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Assessing Readiness for Group Therapy in Primary Care: An Initial Survey Exploring Need

A dissertation

presented to

the faculty of the Department of Psychology

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Doctor of Philosophy in Psychology,

concentration in Clinical Psychology

by

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Keywords: Group therapy, Group limitations, Primary care, Rural primary care, Recruiting,

Group Cognitive-Behavioral Therapy (GCBT), Provider beliefs, Appalachia

ABSTRACT

Assessing Readiness for Group Therapy in Primary Care: An Initial Survey Exploring Need

by

Philip A. Randall

Primary care providers have become the front line of treatment for mental health in the United States. Group interventions have been argued to be an effective way to treat more patients with fewer resources, which could reduce the burden of psychopathology on primary care settings. Group therapy faces many barriers to successful implementation in primary care, including site constraints, provider perceptions, population needs, and recruiting difficulties. A survey was developed to assess primary care providers' perspectives on these areas and distributed via online survey to practitioners in Appalachia; 28 providers responded. No hypotheses were supported, likely a result of the small sample size. Analysis of quantitative and qualitative data elucidated some potential areas for future exploration. Respondents held generally favorable views of group therapy in primary care, and may be more responsive to the peer support and learning elements of group interventions than time or cost benefits. Respondents reported scheduling and a lack of mental health providers with group expertise to be a significant barrier to group interventions in primary care. Billing may not be a significant concern for primary care providers, as is typically reported. Discrepancies between psychopathology frequently seen in primary care settings and the demand on provider time and attention are also discussed.

DEDICATION

To my wife Liz, I cannot thank you enough for your love, support, and patience with me over the years. I am grateful to have found you, and could not ask for a better partner in life. The conclusion of this collection of chapters marks the beginning of many more to be written in the story of “us.” To our adorable Corgi (and flower girl), Evelyn, you were the first being to make our happy couple an even happier family. I enjoy your belly rubs as much as you do, and may you someday reach 10,000 Instagram followers. To my family – Kirk, Carol, and Patrick – you all have been a source of unwavering optimism and guidance in my life. I would not be who I am today without all of you. But, after licensure I will have to start charging you for our talks. Student loans wait for no one.

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CHAPTER 1

INTRODUCTION

The financial burdens of mental illness are staggering; the U.S. Department of Health and Human Services (2006) estimated the cost of treating mental disorders at \$57,452,000,000. Over 20 years ago it was estimated that one in five people suffered from mental illness, and fewer than 20% sought help (Bourdon, Rae, Locke, Narrow, & Regier, 1992; Regier et al., 1993). Recent estimates of the rate of psychiatric disorders have climbed to one in four (Sansone & Sansone, 2010). Much like other medical concerns, patients suffering from mental illness experience limitations in many aspects of life, including limited functioning, lower quality of life, shorter lifespan, as well as increased rates of divorce, unemployment or disability, substance abuse, chronic health problems, and suicide (Anseau et al., 2004; Brenner & Shyn, 2014; Combs & Markman, 2014; Kroenke et al., 2013; Stein, 2003). Medical costs for patients have also been found to be higher for those with depression or anxiety (Melek & Norris, 2008; Simon, VinKorff, & Barlow, 1995). Given the substantial impact on functioning, Serrano-Blanco and colleagues believe “mental disorders will be the most burdensome diseases in the world in the year 2020” (2010, p. 201).

Medical providers have long been the largest source of mental healthcare in the U.S. (Regier et al., 1993), and primary care (PC) clinics are the front line of treatment. Approximately 20-30% of PC patients have a psychiatric disorder (Anseau et al., 2004; Sansone & Sansone, 2010), although the vast majority of those patients initially sought care for somatic concerns (Goldberg, 1995; Stein, 2003). The National Ambulatory Medical Care Survey found PC populations tend to be fairly evenly distributed across age and gender; 55.5% are female, 29.8% are under 18, 22.7% are between the ages of 18 – 44, 26.0% are between the ages 45 – 64, and 21.5% are over 65 (Mehrotra, Wang, Lave, Adams, & McGlynn, 2008). Chronic physical

conditions commonly seen in PC include hypertension, hyperlipidemia, diabetes, arthritis, and asthma (Hing & Uddin, 2010). Mental disorders commonly seen in the PC population include eating, substance abuse, and somatoform disorders, as well as comorbid conditions like chronic pain.

However, by far the most prevalent psychiatric conditions are anxiety and mood disorders (Department of Health and Human Services, 2001; Kroenke et al., 2013; Kroenke, Spitzer, Williams, Monahan, & Löwe, 2007; Merrill & Duncan, 2014; Sansone & Sansone, 2010; Serrano-Blanco et al., 2010). Estimates of the prevalence of anxiety disorders in PC range from 5 to 20% (Cerimele, Chwastiak, Dodson, & Katon, 2014; Kroenke et al., 2013; Kroenke et al., 2007; Stein, 2003). Rates of depression are slightly lower, occurring in 5-10% of PC patients (Cerimele et al., 2014; Department of Health and Human Services, 2001).

In order to serve this substantial population the medical community has moved to an integrated model of care, partnering with mental health providers (deGruy & Etz, 2010; Goodheart, 2010; Strosahl, 1998). In the interest of justifying the added systemic costs for integrating psychology with PC, the field of psychology has focused on the clinical (Coles & Heimberg, 2001; Deacon & Abramowitz, 2004; Oei & Dingle, 2008) and cost-effectiveness (Manicavasgar, Parker, & Perich, 2011; Wetherell et al., 2011) advantages of group therapies as a means of efficiently delivering care to a wide pool of patients. Although many interventions utilized by mental health providers have been adapted to integrated care settings (Robinson & Reiter, 2007), and many psychological interventions have been adapted to group formats (Burlingame & Baldwin, 2010; Ellis & Dryden, 2007), few mental health treatment groups have been implemented in medical settings.

This project investigated group therapy in PC: potential obstacles mental healthcare providers may face when providing group interventions, healthcare providers' experiences with recruiting patients to treatment groups and their beliefs about group therapy, and which patient populations might benefit most from group therapy. It is important to note that for the purposes of this study "group therapy" will refer to psychological treatment, not disease management or didactic groups (unless otherwise specified). Additionally, although PC mental health providers are the primary intended audience for the results of this project, non-mental healthcare providers were the targeted sample of the survey.

In order to provide an adequate background for this study, several areas will be discussed. First, a brief overview of available group treatments (specifically those often employed in PC settings) and their efficacy will be discussed. Second, the merits and limitations of delivering mental health care in group forms will be discussed. Third, potential barriers to successful implementation of therapy groups in PC settings will be identified. Fourth, the development of a questionnaire to address areas of need, as identified by the literature, will be detailed. Then, specific aims of information gathering and hypotheses are presented, followed by the methods of data collection, results, and discussion.

Available Group Treatments

Group Cognitive-Behavioral Therapy (GCBT) is the most widely-researched group intervention, originally developed for the treatment of anxiety disorders (Heimberg, Becker, Goldfinger, & Vermilyea, 1985). The aim of this treatment is to evaluate the interactive relationship between thoughts, feelings, and behaviors, and modify unhelpful patterns of thinking and dysfunctional behavior. Coles and Heimberg (2001) reviewed literature concerning the efficacy of GCBT for treatment of social phobia and supported earlier findings that GCBT was an effective intervention. Craner, Sawchuk, and Smyth (2016) found group cognitive-behavioral

and mindfulness interventions to be an efficacious treatment for anxiety and depression in PC. A meta-analysis of CBT in both individual and group formats concluded GCBT is an effective treatment for anxiety disorders (Deacon & Abramowitz, 2004).

A recent study (Heatherington et al., 2014) evaluated 10 years of anxiety group outcomes in a community mental health center, including social phobia, generalized anxiety, and panic disorder. The authors found GCBT resulted in large effect sizes and significantly lower anxiety scores on outcome measures, comparable to those seen in individual treatment. Norton and Barrera (2012) evaluated the effectiveness of GCBT in two forms: disorder-specific groups for panic disorder, social anxiety disorder, or generalized anxiety disorder; and trans-diagnostic GCBT groups, which was explained as a mixed population of diagnoses within treatment groups. The justification for combining disorder populations was their belief that “the primary difference between individual anxiety disorders is [simply] the content of the perceived threat” (p. 880). Patients showed significant improvement on clinician-rated and self-report outcome measures in both forms of GCBT treatment.

GCBT has also been used in the treatment of mood disorders, primarily unipolar depression. It produced outcomes superior to control groups in depressed German PC patients (Hegerl et al., 2010), postnatal depression in PC (Scope et al., 2013), and women with depression (Cramer, Salisbury, Conrad, Eldred, & Araya, 2011). After reviewing studies of GCBT and depressive disorders, Oei and Dingle (2008) called it “one of the most effective [treatments] for depression” (p. 18). They concluded GCBT was effective for a variety of populations, and outcomes were comparable to other forms of therapy, including individual CBT and pharmacotherapy. In addition to treating mood disorders, GCBT was found to be an efficacious intervention for chronic pain in PC clinics (Lamb et al., 2010).

“Third wave” therapies build on the first two generations of behavior therapy and aim to not only reduce problematic symptoms, but improve quality of life by allowing patients to accept the existence of unhelpful thoughts and lessen their impact by creating “distance” in the form of shifting attention away from those thoughts (Micallef-Trigona, 2014). Two interventions classified as “third wave” are Acceptance and Commitment Therapy (ACT) and Mindfulness-based interventions, and are cognitively-oriented.

A recent pilot study comparing group ACT to treatment as usual suggested the intervention was a feasible method of treating PC patients with chronic pain in the U.K. (McCracken, Sato, Wainwright, House, & Taylor, 2014). A randomized controlled trial found group ACT produced outcomes equivalent to CBT in U.S. PC patients with chronic pain (Wetherell et al., 2011). Interestingly, the authors noted that patients had very different opinions of the treatments: CBT was thought to be more credible, but ACT was found to be more enjoyable.

Group formats of Mindfulness interventions appear to be less efficacious. Manicavasgar and colleagues (2011) found no significant differences between group Mindfulness-Based Cognitive Therapy (MBCT) and GCBT following eight weeks of treatment for depression. A randomized controlled trial found no difference between group MBCT and treatment as usual (primarily individual CBT) when treating depression and anxiety in Swedish PC clinics (Sundquist et al., 2014). However, group MBCT was found to significantly reduce the number of non-mental health visits for high-utilizers in Canadian PC clinics (Kurdyak, Newman, & Segal, 2014).

Two other forms of group therapy have been utilized in the medical setting, both used as treatments for depression. A group form of Problem Solving Therapy (which posits that negative

emotions can be resolved by bolstering problem solving techniques to more effectively deal with problems of everyday living) was found to be more effective than placebo medications and equally effective as antidepressant medication in a randomized controlled trial (Mynors-Wallis, Gath, Lloyd-Thomas, & Tomlinson, 1995). A pilot study also found group Interpersonal therapy (which aims to relieve psychological distress with exposure to supportive and corrective social experiences) to be an effective intervention for postnatal depression (Reay, Fisher, Robertson, Adams, & Owen, 2006).

In summary, evidence for the efficacy of group therapy is largely positive. CBT-based treatments comprise the majority of studied interventions, and several guides for standardized treatment are available, albeit not in the PC setting. However, drawing definitive conclusions regarding the efficacy of various treatments is difficult at this time due to the comparatively small number of peer-reviewed studies of group psychotherapy in PC and the fragmented nature of their methodologies. As Burlingame, Fuhrman, and Mosier (2003) noted, methods of evaluating efficacious group interventions are widely varied; the majority of studies utilize self-report measures, and many others focus on the improvement of specific symptoms or personality measures for evidence of improvement. Thus, conclusions about the efficacy of group therapy, while largely advantageous, should be interpreted with caution.

