of SC). I invited you to participate in a research study into SBIRT implementation factors in non-medical settings. This second email is a reminder about the study and what to do if you would like to participate.

We are conducting interviews as part of a research study to increase our understanding of the implementation of SBIRT in non-medical settings. Non-medical settings are defined as any setting in which the primary focus of service provision is not direct medical care. The interview takes around 20 minutes. We are interested in learning more about your thoughts and perspectives on using SBIRT in your setting (even if you are not using it). Your responses to the questions will be kept confidential, and each interview will be assigned a number code to help ensure that personal identifiers are not revealed during the analysis and write up of findings. Your participation will be a valuable addition to our research, and findings could lead to greater understanding of SBIRT implementation in non-medical settings.

If you are willing to participate, please let me know and we can then coordinate a time that works best for you to conduct the interview. If you have any questions, please do not hesitate to ask. You can reach me by email at andrewjf@email.sc.edu or by telephone at 530-646-5690

Thank you,

Andrew J Flaherty
PhD Candidate
College of Social Work
University of South Carolina

APPENDIX C

SBIRT IMPLEMENTATION CHECKLIST EMAIL

Dear (Name of Field Community Member)

Thank you for agreeing to participate in our research study into factors that influence SBIRT implementation in non-medical settings.

Your interview is scheduled to take place on (Insert Time and Date).

In preparation for the interview, I have attached an SBIRT Implementation Checklist. If you are able to review the checklist in advance that would be so helpful, as this will guide most of our discussion on SBIRT in your practice.

If you have any questions, please do not hesitate to email me.

Best,

Andrew J Flaherty

PhD Candidate

College of Social Work

University of South Carolina

APPENDIX D

SBIRT IMPLEMENTATION PRACTITIONER CHECKLIST

What Components of SBIRT are you currently using in your practice?

Screening Yes No

Definition: Assessing a patient for substance use through universal screening and then using standardized screening tools if a client indicates using alcohol or drugs.

Example: Using the AUDIT or the DAST to assess clients who indicate that they are currently using alcohol or drugs

Do you conduct a universal screening for alcohol and drug use? Yes No

Do you conduct an in-depth screening for alcohol and drug use? Yes No

Do you use the AUDIT? Yes No

Do you use the DAST? Yes No

Tell me more about how screening is used as part of SBIRT in your practice setting.

Brief Intervention Yes No

Definition: Using the Brief Negotiated Interview (BNI) to facilitate exploration between clinician and client about client's substance use.

Example: Exploring the pros and cons of the client's substance use.

Do you provide clients with a brief intervention based upon client scores on their screening? Yes No

Tell me more about how you are using the BNI as part of SBIRT in your practice setting.

Referral to Treatment Yes No

Definition: *A collaborative, client centered form of discussion used to elicit and strengthen client's motivation for change*

Example: *Using the OARS skills (Open-ended questions, affirmations, reflections*

Do you actively refer those clients who need or request referral to additional sources of support? Yes No

Tell me more about how you refer clients to treatment as part of SBIRT in your practice setting.

Motivational Interviewing Yes No

Definition: *Actively referring clients who score in the harmful use category to relevant further supports.*

Example: *Using a warm handoff to connect a client with a trusted referral source.*

Do you use the core MI skills (Open Ended Questions, Summaries, Affirmations and Reflections) when you engage in any of the SBIRT components with clients? Yes No

Tell me more about how you use motivational interviewing as a part of SBIRT in your practice Setting.

APPENDIX E

SEMI STRUCTURED INTERVIEW GUIDE

Introduction:

Hello, I am Andy Flaherty, a doctoral student from the University of South Carolina and I am conducting a research study to understand factors that influence SBIRT implementation in non-medical settings.

Consent to Participate/Opt-out:

Your participation in this phone interview is completely voluntary. If you do not wish to participate, you may stop at any time and have the right to opt-out of any question. Your responses will be completely confidential. Your name or any identifying details will not be included in the final write up and a copy of this interview and transcripts will be securely stored. There are minimal risks associated with this interview. Taking part in this interview is your agreement to participate.

I will email a copy of this letter to you for your records. If you have any questions regarding the research, contact my Chair Dr. Aidyn Iachini at the (U of SC) College of Social Work. If you have any questions regarding your rights as a research subject, please contact the IRB Administrator at the University of South Carolina

Do you agree to participate in this interview? Yes__ No__

Do you agree to this interview being audio-recorded? Yes__ No__

Eligibility question:

1. Are you currently working in a non-medical setting? (Defined as a setting in which the primary focus of service delivery is not on the provision of direct medical care.)

Yes__ No__

If yes, then proceed to Question 2

If no, end the interview and thank them for their time.