The merits and limitations of group therapy

While early evidence of the efficacy of group psychotherapy in PC is promising, researchers and healthcare providers must weigh the pros and cons of introducing the added variable of therapy modality into treatment. Proponents of group therapy give a variety of reasons why providers should consider group interventions in lieu of individual treatment. The group dynamic allows patients to create positive social relationships with others, which offers a platform for peer support or comparison (for the purposes of normalizing symptoms), and an

avenue for decreasing social isolation (Anderson & Rees, 2007; Bouvard & Kaiser, 2006; Wetherell et al., 2011). In addition to having more patients present in therapy, group interventions are sometimes co-led, which can offer a second professional perspective to group members (Whitfield, 2010). And perhaps the most commonly-used argument in favor of group treatment: since multiple patients are treated in a single group session, therapists' time is more efficiently utilized (Bouvard & Kaiser, 2006), which is believed to result in more cost-effective treatment (Manicavasgar et al., 2011; Wetherell et al., 2011).

Group therapy is not without its drawbacks. As noted above, many have suggested group therapy is more cost-effective than individual treatment, although this assertion is still unclear at best due to the complexity of calculating costs across an array of settings (Oei & Dingle, 2008). For example, Whitfield (2010) found group therapy to be more cost-effective for depression, but less cost-effective than individual treatment for anxiety. Similarly mixed findings were seen when group CBT was found to be cost effective in treating children with depression, but less cost effective when treating substance abuse and anxiety (Tucker & Oei, 2007). GCBT was also deemed not the most cost-effective method of treating postnatal depression (Stevenson, Scope, & Sutcliffe, 2010).

Oei and Dingle (2008) believe group treatment may be effective in more densely populated areas where greater numbers of afflicted patients are available, but that savings may be outweighed by practical concerns (i.e., waiting periods). In addition to the cost-effectiveness of group therapy remaining questionable at this time, other noted drawbacks include the difficulty of accommodating longer meeting times into patient and provider schedules (Coles & Heimberg, 2001) and the need for continuous recruitment in open-enrollment groups (Greenfield et al., 2014).

The most troublesome aspect of group interventions – initial recruitment of patients – often occurs before the start of treatment. Bower, Wilson, and Mathers (2007) surveyed published authors in the U.K. and found less than a third of studies conducted in PC settings recruited participants on their planned timeline. Authors' primary response to recruiting difficulties was extending the recruitment period. Other solutions included increasing the number of clinics used for recruiting, finding additional funding for the study, recalculating power analyses, introducing other recruitment methods, or simply conducting the study with fewer participants. Although not specific to psychotherapy, these findings show the difficulty often faced when attempting to recruit patients to participate in interventions outside of treatment as usual.

Barriers for group therapy entering primary care

Although mental health providers have become increasingly integrated into PC settings (Goodheart, 2010), they still face significant financial, systemic, temporal, and structural obstacles (Butler et al., 2008; Mauer, 2003; Walders, Childs, Comer, Kelleher, & Drotar, 2003). Mental health providers seeking to implement group interventions in the PC setting face some unique challenges that one-on-one interventions may not encounter.

Site suitability. Practicing individual therapy within the PC setting comes with inherent difficulties including a faster pace (resulting in shorter sessions) (deGruy F. , 1997), conflicting views of preserving patient privacy in medical records (Goodheart, 2010), and adopting medical terminology and forms of billing (Chaffee, 2009; Gatchel & Oordt, 2003). Group therapists face the added burden of needing room for 10 to 15 patients (Ellis & Dryden, 2007), the difficulty of allotting time for lengthy group sessions (Coles & Heimberg, 2001), mixed (favorable or unfavorable) patient preferences regarding group therapy modalities (Perreault et al., 2014), and

increased risk of confidentiality concerns or personality clashes amongst group members (Coles & Heimberg, 2001).

Provider interest. While many PC providers appear to be increasingly in favor of integrated care, not all welcome the notion of referring to specialists for mental health or behavioral medicine issues, partly due to positive perceptions about their own competencies in diagnosing and treating psychological concerns (Beacham, Herbst, Streitwieser, Scheu, & Sieber, 2012). Provider referrals have been identified as one of the most effective modalities of recruiting patients into therapy groups (Cramer et al., 2011; Wetherell et al., 2011), and a provider's recommendation to participate is especially important to patients (McCracken et al., 2014). Thus, if a provider is not interested in group therapy services, mental health professionals face a significant roadblock when attempting to implement or sustain such groups.

Population needs. As described earlier, PC providers frequently see patients with anxiety and mood disorders, often with comorbid physical symptoms. This creates a need for mental health providers to shift from specialization toward a generalist approach, where they are able to treat a wide variety of complex problems (deGruy F. , 1997). Providers of group interventions face an added difficulty of attending to each patient's needs. Individual encounters can be specifically tailored within the confines of evidence-based interventions, though group facilitators must balance individual needs with group goals. This task may be easier in urban areas where the available population (and patients whom are a good fit for a particular group) is greater, but rural practitioners may have a more difficult time developing therapy groups with homogenized aims and interventions.

Recruiting. Many studies of group therapy focus on group outcomes, and the rest focus on group processes like interaction, participation, and attendance (Macgowan & Wong, 2014).

While outcomes and processes are undeniably critical for consideration of therapeutic interventions, it ignores the difficulty many researchers face: initial recruitment (Bower et al., 2007; Yalom, 2013). Poorly recruited studies can rapidly increase the time and money needed for conducting research, or result in statistically imprecise findings (Treweek et al., 2013).

Common techniques used to recruit patients into treatment groups include: referrals from healthcare providers, medical record searches, community service provider (e.g., domestic violence organizations or support groups) referrals, posting ads or flyers in the community, or patient self-referral (Randall, 2015). Bower and colleagues (2009) found very few studies concerning methods of recruiting patients to controlled clinical trials in PC and concluded that very few recruitment tactics were actually informed by theory.

Only a handful of recent studies were found to be remotely focused on evaluating recruitment techniques. One found that medical referrals accounted for the majority (64%) of all referrals; the most effective non-medical source was deemed to be “literature available to the public written by study principal investigators,” although the authors did not specify what this entailed and where it was available (Brownstone, Anderson, Beenhakker, Lock, & Le Grange, 2012, p. 814). Parkinson and Bromfield (2013) found Facebook ads to be a viable method for obtaining a convenience sample, but determined their sample was not representative of their target population.

Woodford, Farrand, Bessant, and Williams (2011) evaluated recruitment techniques for an internet-based CBT intervention and found targeting online advertisements to specific mental health websites and search engine results to be effective methods of Internet recruitment. They also advocated the use of “assertive recruitment,” which is termed “opt-out” recruiting in the medical literature. This method involves contacting potential participants with invitations to a

study and requiring them to contact the researchers if they do *not* wish to receive any more information; asking patients to “opt-out” of a study rather than the traditional “opt-in” approach, which typically produces low numbers of responses. The authors argue that this approach accounts for low levels of motivation, which is typical of symptomology in depressed individuals.

Lastly, Greenfield and colleagues (2014) found referrals from healthcare providers to be the best strategy for enrolling patients (rather than local advertisement); 69.8% of their sample stemmed from local referrals. Interestingly, the authors noted that providers of group therapy need be concerned not only with recruiting numbers but also the quality of recruits. Newspaper ads accounted for a quarter of all pre-screenings, yet those individuals accounted for only 14% of enrolled participants.

Medical literature seems to have placed more importance on evaluating recruiting strategies, however many of the articles found in the medical literature that discuss recruiting do so within the context of controlled medical trials. While this may not be equivalent to recruiting patients for group psychotherapy, due to the shared population of PC patients and the value of incorporating novel ideas into the field of psychology, it is critical that the medical literature be considered.

Several extensive literature reviews show the following recruitment methods to be effective: incentives (providing monetary compensation or other resources); assisting patients with travel and having flexible appointments; careful and personal communication (i.e., control groups described as “watchful waiting” could be interpreted by patients as “neglected”); increasing patients’ involvement and awareness of the problem and its potential impact on health; telephone reminder calls; including questionnaires with invitation packets; using “opt-

out” recruiting; incorporation of marketing and business techniques; and involving clinic staff who play a role in recruiting (e.g., providing appropriate training, involving clinicians in study design, providing frequent feedback about recruitment rates, and focusing on clinicians with special interest in the topic (Bower et al., 2014; Bower et al., 2009; Caldwell, Hamilton, Tan, & Craig, 2010; Colwell, Mathers, Ng, & Bradley, 2012; Dyas, Apekey, Tilling, & Siriwardena, 2009; McDonald et al., 2011; Treweek et al., 2013; Ward, Miller, Graffy, & Bower, 2009; Watson & Torgerson, 2006).

In summary, mental health providers facing the task of treating PC patients with group interventions are likely to see a variety of challenges providers using traditional forms of therapy may not see; the possibility of space or resource limitations; varied levels of interest in non-traditional forms of treatment from providers and patients; a wide range of presenting concerns, and each patient with their own specific needs, which can be more difficult to manage than with individual treatment; and many systemic barriers (e.g., financial reimbursement, professional norms). Even if all of these obstacles are minimal for a given setting, providers still face the strenuous task of recruiting group members.

Questionnaire Development

Based on the findings of a literature review (Randall, 2015) summarized above, the author developed a 35-item questionnaire to gather data about domains critical to successful implementation or sustainability of providing group therapy in PC settings. Little or no data are available in the literature to inform mental health providers’ approach to being an effective practitioner in these integrated settings. The questions developed to address these areas of need utilized a concurrent mixed methods approach, incorporating both quantitative (closed-ended multiple-choice) and qualitative (open-ended free responses) approaches (Creswell, 2003). This

was deemed most appropriate for the purpose of this project, due to the complexity of understanding the role of group therapy in the PC setting.

Quantitative questions aid in the understanding of the utility or need for group interventions and provide an opportunity to support or refute findings in the literature; qualitative questions may elucidate future variables to explore. At this time the limited research in this domain has focused on factors perceived to be needed (i.e., suitable resources and patient need) or consequential (i.e., cost-effectiveness or efficaciousness of group interventions) for group therapy to be implemented. Open-ended questions may provide additional factors for group mental health providers to consider when developing treatment groups in PC.

Several areas of importance were identified as important factors for assessing a PC facility's readiness to implement therapy groups: site suitability, provider interest, population needs, and recruitment techniques. Demographic information and free response questions were also included to provide qualitative data which might clarify the quantitative questions. As Creswell (2003, pp. 21-22) noted, quantitative data can help identify "factors that influence an outcome" (such as successfully conducting group therapy), and qualitative data is essential when "little research has been done on [a topic]." Given the scant amount of literature regarding group therapy in PC settings, using a mixed methods approach provided concrete quantitative data to expand upon existing knowledge as well as complimentary qualitative data.

Site suitability. "Site suitability" included three questions; first, an assessment of whether the respondent's site provides mental health services, and if any of those services are in a group format (Appendix A, Question 10). This established how prevalent group therapy is in the PC setting. Second, a question regarding the respondent's opinion as to whether their site has suitable or sufficient resources to host group therapy sessions (Appendix A, Question 11). This

was further specified by a third question, which listed several reasons a PC site may be unable to host therapy in a group setting, as identified in the literature: patient recruitment difficulties (Bower et al., 2007; Bower et al., 2009; Greenfield et al., 2014), limited schedule flexibility (Coles & Heimberg, 2001), needing a larger space to deliver services (Ellis & Dryden, 2007), inability to bill for services (Butler et al., 2008), lack of demand or interest from patients, and lack of provider need (Appendix A, Question 12). Question 11 was intended to be vague to check for consistency with answers on Question 12. More specifically, if a provider believes their site does or does not have adequate resources to host group therapy sessions but their responses on Question 12 suggest otherwise, provider perceptions may not match actual circumstances.

Provider interest. “Provider interest” included six questions; first providers would be asked if they believe group therapy has any inherent advantages over traditional one-on-one encounters (Appendix A, Question 13). Available answers included findings from the literature: peer support or peer comparison (Anderson & Rees, 2007; Bouvard & Kaiser, 2006; Wetherell et al., 2011), efficient use of provider time (Bouvard & Kaiser, 2006), cost-effectiveness (Manicavasgar et al., 2011; Wetherell et al., 2011), as well as a free response to elicit possible benefits not found in the literature and a null response if providers do not feel group therapy is advantageous.

Second, providers were asked if they have ever referred a patient for mental health services for non-crisis purposes (Appendix A, Question 14). Non-crisis services were specified, since it targets referrals that were not obligated. This question was intended to elucidate information about not only the rate of mental health referrals in PC, but to also serve as a

mechanism for comparing providers' referral or non-referral behavior with their perceptions of group therapy and its utility in PC.

Third, providers were asked if that referral agency was on- or off-site (Appendix A, Question 15), since ease of access can be a barrier to mental health referrals (Trude & Stoddard, 2003). Fourth, providers were asked if others in their practice have referred patients for non-crisis mental health services (Appendix A, Question 16). This question examines a basic human tendency, adherence to social norms (Cialdini & Goldstein, 2004), and if it is linked with a provider's interest in mental health services. Fifth, respondents were asked about their beliefs regarding the efficacy of group therapy for treating mental illness (Appendix A, Question 17). This was critical to compare to referral behaviors, as providers are unlikely to endorse treatments they deem ineffective or not efficacious. Lastly, providers are asked if they would be willing to refer a patient to a therapy group (Appendix A, Question 18). If providers are unwilling to refer their patients to mental health groups, even the best-intentioned therapist will see limited success without incorporating some form of education for their colleagues.

Population needs. "Population needs" contained three questions to help potential providers ascertain what types of group interventions could be most beneficial at a particular location. The first question asked providers which three mental health disorders are in most need of care at their particular site (Appendix A, Question 19); the second asked which require the most attention (Appendix A, Question 20); and the third asked providers to identify which disorders are seen most frequently (in greatest numbers) (Appendix A, Question 21).

In all of these questions providers were asked to provide three answers to confirm or refute the literature consensus that anxiety and mood disorders are the most prevalent psychiatric conditions in PC (Department of Health and Human Services, 2001; Kroenke et al., 2013;

Kroenke et al., 2007; Merrill & Duncan, 2014; Sansone & Sansone, 2010; Serrano-Blanco et al., 2010), while leaving room to see if there is a consensus third. Answers are broken down into major diagnostic categories as defined in the DSM-5 (American Psychiatric Association, 2013). While these three questions are rather similar, they could provide nuanced findings. For example, Question 19 is geared toward patient needs, whereas Questions 20 and 21 would provide information about provider and site needs. The latter two questions may also elucidate information about which populations would best be addressed with group interventions. For example, although a particular clinic may see anxiety or mood disorders with the most frequency providers could feel substance abuse requires the most attention. Thus, a mental health provider's efforts could be most useful in addressing resource-intensive patients, depending on a site's needs.

Recruitment techniques. The “Recruitment techniques” section contained eight questions aimed at one of the most arduous barriers a mental health provider might face when implementing a therapy group in the PC setting: recruitment. Specifically, gathering and retaining group members. First, providers were asked if they have ever recruited patients into any sort of organized group (i.e., a research study, therapy, peer support, didactic, etc.) to assess their level of experience in this domain (Appendix A, Question 22). Second, they were asked what techniques they employed to recruit said patients (Appendix A, Question 23), with several options available based on the most commonly utilized methods (Randall, 2015).

Third, providers were asked which of those methods resulted in the *greatest number* of potential recruits (Appendix A, Question 24). Fourth, providers were asked which of those methods resulted in the greatest number of participants *who were a good fit* for their group (Appendix A, Question 25). This distinction is made due to Greenfield and colleagues' (2014)

findings that although some techniques may result in a greater number of group members, not all of those individuals are a good fit for specific groups. Fifth, providers were asked if they have ever heard of “opt-out” recruiting (Appendix A, Question 26). Due to the ethical concerns about this approach (Junghans, Feder, Hemingway, Timmis, & Jones, 2005), many providers may be unaware of this tactic, which is in need of further data (Randall, 2015).

Sixth, providers were asked to operationally define “opt-out recruiting” to check for understanding (Appendix A, Question 27). Seventh, providers were asked if they would like to be involved in their patients’ recruitment to therapy groups (Appendix A, Question 28). This question is based on McCracken and colleagues’ (2014) finding that a provider’s recommendation to participate in a therapy group is especially important. If a provider was not interested in directing his or her patients to mental health groups, this question could alert therapists of a potential roadblock to garnering sufficient group participants. Lastly, providers were asked if they typically report their recruiting techniques in their published work (Appendix A, Question 29), to investigate prior findings that recruiting specifics is largely absent in many academic works (Randall, 2015).

Demographics. Nine demographic questions were included on the initial survey. The first three questions addressed general demographic information of respondents: age, gender, and ethnicity (Appendix A, Questions 1, 2, and 3). Two questions (Appendix A, Questions 4 and 5) focused on the respondent’s general location and urbanity of their site, both adapted from U.S. Census (2011; 2013) breakdowns. Respondents were also asked about their occupation (physician, nurse, assistant, specialist, etc.) (Appendix A, Question 6), as well as possible primary or secondary roles or duties (Appendix A, Questions 7 and 8). Lastly, respondents were asked how many years they have been practicing (Appendix A, Question 9).

Free response. Free response questions were added to supplement the information gathered in the other survey questions. Providers were asked about their thoughts about the role of mental health in PC (Appendix A, Question 30); the difficulty of finding mental health care for patients (Appendix A, Question 31); their experience with recruiting participants into groups (Appendix A, Question 32); willingness to refer patients to therapy groups (Appendix A, Question 33); beliefs about the effectiveness of group therapy in the treatment of mental illness (Appendix A, Question 34); and to compare individual versus group modalities of care (Appendix A, Question 35).

Aims

The purpose of this study was to expand upon findings in the literature (Randall, 2015) about the role of group therapy in PC settings by exploring the needs of patients and providers, as well as potential obstacles to implementing a treatment group.

Specific aims of this study were:

1. To perform an initial content validation of a needs assessment questionnaire aimed at facilitating the implementation of therapy groups.
2. To evaluate potential obstacles mental health professionals may face when attempting to begin or sustain group interventions in PC clinics in the Appalachian region.
3. To explore PC (mental and physical health) providers' beliefs and opinions about group therapy.
4. To evaluate which patient populations (e.g., which mental health disorders – anxiety, depression, etc.) in the Appalachian region may benefit most from group mental health interventions.

5. To explore an under-reported topic of PC providers' experiences with recruiting patients into treatment groups.
6. To evaluate providers' qualitative responses about the role of mental health in PC, the ability for their patients to find adequate mental health services, experience with patient recruiting, and opinions about group modalities of care; responses will be used to expand upon themes identified in quantitative responses, and elucidate other related avenues for future research exploration.

The results of this study could provide clinicians and researchers, especially in the Appalachian region, with information about possible obstacles and areas of need for implementing group mental health interventions in PC. Expansion of group treatments could improve the availability of mental health services in Appalachia, a region that is traditionally underserved in psychological care (Correll, Cantrell, & Dalton III, 2011; Hendryx, 2008), by serving more patients with fewer providers. Finally, this study could inform future practice and research by examining Appalachian primary care providers' (PCP) beliefs and experiences about integrated care, recruiting difficulties, and group therapy.

Hypotheses

In addition to elucidating more information about patient population needs and recruiting experiences, the following exploratory hypotheses were developed to achieve the research aims of this study:

Hypothesis 1 (H1). PCPs' attitudes about behavioral health vary (Beacham et al., 2012), and "behavior is a function of salient information, or beliefs, relevant to the behavior" (Ajzen, 1991, p. 189). Given the link between attitudes and behaviors, it is hypothesized that *providers who have not referred patients to mental health services will perceive a lower need or value for group therapy in PC* (Appendix A, Questions 13, 14, 17, 33, 34 and 35).

Hypothesis 2 (H2). Torrence and colleagues (2014) found that age was not related to medical providers' attitudes about behavioral health consultants in PC, but increased interaction with mental health providers was associated with more favorable attitudes. Thus, since providers who have practiced for a longer period of time have had more opportunity to work with mental health practitioners, it is hypothesized that *providers with more work experience will be more supportive of group therapy in PC* (Appendix A, Questions 9, 13, 14, 17, 18, 33, 34, and 35).

Hypothesis 3 (H3). The number of available mental healthcare providers has increased in the United States, however the growth availability of mental health services in rural areas is minimal (Gamm, Stone, & Pittman, 2003), and those numbers may actually decline in the near future as practitioners retire (Hastings & Cohn, 2013). Thus, it will be vital for rural providers to address the mental illness needs of patients with fewer resources (providers), and it is hypothesized that *rural providers will be more supportive of group therapy in PC, compared to urban and suburban providers* (Appendix A, Questions 5, 13, 14, 17, 18, 33, 34, and 35).

Hypothesis 4 (H4). Increased opportunity for interdisciplinary collaboration may decrease barriers to integration (Correll et al., 2011), and higher availability of mental health services has been associated with fewer perceived barriers to referrals (Walders et al., 2003). Thus, it is hypothesized that *providers at sites which currently provide mental health services will be more supportive of group therapy in PC, compared with providers at sites not currently providing mental health services* (Appendix A, Questions 10, 13, 14, 17, 18, 33, 34, and 35).

Hypothesis 5 (H5). Nurse practitioners and physician assistants have been found to see fewer patients with depression (compared to physicians), and less likely “to prescribe antidepressants, or to treat such patients without referral” (Gamm et al., 2003, p. 103). Physicians have been found to more strongly believe behavioral health consultants help patients with mental

illness (when compared to midlevel providers) (Torrence et al., 2014). Thus, it is hypothesized that *physicians (i.e., M.D. or D.O.s) will hold a more favorable view toward group therapy than midlevel providers* (Appendix A, Questions 7, 13, 14, 17, 18, 33, 34, and 35).

CHAPTER 2

METHOD

Participants

Phase I: Content Validation. Two sets of participants were used for this study.

Participants in the first phase (content validation) of the study included professionals who are experts (significant experience or published research) in PC and mental health services. These participants were not included in Phase II data collection, as their role was that of a consultant and thus were not included in hypothesis testing. Fifteen experts were emailed to elicit their feedback for the questionnaire developed for this study. Experts were identified based on their areas of interest and expertise in integrated care and group psychotherapy, including: leaders of the APA Division 38 (Society for Health Psychology) Integrated Primary Care Committee; authors of published work in PC research in Appalachia; chairs of medical research universities focusing on integrated care; AGPA fellows; chairs of AGPA health, research, and special interest groups; and authors of respected group psychotherapy literature. Four experts participated in the evaluation, however one respondent dropped out after the third item.

Phase II: Data Collection. Participants in the second phase of the study were recruited from a list of 582 PCPs from the Appalachian region, obtained from a previous study conducted in the Appalachian region. Ellison (2014) searched local chambers of commerce, Health Resources and Service Administration (HRSA), Tennessee Primary Care Association (TPCA), DexKnows.com and Google.com websites for individuals, practices, and organizations that identified themselves as “primary care” providers in Tennessee. This author also searched internet databases such as the National Provider Identifier Database for PCPs in the region whom may not have been included. Ellison’s (2014) list of potential contacts included providers across the state, including areas outside of the Appalachian region. In order to maintain the focus on

group therapy in the underserved Appalachian region, this author limited focus to providers within a roughly 10-mile radius of Interstate 75 and all areas East in Tennessee. Of the 582 possible contacts, 363 fit this criteria.

Procedure

Phase I: Content Validation. Experts were emailed to ask if they would be willing to assist the author in evaluating the survey, along with a brief description of the aims and goals of this study. Participants expressing interest were sent a follow-up email (Appendix B), the questionnaire (Appendix A), and an online link to the survey where they provided ratings and feedback about the content of each item, specifically how clear and relevant each item appeared (Appendix C). Content validity assesses whether a measure contains appropriate questions for the construct it intends to measure (Polit, Beck, & Owen, 2007). One method of garnering content validation is measuring inter-rater agreement. Content validity can be calculated with the Content Validity Index (CVI) (Polit & Beck, 2006). Experts were asked to rate items on a 4-point scale, with “1” indicating the item is not relevant or clear, and “4” indicating the item is highly relevant or clear. Experts’ scores were averaged and all items receiving an average Item-CVI relevance or clarity score of 3 or higher were retained in the final survey (Polit et al., 2007). Items receiving a score below 3 were examined by the author for revision or omission, per experts’ feedback.