Interview Questions and Prompts

- 2. (Intro Prompt) Knowing that you have previously attended the HOPES SBIRT Training as a past participant, I'd like us to begin by working through the SBIRT implementation checklist I sent you so that I can have a better understanding of which SBIRT components, if any, you are using in your practice setting.

A. Screening

Do you use "Screening": Yes__ No__

Do you conduct a universal screening for alcohol and drug use? Yes__ No__

Do you conduct an in-depth screening for alcohol and drug use? Yes__ No__

Do you use the AUDIT? Yes__ No__

Do you use the DAST? Yes__ No__

Tell me more about how screening is used as part of SBIRT in your practice setting:

B. Brief Intervention

Do you use "Brief Intervention": Yes__ No__

Do you provide clients with a brief intervention based upon client scores on their screening? Yes__ No__

Tell me more about how you are using the BNI as part of SBIRT in your practice setting:

C. Referral to Treatment

Do you use "Referral to Treatment"? Yes__ No__

Do you actively refer those clients who need or request referral to additional sources of support? Yes__No__

Tell me more about how you refer clients to treatment as part of SBIRT in your practice setting.

D. Motivational Interviewing

Do you use “Motivational Interviewing”? Yes__No__

Do you use the core MI skills (Open Ended Questions, Summaries, Affirmations and Reflections) when you engage in any of the SBIRT components with clients? Yes__No__

Tell me more about how you use motivational interviewing as a part of SBIRT in your practice setting.

If they are not using any of the components of SBIRT go to Question 3

If they are using all the components of SBIRT go to Question 7

If they are using some but not all the components of SBIRT go to Question 5

3. Tell me more about what influences your ability to implement SBIRT (any component) in your practice setting

4. What are your thoughts on attempting to implement the components of SBIRT at some point in the future, and what would need to change in your organization for this to be possible?

Proceed to question 9

5. What factors make it hard to use all the SBIRT components in your practice setting?

6. Do you plan on using the other SBIRT components (those that you are not currently using) in the future? If yes, what would need to change in your practice setting for this to be possible?

Proceed to question 9

7. Tell me about the things that make it easier to use SBIRT in your practice setting.

8. Tell me about the things that make it harder to use SBIRT in your practice setting.

9. Do you have any other thoughts or observations about implementing SBIRT in non-medical settings like your practice setting?

Now that you have answered all the detailed questions, I have a few demographic questions. These questions make it easier for me when I am writing up my results to describe exactly who participated in this study.

10. What is your age in years? _____

11. What is your gender? _____

12. What is your highest terminal degree (e.g., BA, MSW, PHD, etc.)? _____

13. Please indicate which title best describes your job:

- | | |
|---------------------------------------------------------|------------------------------------------------------|
| <input type="checkbox"/> Social Worker | <input type="checkbox"/> Psychologist |
| <input type="checkbox"/> Physician | <input type="checkbox"/> Counselor |
| <input type="checkbox"/> Nurse | <input type="checkbox"/> Medical Director |
| <input type="checkbox"/> Physician's Assistant | <input type="checkbox"/> Manager/Director |
| <input type="checkbox"/> Pharmacist | <input type="checkbox"/> Federal Government Official |
| <input type="checkbox"/> Clinical Supervisor | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Clinical Administrator/Manager | |

14. How many years have you been working in your organization? _____

15. One last question. We always like to have participants review a one-page summary of the study findings to make sure it is reflective of your experiences. Would you be willing to review a summary of the findings from the study once it is completed? Yes__ No__

APPENDIX F

FACTORS THAT INFLUENCE SBIRT IN NON-MEDICAL SETTINGS

CODEBOOK

Table F.1 *Codebook of Factors*

Name of Code	Definition/Explanation of the Code
Client Factors and Client Needs	<i>Client Factors and Client Needs</i> are defined as needs and challenges experienced by clients that impact a participant’s ability to deliver SBIRT. For instance, clients experiencing very high levels of stress, material needs, no support system and/or cognitive ability were identified by participants as client factors and needs that influenced their ability to use/implement SBIRT.
Time	<i>Time</i> is defined as referring to the chronological time that participants have at their disposal to use and implement SBIRT. <i>Time</i> also refers to the overall cumulative amount of time that SBIRT implementation takes and how this affects demands on participants for productivity within their existing job role.
Compatibility	<i>Compatibility</i> described the extent to which SBIRT implementation complements and matches the existing structure, practices, values and priorities of an agency setting. Specifically, compatibility should be understood as being a spectrum. Very high levels of compatibility exist at one end of the continuum, in which SBIRT matches and complements the pre-existing practices, structures, values and priorities of the agency setting. This is contrasted with