Phase II: Data Collection. After the questionnaire was revised (see Chapter 3 below for details about which items were modified) all items and the informed consent were uploaded to Survey Monkey. The survey was designed to present respondents with items in the same section (demographic information, site suitability, provider interest, population needs, recruitment techniques, and free response) on one page for the purpose of brevity; otherwise respondents would spend a significant amount of time clicking on a new page for every item. Survey Monkey

settings allow for pages to be displayed in a randomized order and questions to be randomized on each page. These settings were enabled to minimize the possibility of order effects (McFarland, 1981), aside from the informed consent page which was always displayed first. No items (other than the informed consent) were designated as requiring an answer to proceed to the next question or page, and a link to immediately end the survey on each page was included per the ETSU Institutional Research Board's request.

After the finalized questionnaire was uploaded and tested by the author to ensure it would be appropriately displayed to potential respondents, PCPs in Tennessee were contacted via phone beginning in April, 2017. Ellison's (2014) study distributed surveys to PCPs via postal mail, thus his contact list included only the mailing address and phone numbers for independent practitioners or branches of larger healthcare organizations. No direct phone numbers or email addresses were included in the database. The author used public internet search engines (e.g., Google.com) to find updated contact information for these providers, as many phone numbers had changed or locations closed. No locations published direct contact information for their providers, so the author determined contacting the office or practice manager at each location would be the best avenue for recruiting participants. Office managers of larger organization branches typically directed the author to speak with corporate representatives, who were contacted by the author when needed. Office managers or corporate representatives were informed about the aim and overall goals of this study and asked if they would be willing to distribute a link to the online questionnaire to their PCPs.

The author made 162 phone call attempts from April through October, 2017. Eighty-one site managers did not respond to the author's requests for follow-up. Twenty sites declined to participate, and 61 sites agreed to distribute the invitation to their providers. Managers who

agreed to participate were emailed a short description of the project with a link to the online questionnaire to pass on to their providers (see Appendix D). Three office managers noted their providers would not read or respond to an email invitation and suggested they might place a faxed copy of the invitation email in their providers' mailbox. Not all locations published a list of providers on their website, but of those that did the number of providers at each site ranged from one to approximately 15. This resulted in an estimated possible pool of up to 915 respondents.

Phase III: Hypothesis Testing. Relationships between the variables reflected on this survey were assessed using Fisher's exact test. For example, item 13 (respondents' history of referring to mental health providers) was compared to items 12, 15, and 28 to determine whether there was a significant relationship between providers who have or have not referred patients for mental health services and their perceptions about group therapy in primary care. Items whose answers were not binary in nature (e.g., yes/no) were consolidated into like categories for ease of comparison (e.g., Respondents who endorsed answers A through E on item 12 were condensed into the view that group has advantages and compared with respondents endorsing answer F, group has no advantages). Free responses were categorized by the author as "generally favorable," or "endorsed"; and "generally unfavorable" or "did not endorse" when those items were compared in chi-square analyses. Descriptive statistics were calculated and general themes identified for qualitative reporting. See Tables 1a – 1e for hypothesis contingency tables.

Table 1a

Hypotheses 1 χ^2 Contingency Table (Before Phase I Revisions)

Hypothesis 1: Providers who have not referred patients to mental health services will perceive a lower need or value for group therapy in primary care.		Q14: Have you referred a patient to a mental health provider...?	
		Yes	No
Q13: What advantages do you believe group therapy may have...?	Answers A – E (Group has advantages) Answer F (Group has no advantages)		
Q17: How effective do you believe group therapy is for treating pts w/ mental illness?	Answers A or B (Very/Somewhat Effective) Answers D or E (Somewhat/Very Ineffective)		
Q33: If group therapy services available, would you refer pts to therapy groups?	Free Response generally favorable Free Response generally unfavorable		
Q34: Opinion of group therapy for the tx of mental illness. Effective or worthwhile?	Free Response generally favorable Free Response generally unfavorable		
Q35: Opinion of group modalities of care in PC? Deviation from one-on-one interventions feasible?	Free Response generally favorable Free Response generally unfavorable		

Table 1b

Hypotheses 2 χ^2 Contingency Table (Before Phase I Revisions)

Hypothesis 2: Providers with more work experience will be more supportive of group therapy in primary care.		Q9: I have been practicing for ___ years	
		Above mean yrs (More experienced)	Below mean yrs (Less experienced)
Q13: What advantages do you believe group therapy may have...?	Answers A – E (Group has advantages) Answer F (Group has no advantages)		
Q14: Have you referred a patient to a mental health provider...?	Yes No		
Q17: How effective do you believe group therapy is for treating pts w/ mental illness?	Answers A or B (Very/Somewhat Effective) Answers D or E (Somewhat/Very Ineffective)		

Q18: Would you be willing to refer a patient to a therapy group?	Yes
	No
Q33: If group therapy services available, would you refer pts to therapy groups?	Free Response generally favorable
	Free Response generally unfavorable
Q34: Opinion of group therapy for the tx of mental illness. Effective or worthwhile?	Free Response generally favorable
	Free Response generally unfavorable
Q35: Opinion of group modalities of care in PC? Deviation from one-on-one interventions feasible?	Free Response generally favorable
	Free Response generally unfavorable

Table 1c

Hypotheses 3 χ^2 Contingency Table (Before Phase I Revisions)

Hypothesis 3: Rural providers will be more supportive of group therapy in primary care, compared to urban and suburban providers.		Q5: How would you describe your location?	
		Urban or Suburban	Rural
Q13: What advantages do you believe group therapy may have...?	Answers A – E (Group has advantages) Answer F (Group has no advantages)		
Q14: Have you referred a patient to a mental health provider...?	Yes		
	No		
Q17: How effective do you believe group therapy is for treating pts w/ mental illness?	Answers A or B (Very/Somewhat Effective) Answers D or E (Somewhat/Very Ineffective)		
Q18: Would you be willing to refer a patient to a therapy group?	Yes		
	No		
Q33: If group therapy services available, would you refer pts to therapy groups?	Free Response generally favorable		
	Free Response generally unfavorable		
Q34: Opinion of group therapy for the tx of mental illness. Effective or worthwhile?	Free Response generally favorable		
	Free Response generally unfavorable		

Q35: Opinion of group modalities of care in PC? Deviation from one-on-one interventions feasible?	Free Response generally favorable
	Free Response generally unfavorable

Table 1d

Hypotheses 4 χ^2 Contingency Table (Before Phase I Revisions)

Hypothesis 4: Providers at sites which currently provide mental health services will be more supportive of group therapy in primary care, compared with providers at sites not currently providing mental health services.		Q10: Does your site provide mental health services?	
		Answer A (No)	Answers B or C (Yes)
Q13: What advantages do you believe group therapy may have...?	Answers A – E (Group has advantages) Answer F (Group has no advantages)		
Q14: Have you referred a patient to a mental health provider...?	Yes No		
Q17: How effective do you believe group therapy is for treating pts w/ mental illness?	Answers A or B (Very/Somewhat Effective) Answers D or E (Somewhat/Very Ineffective)		
Q18: Would you be willing to refer a patient to a therapy group?	Yes No		
Q33: If group therapy services available, would you refer pts to therapy groups?	Free Response generally favorable Free Response generally unfavorable		
Q34: Opinion of group therapy for the tx of mental illness. Effective or worthwhile?	Free Response generally favorable Free Response generally unfavorable		
Q35: Opinion of group modalities of care in PC? Deviation from one-on-one interventions feasible?	Free Response generally favorable Free Response generally unfavorable		

Table 1e

Hypotheses 5 χ^2 Contingency Table (Before Phase I Revisions)

Hypothesis 5: Physicians (i.e., M.D. or D.O.s) will hold a more favorable view toward group therapy than midlevel providers.		Q7: What is your primary role?	
		Answer A (Physician)	Answers B – F (Non-Phys.)
Q13: What advantages do you believe group therapy may have...?	Answers A – E (Group has advantages) Answer F (Group has no advantages)		
Q14: Have you referred a patient to a mental health provider...?	Yes No		
Q17: How effective do you believe group therapy is for treating pts w/ mental illness?	Answers A or B (Very/Somewhat Effective) Answers D or E (Somewhat/Very Ineffective)		
Q18: Would you be willing to refer a patient to a therapy group?	Yes No		
Q33: If group therapy services available, would you refer pts to therapy groups?	Free Response generally favorable Free Response generally unfavorable		
Q34: Opinion of group therapy for the tx of mental illness. Effective or worthwhile?	Free Response generally favorable Free Response generally unfavorable		
Q35: Opinion of group modalities of care in PC? Deviation from one-on-one interventions feasible?	Free Response generally favorable Free Response generally unfavorable		

CHAPTER 3

RESULTS

Phase I: Content Validation

Fifteen experts were emailed to elicit their feedback for the questionnaire developed for this study. Four experts participated in the evaluation, however one respondent dropped out after the third item. With this response rate, all items receiving an average I-CVI relevance or clarity score of three or higher were retained in the final survey (Polit et al., 2007). Items receiving a score below three were examined by the author for revision or omission, per experts' feedback. See Table 2 for a summary of Phase I content validation results. Item numbers in this section refer to Appendix A unless otherwise specified.

Table 2
Phase I Content Validation Results

Item #	Question		Expert 1	Expert 2	Expert 3	Expert 4	Average
1	Age	Relevance	1	2	4	2	2.25
		Clarity	4	4	4	3	3.75
2	Gender	Relevance	2	2	3	3	2.50
		Clarity	4	2	3	2	2.75
3	Ethnicity	Relevance	2	2	3	3	2.50
		Clarity	4	1	3	2	2.50
4	Clinic location	Relevance	4	3	3		3.33
		Clarity	4	3	3		3.33
5	Location population	Relevance	4	3	4		3.67
		Clarity	4	3	4		3.67
6	Job title	Relevance	4	3	4		3.67
		Clarity	2	2	2		2.00
7	Primary work duty	Relevance	2	2	3		2.33
		Clarity	1	3	2		2.00
8	Secondary work duty	Relevance	2	1	2		1.67
		Clarity	1	1	2		1.33
9	Years practicing	Relevance	3	4	4		3.67
		Clarity	4	2	4		3.33

10	Provision of MH services	Relevance	4	4	4	4.00
		Clarity	1	3	4	2.67
11	Site suitability	Relevance	4	4	3	3.67
		Clarity	1	2	1	1.33
12	Site limitations	Relevance	4	4	2	3.33
		Clarity	2	3	2	2.33
13	Advantages of group	Relevance	4	4	3	3.67
		Clarity	3	4	3	3.33
14	Referred for MH treatment	Relevance	2	4	3	3.00
		Clarity	1	4	3	2.67
15	Referral location	Relevance	2	4	3	3.00
		Clarity	4	4	3	3.67
16	Have others referred	Relevance	1	4	3	2.67
		Clarity	4	4	3	3.67
17	Effectiveness of group	Relevance	4	4	4	4.00
		Clarity	2	4	4	3.33
18	Willing to refer to group	Relevance	4	4	4	4.00
		Clarity	1	4	4	3.00
19	Disorders in most need	Relevance	4	4	4	4.00
		Clarity	4	4	4	4.00
20	Disorders need most attention	Relevance	4	3	4	3.67
		Clarity	4	4	4	4.00
21	Disorders seen most frequently	Relevance	4	4	4	4.00
		Clarity	4	4	4	4.00
22	Attempted to recruit	Relevance	3	4	4	3.67
		Clarity	3	4	4	3.67
23	Recruitment techniques	Relevance	4	3	4	3.67
		Clarity	3	4	4	3.67
24	Greatest number of recruits	Relevance	4	3	4	3.67
		Clarity	4	3	4	3.67
25	Good fit recruits	Relevance	2	4	4	3.33
		Clarity	2	4	4	3.33
26	Opt-out recruiting	Relevance	2	3	4	3.00
		Clarity	4	3	4	3.67
27	Opt-out recruiting understanding	Relevance	1	3	4	2.67
		Clarity	1	3	4	2.67
28	Involved in recruitment	Relevance	4	4	4	4.00
		Clarity	1	4	4	3.00
29	Report recruitment techniques	Relevance	1	3	3	2.33
		Clarity	3	4	3	3.33

30	Role of MH in PC	Relevance	4	4	4	4.00
		Clarity	1	4	4	3.00
31	Difficult to find patients adequate care	Relevance	4	4	4	4.00
		Clarity	2	3	4	3.00
32	Recruitment experience	Relevance	1	4	4	3.00
		Clarity	2	4	4	3.33
33	Interest in referring to group	Relevance	4	4	4	4.00
		Clarity	1	4	4	3.00
34	Opinion of group	Relevance		4	4	4.00
		Clarity		4	4	4.00
35	Opinion of group in PC	Relevance		3	1	2.00
		Clarity	1	4	4	3.00

Demographics. Item 1 was rated 2.25 on relevance and 3.75 for clarity. Experts suggested years of experience would be a better question to ask for the purposes of this questionnaire, however the author deemed it best to retain this item as it is a standard demographic question. Thus, no changes were made to this item. Item 2 was rated 2.50 for relevance and 2.75 for clarity. Experts suggested including non-categorical gender identifications for this item’s answers. “Genderqueer” and “Non-binary” were included as possible answers in the final questionnaire. Item 3 was rated 2.50 for relevance 2.50 for clarity. Experts suggested adding a biracial or multiracial response, which was included in the final questionnaire. Item 4 was rated 3.33 for relevance and clarity, and Item 5 was rated 3.67 for relevance and clarity, and no changes were made to these items.

Experts found Item 6 to be relevant (3.67), but not clear (2.00). They advised the author to be more specific in answer choices, including the addition of “Mental Health Specialist” and “Office or Practice Manager” to the answer pool. These responses would include other positions which experts believed may be common job titles in the PC setting. It was also suggested that “Specialist” should be revised to “Other Specialist” to differentiate respondents outside of the

mental health fields. Items 7 and 8 were rated low on both relevance (2.33 and 1.67, respectively) and clarity (2.00, 1.33). Experts did not see the purpose of differentiating between role and job title, which was reflected in Item 6. Thus, Items 7 and 8 were omitted from the final questionnaire. Item 9 was found to be both relevant (3.67) and clear (3.33), however one expert believed more specificity in the phrasing of this item may be helpful for respondents. Item 9 was revised from “I have been practicing for ___ years” to “I have been practicing my area of specialty for ___ years,” per that expert’s suggestion.

Site suitability. Item 10 was deemed relevant (4.00) but not clear (2.67) due to one expert’s confusion about the intent of the question: to assess the respondent’s job duties, or elucidate the location of services (e.g., if those services are integrated, co-located, or consultation). As the other respondents appeared to be clear about the intention of this item (location of services), the phrasing of this question was left unchanged. However, the respondent brought up what this author deemed to be an important area to assess and a new item was added to the final survey. Specifically, respondents are asked “if your site provides mental health services to patients are those services primarily...” and given the choice of integrated, co-located, consultation, referred out, “we do not provide mental health services,” or other (see Item 9 on Table 3). These choices for these answers were adapted from Strosahl’s (1998) description of varying levels of integrated care, with the addition of referring out or no provision of services to capture other possible models in which respondents may be working.

Table 3
Phase I Modifications to Questionnaire

Original Item #	Phase I Revisions	New Item #
1	No changes	1
2	Added non-categorical gender identifications to answer pool	2
3	Added biracial or multiracial ethnicity to answer pool	3
4	No changes	4

5	No changes	5
6	Added “Mental health specialist” and “Office or practice manager” to answer pool; modified “Specialist” to “Other specialist” to differentiate from MH providers	6
7	Omitted	
8	Omitted	
9	Revised question to further specify the years of practice for respondents’ area of specialty	7
10	No changes	8
	New item added to clarify location of MH services	9
11	No changes	10
12	Included “Lack of providers with group therapy training or expertise” to answer pool	11
13	Revised answer “A” to include peer learning as a potential advantage	12
14	No changes	13
15	Revised wording of question to remove reference to earlier item, thereby avoiding potential respondent confusion	14
16	Omitted	
17	No changes	15
18	No changes	16
19	No changes	17
20	No changes	18
21	No changes	19
22	No changes	20
23	Specified a “provider” as the source of referral for answer “A” and modified wording of answer “E” from solicitation to request from local providers	21
24	Specified a “provider” as the source of referral for answer “A” and modified wording of answer “E” from solicitation to request from local providers	22
25	Specified a “provider” as the source of referral for answer “A” and modified wording of answer “E” from solicitation to request from local providers	23
26	Omitted	
27	Omitted	
28	No changes	24
29	Omitted	
30	No changes	25

31	Revised wording of the question to specify barriers in the immediate vicinity	26
32	No changes	27
33	No changes	28
34	Omitted	
35	Omitted	

Item 11 received a relevance score of 3.67, but a clarification score of 1.33, and experts noted this item was too vague. As this item was intended to be vague in order to elicit possible discrepancies between perceptions of site suitability and the actual limitations described in the following question, the author deemed it best to leave this question unchanged. Item 12 was deemed relevant (3.33) but not clear (1.33). Several experts noted having a qualified professional with group expertise is important to the success of group therapy. “Lack of providers with group therapy training or expertise” was added to the answer pool in the final questionnaire.

Provider interest. Experts found Item 13 to be both relevant (3.67) and clear (3.33), however one expert suggested “learning from others” could be added to the answer pool. This facet of group interventions was similar to the first answer (peer support), as group participants are drawing support or skills from other group members. Thus, the first answer was revised to “peer support/learning.” Item 14 was relevant (3.00) but slightly unclear (2.67), however experts provided no feedback about how to better word this question. This item was unchanged in the final questionnaire.

Item 15 was deemed relevant (3.00) and clear (3.67), however when uploading survey items to Survey Monkey the author identified the possibility of respondents being confused about what item was referenced in the phrasing of this question. On a paper survey the item would immediately follow the item assessing the respondent’s history of mental health referrals, however this may be confusing when items are presented on a computer screen. The question

was changed from “if so, was that provider...” to “if you have referred a patient to a mental health provider, was that provider...” to avoid any possible uncertainty. Item 16 was deemed clear (3.67) but irrelevant (2.67) and experts noted “one provider is speaking for all.” Although adherence to social norms is an important consideration for providers hoping to work with providers in PC settings, it was not critical to evaluate for the purposes of this survey and this item was omitted from the final questionnaire. Experts found items 17 and 18 to be relevant (4.00 and 4.00, respectively) and clear (3.33, 3.00). No changes were made to these items.

Population needs. Experts deemed items 19, 20, and 21 to be relevant and scored the questions 4.00, 3.67, and 4.00, respectively. They also found items to be sufficiently clear, scoring all three items 4.00. No changes were made to these items for the final questionnaire.

Recruitment techniques. Item 22 met cutoff requirements for both relevance (3.67) and clarity (3.67), and no changes were made to this item. Items 23, 24, and 25 were found to be relevant (3.67, 3.67, and 3.33, respectively) and clear (3.67, 3.67, and 3.33, respectively), but experts provided feedback that specifying “provider” in the first answer would be helpful. The first answer was accordingly modified from “medical referral of specific patients” to “medical provider referral of specific patients.” One expert was also concerned about the phrasing of answer “solicitation of other local healthcare providers” and this response was modified to “requesting referrals from local healthcare providers” for the final questionnaire.

Experts found Item 26 to be both relevant (3.00) and clear (3.67), but Item 27 was scored below the cutoff for relevance (2.67) and clarity (2.67). One expert noted respondents may take offense or be confused by the wording of Item 27. As the utilization opt-out recruiting was not critical for the focus of this study, both items were omitted from the final questionnaire. Item 28

was deemed highly relevant (4.00) and sufficiently clear (3.00) and no changes were made. Item 29 was found to be clear (3.33) but irrelevant (2.33) and was omitted.

Free response. Item 30 was determined to be relevant (4.00) and clear (3.00) by the experts, and no changes were made to this question. Item 31 was also found to be relevant (4.00) and clear (3.00), but one expert noted it may be helpful to clarify if the intent of this question is to assess the availability of services in their community. Thus, the wording of this question was revised from “Do you find it difficult to find your patients adequate care for their mental health needs? Why or why not?” to “Do you find it difficult to find your patients adequate care for their mental health needs in your community? Why or why not?” as some providers may refer to services outside of their immediate vicinity.

Items 32 and 33 were deemed both relevant (3.00 and 4.00, respectively) and clear (3.33, 3.00), and no changes were made. Item 34 was found to be highly relevant (4.00) and clear (4.00), but all experts noted the content of this item was explicitly addressed in earlier items. Thus, this item was omitted in the interest of brevity. Item 35 was scored below the relevance cutoff criteria (2.00), but was acceptably clear (3.00). Experts felt this item could be answered by earlier responses, and this item was omitted from the final questionnaire.

In summary, eight items were eliminated from the questionnaire and one new item was included for a total of 28 questions. Eleven items were revised to improve relevance or clarity. See Table 3 for a summary of modifications in Phase I of this study, and Appendix E for the revised questionnaire.

Phase II: Data Collection

A total of 28 respondents completed the informed consent. One participant dropped out of the questionnaire after the informed consent, and several remaining respondents chose not to answer all items. Twenty-one respondents (75%) completed all 28 items including free response

questions 25 through 28. Response rates for items 1 through 24 ranged from 23 individuals (82%) to 27 (96%). See Table 4 for a summary of the response rate for each survey item, and Table 5 for a summary of the answers for each survey item described below.

Table 4
Survey Response Rates by Item

Survey item	Total respondents	Response rate (n/28)
Informed Consent	28	100%
Item 1	27	96%
Item 2	27	96%
Item 3	27	96%
Item 4	27	96%
Item 5	27	96%
Item 6	27	96%
Item 7	24	86%
Item 8	24	86%
Item 9	24	86%
Item 10	24	86%
Item 11	24	86%
Item 12	25	89%
Item 13	26	93%
Item 14	25	89%
Item 15	25	89%
Item 16	26	93%
Item 17	24	86%
Item 18	24	86%
Item 19	24	86%
Item 20	24	86%
Item 21	24	86%
Item 22	23	82%
Item 23	24	86%
Item 24	23	82%
Item 25	21	75%
Item 26	21	75%
Item 27	21	75%
Item 28	21	75%

Table 5
Percentages of Survey Responses

Item #	Question	# of Respondents (n)	Item Answers	Total Responses	% Of Respondents	Overall Response Rate (n/28)	
1	Age	27	Free Response	27	100.00%	96%	
2	Gender	27	Male	2	7.41%	96%	
			Female	25	92.59%		
			Genderqueer	0	0.00%		
			Non-binary	0	0.00%		
			Transgender	0	0.00%		
			Other	0	0.00%		
3	Ethnicity	27	White	26	96.30%	96%	
			Hispanic or Latino	0	0.00%		
			Black or African American	1	3.70%		
			Native American or American Indian	0	0.00%		
			Asian/Pacific Islander	0	0.00%		
			Biracial or Multiracial	0	0.00%		
			Other	0	0.00%		
4	Clinic location	27	Northeast U.S.	0	0.00%		96%
			Southern U.S.	27	100.00%		
			Midwest U.S.	0	0.00%		
			Western U.S.	0	0.00%		
			Other	0	0.00%		
5	Clinic population	27	Urban	11	40.74%	96%	
			Suburban or Urban Cluster	12	44.44%		
			Rural	4	14.81%		
6	Job title	27	Physician	7	25.93%	96%	
			Nurse/Nurse Practitioner	10	37.04%		
			Physician's Assistant	1	3.70%		
			Mental Health Specialist	7	25.93%		
			Other Specialist	0	0.00%		
			Admin/Staff	0	0.00%		
			Office or Practice Manager	1	3.70%		
			Other	1	3.70%		