	low levels of compatibility in which the existing structure, practices and values of the practice setting are not compatible with SBIRT implementation.
Leadership	<i>Leadership</i> refers to the influence and impact that leaders (managers, directors, supervisors etc.) within a setting have on the course and SBIRT implementation process.
Perception of Advantage/Efficacy of SBIRT	<i>Perception of Advantage/Efficacy of SBIRT</i> is defined as the extent to which the participant perceived that using SBIRT/SBIRT Components provided an advantage and favorable outcomes for clients (in contrast to the outcomes that would be expected with not using the intervention or using an alternate intervention).
Available Resources	<i>Available Resources</i> is defined as the extent that resources in a non-medical setting facilitate implementation. High levels of available resource facilitate implementation through providing adequate means to consistently use SBIRT. Low levels of available resources act as a barrier to SBIRT implementation, as tangible supports are not present to consistently use or sustain implementation efforts.
Staff Training/Staffing	<i>Staff Training and Staffing</i> refers to any participant responses about staff training in SBIRT, the numbers of trained staff in the setting and or having enough staff competent in using the SBIRT components.
Policy	<i>Policy</i> is defined as any pre-existing structural policy, mandate or procedure within the participants setting that influences SBIRT implementation.

APPENDIX G

MEMBER CHECKING DOCUMENT

Project Title: SBIRT Implementation in Non-Medical Settings

Brief Summary of Qualitative Themes

Researcher: Andy Flaherty
Dissertation Chair: Dr. Aidyn Iachini

Study Purpose:

The overall purpose of this study was to identify factors that influence SBIRT implementation in non-medical settings.

Summary of Project Findings:

Data analysis revealed the following factors influence SBIRT implementation in non-medical settings:

- Available Resources
- Compatibility of SBIRT with the Setting
- Perception of Advantage and Efficacy of SBIRT
- Time
- Staffing and Staff Training
- Policy
- Client Factors
- Leadership

Below is a brief description of each of the factors.

Compatibility of SBIRT with Setting

Compatibility refers to the extent to which SBIRT implementation complements and matches the existing structure, practices, values and priorities of an agency setting. Specifically, compatibility should be understood along a spectrum. Very high levels of compatibility exist at one end of the continuum, in which SBIRT matches and complements the pre-existing practices, structures, values and priorities of the agency setting. This is contrasted with low levels of compatibility in which the existing structure,

practices and values of the practice setting are not compatible with SBIRT implementation.

Time

Time refers to the chronological time that participants have at their disposal to use and implement SBIRT, as well as the overall cumulative amount of time that SBIRT implementation takes.

Staffing and Staff Training

Staff Training and Staffing refers to any participant responses about staff training in SBIRT, the numbers of trained staff in the setting, and/or having enough staff competent in using the SBIRT components.

Policy

Policy is defined as any pre-existing structural policy, mandate or procedure within the participants setting that influences SBIRT implementation.

Client Factors and Client Needs

Client Factors and Client Needs are defined as needs and challenges experienced by clients that impact a participant's ability to deliver SBIRT. For instance, clients experiencing very high levels of stress, material needs, and/or cognitive ability were all identified by participants as client factors and needs that influenced their ability to use/implement SBIRT.

Leadership

Leadership as an influential factor is defined as referring to the influence and impact that leaders (managers, directors, supervisors, etc.) within a setting have on the implementation of SBIRT.

Available Resources

Available Resources refer to the extent that resources in a non-medical setting facilitate implementation. High levels of available resources facilitate implementation through providing adequate means to consistently use SBIRT. Low levels of available resources act as a barrier to SBIRT implementation, as tangible supports are not present to consistently use or sustain implementation efforts.

Perception of Advantage/Efficacy of SBIRT

Perception of Advantage/Efficacy of SBIRT refers to the extent to which the participant perceived that using SBIRT/SBIRT Components provided an advantage and favorable outcomes for clients (in contrast to the outcomes that would be expected with not using the intervention or using an alternate intervention).

APPENDIX H

MEMBER CHECKING EMAIL

Dear (Name of participant)

I am writing to you because you completed an interview as a part of my dissertation research into SBIRT implementation in non-medical settings and indicated that you would be interested in reviewing a brief summary of my findings.

Attached is this summary. If you could please review the findings, and then let me know whether you feel like this summary is reflective of your views and experiences with SBIRT implementation, that would be very helpful.

Thank you so much for your help and your investment into SBIRT implementation research. If you have any questions about this process, then please do not hesitate to email me.

Best,

Andrew J Flaherty

PhD Candidate

College of Social Work

University of South Carolina