7	Years of practice	24	Free Response	24	100.00%	86%
8	Clinic mental health services	24	No mental health services	2	8.33%	86%
			Mental health services with no groups	7	29.17%	
			Mental health services with groups	15	62.50%	
9	Location of mental health services	24	Integrated	19	79.17%	86%
			Co-located	1	4.17%	
			Consultation	0	0.00%	
			Referred out	1	4.17%	
			No mental health services	1	4.17%	
			Other	2	8.33%	
10	Site suitability for group	24	Yes	14	58.33%	86%
			No	6	25.00%	
			Unsure	4	16.67%	
11	Limitations for group	24	Patient recruitment	3	12.50%	86%
			Schedule flexibility	15	62.50%	
			Rooms size or availability	8	33.33%	
			Billing	2	8.33%	
			Patient interest	7	29.17%	
			Provider need	3	12.50%	
			Provider expertise	11	45.83%	
			None – site is suitable for group	4	16.67%	
			Other	1	4.17%	
12	Advantages of group	25	Peer support/learning	22	88.00%	89%
			Peer comparison	20	80.00%	
			Time efficient	16	64.00%	
			Cost-effective	12	48.00%	
			Group is not more advantageous	1	4.00%	
			Other	1	4.00%	
13	Referred to mental health services	26	Yes	25	96.15%	93%
			No	1	3.85%	

14	Referral location	25	On-Site	18	72.00%	89%
			Off-Site	7	28.00%	
15	Effectiveness of group	25	Very Effective	5	20.00%	89%
			Somewhat Effective	18	72.00%	
			Neither Effective nor Ineffective	2	8.00%	
			Somewhat Ineffective	0	0.00%	
			Very Ineffective	0	0.00%	
16	Willing to refer to group	26	Yes	24	92.31%	93%
			No	0	0.00%	
			Not Sure	2	7.69%	
17	Disorders most in need of care	24	Anxiety Disorders	12	50.00%	86%
			Bipolar and Related Disorders	4	16.67%	
			Depressive Disorders	18	75.00%	
			Eating Disorders	0	0.00%	
			Somatoform Disorders	1	4.17%	
			Substance Abuse Disorders	17	70.83%	
			Trauma or Stress Disorders	13	54.17%	
			Diet & Exercise	7	29.17%	
			Other	0	0.00%	
18	Disorders requiring most attention	24	Anxiety Disorders	12	50.00%	
			Bipolar and Related Disorders	8	33.33%	
			Depressive Disorders	14	58.33%	
			Eating Disorders	2	8.33%	
			Somatoform Disorders	4	16.67%	
			Substance Abuse Disorders	13	54.17%	
			Trauma or Stress Disorders	14	58.33%	
			Diet & Exercise	4	16.67%	
			Other	1	4.17%	

19	Most frequently seen disorders	24	Anxiety Disorders	18	75.00%	86%
			Bipolar and Related Disorders	3	12.50%	
			Depressive Disorders	22	91.67%	
			Eating Disorders	0	0.00%	
			Somatoform Disorders	1	4.17%	
			Substance Abuse Disorders	12	50.00%	
			Trauma or Stress Disorders	10	41.67%	
			Diet & Exercise	6	25.00%	
			Other	0	0.00%	
20	Recruited into a group	24	Yes	17	70.83%	86%
			No	7	29.17%	
21	Recruitment techniques	24	Provider referral	13	54.17%	86%
			Medical record search	2	8.33%	
			Front desk/staff recruitment	5	20.83%	
			Patient self-referral	11	45.83%	
			Requesting local referrals	5	20.83%	
			Media/flyer distribution	5	20.83%	
			Internet outreach	0	0.00%	
			Monetary or other incentives	2	8.33%	
			No recruitment experience	9	37.50%	
			Other	1	4.17%	
22	Recruitment greatest number	23	Provider referral	9	39.13%	82%
			Medical record search	0	0.00%	
			Front desk/staff recruitment	0	0.00%	
			Patient self-referral	5	21.74%	
			Requesting local referrals	0	0.00%	
			Media/flyer distribution	0	0.00%	
			Internet outreach	0	0.00%	
			Monetary or other incentives	1	4.35%	
			No recruitment experience	10	43.48%	
			Other	4	17.39%	

23	Recruitment good fit	24	Provider referral	9	37.50%	86%
			Medical record search	0	0.00%	
			Front desk/staff recruitment	2	8.33%	
			Patient self-referral	5	20.83%	
			Requesting local referrals	0	0.00%	
			Media/flyer distribution	1	4.17%	
			Internet outreach	0	0.00%	
			Monetary or other incentives	1	4.17%	
			No recruitment experience	10	41.67%	
			Other	1	4.17%	
24	Involved in recruitment	23	Yes, I would like to be involved	16	69.57%	82%
			No, recruit without me	7	30.43%	
25	Role of mental health in PC	21	Favorable	20	95.24%	75%
			Unfavorable	0	0.00%	
			Neutral	1	4.76%	
26	Difficult to find mental health care	21	Endorsed	14	66.67%	75%
			Did not endorse	4	19.05%	
			Neutral	3	14.29%	
27	Recruitment experience	21	Endorsed	10	47.62%	75%
			Did not endorse	4	19.05%	
			Neutral	2	9.52%	
28	Interest in referring to group	21	Favorable	20	95.24%	75%
			Unfavorable	1	4.76%	
			Neutral	0	0.00%	

Demographic information. On item 1 a total of 27 respondents reported a mean age of 39.96 ($SD = 12.25$) with a range of 25 to 75 years old. The majority of respondents were Female ($n = 25, 92.59\%$), and only two (7.41%) identified as Male on item 2. Most respondents identified as White ($n = 26, 96.30\%$), with one respondent (3.70%) identifying as Black or African American on item 3. All respondents ($n = 27, 100\%$) indicated their clinic location was in the Southern United States on item 4. Eleven (40.74%) respondents described their location as

Urban, 12 indicated Suburban (44.44%), and four (14.81%) indicated they were in a rural location on item 5.

When asked to describe their job title on item 6, one quarter of respondents indicated they were a Physician ($n = 7, 25.93\%$); one third were Nurses or Nurse Practitioners ($n = 10, 37.04\%$); one (3.70%) was a Physician's Assistant; seven (25.93%) were Mental Health Specialists; one (3.70%) was an Office or Practice Manager; and one respondent (3.70%) indicated "Other" and described themselves as a Behavioral Health Consultant. A total of 24 respondents answered item 7, reporting years of experience ranging from one to 30 with a mean of 9.42 years ($SD = 9.53$).

Site suitability. On item 9, two respondents (8.33%) indicated their site does not provide mental health services, seven (29.17%) were at locations with mental health services but no group therapy sessions, and over half ($n = 15, 62.50\%$) indicated their site provided mental health service with group therapy available (item 8). The majority of respondents ($n = 19, 79.17\%$) were at locations which provided integrated services with a mental health provider on staff; one respondent (4.17%) described their location as co-located with a non-staff provider on site; one respondent (4.17%) referred out to the community for mental health services; one respondent (4.17%) indicated their site did not provide any mental health services; and two respondents (8.33%) indicated "other" with one noting a behavioral health consultant was available one day per week or via telemedicine on the other days, and the other indicating they prescribe medication for some mental health concerns but refer out to the community for behavioral or talk therapy. Over half ($n = 14, 58.33\%$) of respondents to item 10 believed their site was suitable for hosting group therapy session, six (25.00%) did not believe their location was suitable for group, and four (16.67%) were unsure.

Item 11 explored possible limitations for hosting groups in more detail, and respondents indicated schedule flexibility ($n = 15, 62.50\%$) and a lack of providers with expertise in group therapy ($n = 11, 45.83\%$) to be the most common barriers to the success of group therapy in PC. Room size or availability ($n = 8, 33.33\%$) and patient interest ($n = 7, 29.17\%$) were also seen as frequent limitations. Three respondents (12.50%) reported it may be difficult to recruit patients for therapy groups, and three (12.50%) believed providers would not need group services. Two respondents (8.33%) noted their site was unable to bill for group services, and one respondent (4.17%) marked “other” and noted their staff members lacked an understanding of the benefits of group therapy. Four respondents (16.67%) believed none of these limitations applied to their site, and their location was suitable for group therapy.

Provider interest. Most respondents found peer support/learning ($n = 22, 88.00\%$) and comparison ($n = 20, 80.00\%$) to be an advantage of group therapy over one-on-one encounters on item 12. Over half ($n = 16, 64.00\%$) group is a more efficient use of provider time, and half ($n = 12, 48.00\%$) believed group therapy is more cost-effective. One respondent (4.00%) added group therapy may help to reduce stigma against receiving mental health services, and one respondent (4.00%) indicated they did not believe group was more advantageous than individual therapy.

Nearly all respondents ($n = 25, 96.15\%$) indicated they had referred a patient to a mental health provider, with only one (3.85%) reporting they had never referred a patient to a mental health provider on item 13. The source of those referrals was on-site for most respondents ($n = 18, 72.00\%$), with seven (28.00%) indicating the provider was off-site (item 14). On item 15, five respondents (20.00%) indicated they believe group therapy is very effective for treating mental illness, 18 (72.00%) believe group is somewhat effective, and two (8.00%) found group

to be neither effective nor ineffective. The majority of respondents ($n = 24, 92.31\%$) indicated they would be willing to refer a patient to group therapy, and two (7.69%) were unsure (item 16).

Population needs. On item 17 the majority of respondents felt patients with Depressive ($n = 18, 75.0\%$) and Substance Abuse ($n = 17, 70.83\%$) Disorders were most in need of care. Trauma or Stress Disorders ($n = 13, 54.17\%$), Anxiety ($n = 12, 50.00\%$), and Diet or Exercise ($n = 7, 29.17\%$) were also reported as most in need. Bipolar ($n = 4, 16.67\%$) and Somatoform ($n = 1, 4.17\%$) Disorders were also believed by some respondents to be highly in need of care.

About half of the respondents to item 18 reported Depressive ($n = 14, 58.33\%$), Trauma or Stress ($n = 14, 58.33\%$), Substance Abuse ($n = 13, 54.17\%$), and Anxiety ($n = 14, 58.33\%$) Disorders required the most attention. One third indicated Bipolar Disorders ($n = 8, 33.33\%$) required the most attention; several believed Somatoform Disorders ($n = 4, 16.67\%$) or Diet and Exercise ($n = 4, 16.67\%$) required the most attention; and only two (8.33%) found Eating Disorders to be the most demanding of the attention. One respondent (4.17%) chose “Other” on item 18, and noted they found Personality Disorders to require the most attention.

The majority of respondents reported Depressive ($n = 22, 91.67\%$) and Anxiety ($n = 18, 75.00\%$) Disorders were the most frequently seen disorders at their location (item 19). Approximately one half deemed Substance Abuse ($n = 12, 50.00\%$) and Trauma or Stress ($n = 10, 41.67\%$) Disorders to be the most frequently seen disorders. Diet and Exercise ($n = 6, 25.00\%$), Bipolar ($n = 3, 12.50\%$), and Somatoform ($n = 1, 4.17\%$) Disorders were also reported as frequently seen by respondents.

Recruitment techniques. The majority of respondents ($n = 17, 70.83\%$) indicated they had experience recruiting patients into an organized group in their years of practice (item 20). Approximately one third had no experience with recruitment ($n = 7, 29.17\%$). Item 21 asked

respondents about the techniques they had employed to recruit patients, and half had experience with provider referrals ($n = 13, 54.17\%$) or patient self-referrals ($n = 11, 45.83\%$). Front desk or staff recruitment ($n = 5, 20.83\%$), local referrals ($n = 5, 20.83\%$), and local media or flyers ($n = 5, 20.83\%$) were also techniques commonly used by respondents. Two respondents (8.33%) recruited patients through medical record searches or incentives ($n = 2, 8.33\%$). One respondent (4.17%) answered “other” on item 20 and noted they had used food incentives to recruit patients. One third of respondents ($n = 9, 37.50\%$) indicated they had no experience with recruiting.

Item 22 asked respondents what recruitment methods resulted in the greatest number of group participants. Provider referrals ($n = 9, 39.13\%$) and patient self-referrals ($n = 5, 21.74\%$) were found by these respondents to lead to greatest numbers. One respondent reported incentives ($n = 1, 4.35\%$), and four (17.39%) found “other” techniques to lead to greatest numbers. Other techniques listed were DCS, court, or community mental health provider referrals. Ten respondents (43.48%) had no recruitment experience.

Provider referrals ($n = 9, 37.50\%$) and patient self-referral ($n = 5, 20.83\%$) were the recruitment techniques believed by respondents to result in patients who were a good fit for their groups. Front desk or staff recruitment ($n = 2, 8.33\%$), media or flyer distribution ($n = 1, 4.17\%$), and incentives ($n = 1, 4.17\%$) were also listed as recruitment techniques leading to a good fit. One respondent (4.17%) noted an assessment of readiness for change, values, and motivation by a mental health provider also led to patients who were a good fit for their group. Ten respondents (41.67%) had no recruitment experience. When asked if they would like to be involved in the recruitment process (item 24), the majority ($n = 16, 69.57\%$) noted they would like to be involved, and a third ($n = 7, 30.43\%$) stated patients could or should be recruited to groups without them.

Free response. Item 25 asked respondents to share their thoughts about the role of mental health in PC. A total of 21 participants responded, and the majority ($n = 20$, 95.24%) indicated a favorable view of mental health within the PC setting. Respondents felt mental healthcare served an “integral,” “essential,” “important,” and “effective” role in PC; others noted it (mental healthcare) was a “routine component of care,” that it is “a huge need,” and that they were “firm believer[s] in integrated care.” Some respondents noted the complimentary roles of MH and PCP providers, stating they “cannot address medical issues while suffering from mental health” concerns, that MH providers “give PCPs more time to deal with physical issues,” and that PCPs can help bridge a gap to MH providers by building on established rapport. Other responses of note included one respondent’s belief that PC is the “de facto [sic] mental health provider” and another’s view that MH is “very much needed and very much not available.” One respondent (4.76%) was determined by the author to have a neutral view of MH in PC, as their response indicated PCPs cover most concerns but “some patients have needs greater than we can care for.” As this response did not provide a clear view in favor of or against MH in PC it was classified as neutral. No respondents provided unfavorable views on this item.

Item 26 asked respondents if they found it difficult to find patients adequate mental healthcare in their community. A total of 21 participants responded to this item, with the majority of them ($n = 14$, 66.67%) endorsing that it was difficult to find their patients adequate care. Frequent themes included a shortage of local providers, long wait times before patients are able to be seen, payment limitations (mental health providers only accepted select insurance plans or out-of-pocket payers), and transportation concerns. One respondent noted “Yes, there is poor access and limited capacity in specialty behavioral health. We must bring behavioral health to primary care...where [patients] show up.” Others wrote about the added burdens involved

with the treatment of substance use disorders, the barrier of stigma against mental health in their community, and inconsistencies in patient follow-up. One individual also noted their location did not have a “behavioral prescriber” on staff, and that not all of their PCPs were comfortable prescribing medications for all mental health concerns.

Three participants (14.29%) provided neutral responses; they found the availability of mental health resources to be adequate at their location, but certain circumstances (long wait lists, lack of providers with expertise in psychiatry or substance use) push those resources beyond their capacity. Four participants (19.05%) provided “did not endorse” responses, noting mental health resources at their locations were “done well” or “amazing.” Notably, three out of these four respondents indicated they were practicing at site with integrated care.

Item 27 asked participants about their experiences with recruiting patients to groups and any setbacks they encountered. A total of 21 participants responded to this item, with five (23.81%) reporting they had no recruitment experience, ten (47.62%) indicating endorsement (meaning they had encountered setbacks with recruiting), four (19.05%) noting no setbacks and an overall positive experience (“did not endorse”), and two (9.52%) neutral responses. Of the respondents indicating they had experienced some difficult experiences with group, the majority (eight of ten) noted patient interest played a significant role in the success of their group experiences. Some found patients were minimally interested in group services when it was initially offered to them as a treatment option. Other recruits’ interest waned further into group interventions, and would not show for appointments; for some survey respondents this “halted progression of treatment” for all members. Respondents also noted scheduling, transportation, and the daunting long-term time investment required were obstacles for recruiting patients.

Item 28 asked survey respondents if they would be interested in referring patients to therapy groups, and of the 21 whom responded the majority ($n = 20$, 95.24%) indicated a “favorable” opinion of groups and that they would be willing to refer to a therapy group. Most of the favorable responses referenced the importance of peer support or learning, and a few individuals also appreciated the multiple points of staff contact associated with group, or the efficiency of staff utilization. One respondent (4.77%) did not have a favorable view of group, noting they were not “an effective use of resources” or a “missed opportunity to deliver interventions.”

Phase III: Hypothesis Testing

To test the hypotheses proposed in this study the author used a series of 2x2 chi square tests of independence to examine the relationship between participants’ answers to relevant survey items. As noted above, participants were typically quite uniform in their responses, which resulted in heavily skewed contingency tables. Due to the small sample size obtained in this study, not all cells within 2x2 matrices met the chi square assumption of five responses per cell. Thus, the Fisher’s exact test computation was selected to approximate the chi-square distribution. Item numbers discussed reflect those of the survey as revised in Phase I (Appendix E). All analyses were run on IBM SPSS Statistics version 23 and Microsoft Excel. See Tables 6a – 6e for a summary of hypothesis testing results.

Table 6a

Hypotheses 1 χ^2 Contingency Table Results

		Q13: Have you referred a patient to a mental health provider...?		Fisher's exact test (1-sided)
		Yes	No	
Q12: What advantages do you believe group therapy may have...?	Answers A – E (Group has advantages)	23	1	.960
	Answer F (Group has no advantages)	1	0	
Q15: How effective do you believe group therapy is for treating pts w/ mental illness?	Answers A or B (Very/Somewhat Effective)	23	1	*
	Answers D or E (Somewhat/Very Ineffective)	0	0	
Q28: If group therapy services available, would you refer pts to therapy groups?	Free Response generally favorable	19	1	.952
	Free Response generally unfavorable	1	0	

**Assumption violated, no participants indicated group was ineffective. Unable to run chi square analysis.*

Table 6b

Hypotheses 2 χ^2 Contingency Table Results

		Q7: I have been practicing for __ years		Fisher's exact test (1-sided)
		Above mean yrs	Below mean yrs	
Q12: What advantages do you believe group therapy may have...?	Answers A – E (Group has advantages)	8	15	.375
	Answer F (Group has no advantages)	1	0	
Q13: Have you referred a patient to a mental health provider...?	Yes	9	14	.625
	No	0	1	
Q15: How effective do you believe group therapy is for treating pts w/ mental illness?	Answers A or B (Very/Somewhat Effective)	9	14	*
	Answers D or E (Somewhat/Very Ineffective)	0	0	

Q16: Would you be willing to refer a patient to a therapy group?	Yes	9	14	.625
	No	0	1	
Q28: If group therapy services available, would you refer pts to therapy groups?	Free Response generally favorable	5	14	.300
	Free Response generally unfavorable	1	0	
*Assumption violated, no participants indicated group was ineffective. Unable to run chi square analysis.				

Table 6c
Hypotheses 3 χ^2 Contingency Table Results

		Q5: How would you describe your location?		Fisher's exact test (1-sided)
		Urban or Suburban	Rural	
Q12: What advantages do you believe group therapy may have...?	Answers A – E (Group has advantages)	21	3	.880
	Answer F (Group has no advantages)	1	0	
Q13: Have you referred a patient to a mental health provider...?	Yes	22	3	.885
	No	1	0	
Q15: How effective do you believe group therapy is for treating pts w/ mental illness?	Answers A or B (Very/Somewhat Effective)	20	3	*
	Answers D or E (Somewhat/Very Ineffective)	0	0	
Q16: Would you be willing to refer a patient to a therapy group?	Yes	22	2	.222
	No	1	1	
Q28: If group therapy services available, would you refer pts to therapy groups?	Free Response generally favorable	17	3	.857
	Free Response generally unfavorable	1	1	
*Assumption violated, no participants indicated group was ineffective. Unable to run chi square analysis.				

Table 6d

Hypotheses 4 χ^2 Contingency Table Results

		Q8: Does your site provide mental health services?		Fisher's exact test (1-sided)
		Answer A (No)	Answers B or C (Yes)	
Q12: What advantages do you believe group therapy may have...?	Answers A – E (Group has advantages)	2	21	.917
	Answer F (Group has no advantages)	0	1	
Q13: Have you referred a patient to a mental health provider...?	Yes	2	21	.917
	No	0	1	
Q15: How effective do you believe group therapy is for treating pts w/ mental illness?	Answers A or B (Very/Somewhat Effective)	1	20	*
	Answers D or E (Somewhat/Very Ineffective)	0	0	
Q16: Would you be willing to refer a patient to a therapy group?	Yes	2	21	.917
	No	0	1	
Q28: If group therapy services available, would you refer pts to therapy groups?	Free Response generally favorable	2	18	.905
	Free Response generally unfavorable	0	1	

**Assumption violated, no participants indicated group was ineffective. Unable to run chi square analysis.*

Table 6e

Hypotheses 5 χ^2 Contingency Table Results

		Q6 : Are you a...		Fisher's exact test (1-sided)
		Answer A (Physician)	Answers B – H (Non-Phys.)	
Q12: What advantages do you believe group therapy may have...?	Answers A – E (Group has advantages)	7	17	.720
	Answer F (Group has no advantages)	0	1	

Q13: Have you referred a patient to a mental health provider...?	Yes	7	18	.731
	No	0	1	
Q15: How effective do you believe group therapy is for treating pts w/ mental illness?	Answers A or B (Very/Somewhat Effective)	6	17	*
	Answers D or E (Somewhat/Very Ineffective)	0	0	
Q16: Would you be willing to refer a patient to a therapy group?	Yes	6	18	.474
	No	1	1	
Q28: If group therapy services available, would you refer pts to therapy groups?	Free Response generally favorable	5	15	.762
	Free Response generally unfavorable	0	1	
*Assumption violated, no participants indicated group was ineffective. Unable to run chi square analysis.				

Hypothesis 1: Providers who have not referred patients to mental health services will perceive a lower need or value for group therapy in primary care. To test H1 the author proposed a series of 2x2 chi square tests of independence to examine the relationship between participants' answers to survey items 12, 15, 28, 34, and 35, using item 13 as a constant of comparison. Fisher's exact test found no significant relationship between providers' history of referring patients for mental health services (item 13) and their beliefs about the advantages of group therapy (item 12) ($p = .960$). A 2x2 chi square analysis could not be completed between items 13 and 15 (the effectiveness of group therapy on treating mental illness), as no participants reported group was somewhat or very ineffective. Fisher's exact test found no significant relationship between providers' history of referring patients for mental health services (item 13) and their willingness to refer to a therapy group (item 28) ($p = .952$). Items 34 and 35 were removed from the survey in Phase I of this study, in accordance with experts' feedback, and thus

were not compared to item 13. The author failed to reject the null hypothesis for H1, providers who have not referred patients to mental health services did not perceive a lower need or value for group therapy in PC within this sample.

Hypothesis 2: Providers with more work experience will be more supportive of group therapy in primary care. To test H2 the author proposed a series of 2x2 chi square tests of independence to examine the relationship between participants' answers to survey items 12, 13, 15, 16, 28, 34, and 35, using item 7 as a constant of comparison. Fisher's exact test found no significant relationship between providers' years of practice above or below the mean (item 7) and their beliefs about the advantages of group therapy (item 12) ($p = .375$). Fisher's exact test found no significant relationship between providers' years of practice (item 7) and their history of referring a patient to a mental health provider (item 13) ($p = .625$). A 2x2 chi square analysis could not be completed between items 7 and 15 (the effectiveness of group therapy on treating mental illness), as no participants reported group was somewhat or very ineffective. Fisher's exact test found no significant relationship between providers' years of practice (item 7) and their willingness to refer patients to therapy groups (item 16) ($p = .625$). Fisher's exact test found no significant relationship between providers' years of practice (item 7) and their willingness to refer to a therapy group (item 28) ($p = .300$). Items 34 and 35 were removed from the survey in Phase I of this study, in accordance with experts' feedback, and thus were not compared to item 7. The author failed to reject the null hypothesis for H2; providers with more work experience were not more supportive of group therapy in PC.

Hypothesis 3: Rural providers will be more supportive of group therapy in primary care, compared to urban and suburban providers. To test H3 the author proposed a series of 2x2 chi square tests of independence to examine the relationship between participants' answers

to survey items 12, 13, 15, 16, 28, 34, and 35, using item 5 as a constant of comparison. Fisher's exact test found no significant relationship between providers' location (item 5) and their beliefs about the advantages of group therapy (item 12) ($p = .880$). Fisher's exact test found no significant relationship between providers' location (item 5) and their history of referring a patient to a mental health provider (item 13) ($p = .885$). A 2x2 chi square analysis could not be completed between items 5 and 15 (the effectiveness of group therapy on treating mental illness), as no participants reported group was somewhat or very ineffective. Fisher's exact test found no significant relationship between providers' location (item 5) and their willingness to refer patients to therapy groups (item 16) ($p = .222$). Fisher's exact test found no significant relationship between providers' location (item 5) and their willingness to refer to a therapy group (item 28), ($p = .857$). Items 34 and 35 were removed from the survey in Phase I of this study, in accordance with experts' feedback, and thus were not compared to item 5. The author failed to reject the null hypothesis for H3, rural providers were not more supportive of group therapy in PC.

Hypothesis 4: Providers at sites which currently provide mental health services will be more supportive of group therapy in primary care, compared with providers at sites not currently providing mental health services. To test Hypothesis 4 the author proposed a series of 2x2 chi square tests of independence to examine the relationship between participants' answers to survey items 12, 13, 15, 16, 28, 34, and 35, using item 8 as a constant of comparison. Fisher's exact test found no significant relationship between providers at sites providing mental health services (item 8) and their beliefs about the advantages of group therapy (item 12) ($p = .917$). Fisher's exact test found no significant relationship between providers at sites providing mental health services (item 8) and their history of referring a patient to a mental health provider

(item 13), ($p = .917$). A 2x2 chi square analysis could not be completed between items 8 and 15 (the effectiveness of group therapy on treating mental illness), as no participants reported group was somewhat or very ineffective. Fisher's exact test found no significant relationship between providers at sites providing mental health services (item 8) and their willingness to refer patients to therapy groups (item 16) ($p = .917$). Fisher's exact test found no significant relationship between providers at sites providing mental health services (item 8) and their willingness to refer to a therapy group (item 28) ($p = .905$). Items 34 and 35 were removed from the survey in Phase I of this study, in accordance with experts' feedback, and thus were not compared to item 8. The author failed to reject the null hypothesis for H4, providers at sites which providing mental health services were not more supportive of group therapy in PC.

Hypothesis 5: Physicians (i.e., M.D. or D.O.s) will hold a more favorable view toward group therapy than midlevel providers. To test H5 the author proposed a series of 2x2 chi square tests of independence to examine the relationship between participants' answers to survey items 12, 13, 15, 16, 28, 34, and 35, using item 6 as a constant of comparison. Fisher's exact test found no significant relationship between participants' job title (item 6) and their beliefs about the advantages of group therapy (item 12) ($p = .720$). Fisher's exact test found no significant relationship between participants' job title (item 6) and their history of referring a patient to a mental health provider (item 13), ($p = .731$). A 2x2 chi square analysis could not be completed between items 6 and 15 (the effectiveness of group therapy on treating mental illness), as no participants reported group was somewhat or very ineffective. Fisher's exact test found no significant relationship between participants' job title (item 6) and their willingness to refer patients to therapy groups (item 16) ($p = .474$). Fisher's exact test found no significant relationship between participants' job title (item 6) and their willingness to refer to a therapy

group (item 28) ($p = .762$). Items 34 and 35 were removed from the survey in Phase I of this study, in accordance with experts' feedback, and thus were not compared to item 6. The author failed to reject the null hypothesis for H5, physicians did not hold a more favorable view toward group therapy than midlevel providers.

CHAPTER 4

DISCUSSION

The aim of this exploratory study was to utilize a needs assessment questionnaire developed by the author to evaluate potential obstacles mental health professionals may face when attempting to begin or sustain group interventions within PC clinics in the Appalachian region. Group practitioners face many obstacles in the PC setting, including site limitations, existing provider interests and beliefs, the needs of the population served, and recruiting difficulties which limit the success of groups in and out of PC. Five hypotheses were developed to explore the relationships between these factors, in hopes of better informing mental health providers who hope to practice group therapy in Appalachian PC settings. Like many rural health (Dibartolo & McCrone, 2003; Lim, Follansbee-Junger, Crawford, & Janicke, 2011; Pribulick, Williams, & Fahs, 2010) and primary care (Bower et al., 2007; Bower et al., 2009) researchers have found, recruitment for this study was problematic and the sample obtained in this study was small. Responses also tended to be clustered in the same answers for many items. This led to assumption violations for chi square testing and the substituted use of Fisher's Exact Test. No proposed hypotheses were supported, and limits on statistical analyses led to limits in conclusions. Nonetheless, the results of this survey provided some interesting data about the knowledge of and barriers to group mental health care in Appalachian PC settings.

The majority of respondents indicated their site provided group mental health services, however only one of four respondents in rural settings were practicing at sites with group interventions. This discrepancy suggests that although group interventions are not uncommon in PC locations, rural sites may be less likely or able to provide group interventions in spite of being underserved with regard to psychological resources (Correll et al., 2011; Hendryx, 2008).

Most participants indicated their site was suitable for the provision of group services, however this perception may not align with the actual circumstances at their location. Only four respondents indicated their site had no limitations when presented with a list of potential barriers, yet 15 noted their location provided group mental health services. This author made two possible conclusions from this discrepancy. Many PC sites may be practicing group therapy and not adequately equipped to do so; or, sites may be overcoming significant obstacles in the provision of group therapy.

Participants indicated that schedule flexibility and provider expertise were the most common limitations for the success of group interventions at their site. Greenfield and colleagues (2014) found scheduling difficulties to be a substantial hurdle when treating substance use at community hospitals or outpatient facilities; however Bower and colleagues' (2007; 2009) findings suggested recruitment would be a much larger issue for groups in PC. Participants in this sample indicated recruiting difficulties are only the fifth most-concerning limitation for groups. The results of this survey suggest many PCPs believe they have a sufficient patient pool from which they may initially recruit members; however the author would argue they may run into problems maintaining group membership. This was generally supported by free responses, as one respondent aptly summarized: "Often initial interest is not lacking, it's the follow through. High levels of drop out in the groups." PCPs may not see the maintenance of group membership as part of the recruiting process, which is an area of peer education in which group providers may intervene. Another possible solution for maintaining group numbers is offering open-enrollment groups rather than closed groups with a set curriculum (Greenfield et al., 2014). Provider expertise is a limitation which was not initially considered by this author, however the

participants in this studied agreed with the experts in Phase I – finding mental health providers with appropriate training and expertise in group interventions may be a challenge in Appalachia.

Interestingly, billing difficulties were not endorsed as a limitation in item 11 by many providers, but payment limitations was a frequent theme of free responses. Other themes from free responses items included provider shortages in respondents' location, long wait times for patients to be seen by mental healthcare providers, and transportation issues. Several respondents also noted transportation, financial, or food/nutrition deficits with which their patients may struggle, which suggests socioeconomic barriers are an ongoing barrier for treatment in the Appalachian region. While the availability of providers and transportation may be out of group practitioners' control, billing practices and wait times were seen as important by this population sample and may be within their scope of control. However, minimizing the time between when participants are first recruited and when the group starts may be a small but important improvement in the delivery of mental health services by Appalachian PCPs.

Time- and cost-efficiency are two of the most commonly used arguments in favor of group treatments (Bouvard & Kaiser, 2006; Manicavasgar et al., 2011; Wetherell et al., 2011), but more participants in this sample indicated peer support, learning, or comparison were important factors than those who endorsed time or financial benefits. This finding is an important reflection of “knowing your audience” when mental health providers advocate for group services in PC. Time- and cost-savings may be attractive to office managers or corporate executives, yet PCPs may be more enticed by the peer factors of group interventions. Noting the benefits of peer support in therapy groups (Anderson & Rees, 2007; Bouvard & Kaiser, 2006; Esbitt, Batchelder, Tanenbaum, Shreck, & Gonzalez, 2015; Schmalisch, Bratiotis, & Muroff, 2010; Wetherell et al., 2011; Yalom & Leszcz, 2005) may be critical for mental health providers hoping to implement

treatment groups given the mixed findings on cost-efficiency (Oei & Dingle, 2008; Stevenson et al., 2010; Tucker & Oei, 2007; Whitfield, 2010).

Respondents to this survey consistently endorsed depressive, anxiety, substance, and trauma or stress disorders as the top four mental health concerns at their sites. Depressive disorders were ranked first by these participants as the most frequently seen, most in need of care, and requiring the most attention in their practice. Anxiety disorders were the second most frequently seen disorder for this sample. Depressive and anxiety disorders are commonly reported as the most prevalent in PC settings (Kroenke et al., 2007; Merrill & Duncan, 2014; Sansone & Sansone, 2010), however national rates of anxiety disorders in PC are typically higher than the rates of depressive disorders (Cerimele et al., 2014; Stein, 2003). While the sample obtained in this study is far too small to conclude rates of depression in Appalachian PC patients are higher than the rate of anxiety, the data may suggest some discrepancies between rates of mental health disorders and the demand of those disorders on providers' time and attention.

Depression was rated as the most frequently seen mental health disorder, followed by anxiety, substance use, and finally trauma or stress disorders. While depressive disorders were also rated as most in need of care and requiring the most attention, anxiety was only fourth on each of those items. Providers indicated substance use disorders were the second "most in need of care" and trauma or stress disorders third; trauma or stress disorders were second on their list of "requiring the most attention" and substance use disorders were third. When considered together the results of these survey items indicate depressive disorders are frequently seen in Appalachian PC settings, need significant levels of care, and demand high levels of attention from PCPs. This is understandable, as the rate of relapses for symptoms of depression are high

(Ali et al., 2017; Kearns et al., 2016; Kuyken et al., 2008; Monroe & Karness, 2012) and PCPs are likely to see patients for a long period of time leading to a higher chance of treating relapse events. Mental health providers aiming for much-needed group interventions would be wise to focus available resources on psychotherapy groups for depressive disorders. Although anxiety disorders were also frequently seen by participants in this study, respondents did not feel these disorders demanded significant time or attention relative to other disorders – perhaps reflecting a belief that anxiety disorders are effectively treated by PCPs. Although this assertion is not well-supported by the literature and in need of further investigation, one study found that over half of PCPs believe providers “too often treat normal worry and stress as if they were a medical illness” (Lawrence, Rasinski, Yoon, & Curlin, 2015, p. 122). The results of the small sample in this author’s study suggest group practitioners in Appalachian PC settings may alleviate more systemic burdens by focusing their attention on substance or trauma disorders than anxiety disorders, but group practitioners should closely monitor costs as prior research has not shown group treatments for anxiety to be particularly cost-effective (Tucker & Oei, 2007; Whitfield, 2010).

Most participants stated they had some level of experience with recruiting patients into an organized group. Provider referrals or patient self-referrals were the most common techniques utilized among these participants, perhaps explaining why respondents felt these two methods resulted in the greatest numbers of participants and also in patients who were a good fit for the group. Receiving referrals from healthcare providers has been previously shown to be an effective recruitment technique (Brownstone et al., 2012; Greenfield et al., 2014), but little is known about the effectiveness of recruiting patients through self-referral. This follows prior findings that commonly-employed group recruitment techniques are not often derived from

theory (Bower et al., 2009). Front desk or staff referrals, media/flyer distribution, and receiving referrals from local providers were also common recruitment techniques, but were not typically reported as leading to good numbers or fit. Medical record searches for qualified group members was found to be a commonly employed (Randall, 2015), and effective (Cramer et al., 2011; Wetherell et al., 2011) tactic, but was not common or seen as effective in this sample.

Nearly all respondents provided a favorable response when asked if they would be interested in referring to therapy groups. Most indicated they would like to be involved with the recruitment of their patients, however almost a third preferred no involvement. Thus, the providers in this sample support the role of not only group therapy but mental health as a whole in the PC setting. However, this discrepancy highlights a possible avenue for intervention by group mental health providers; provider referrals have been found to be one of the most effective means of recruiting patients to therapy groups (Cramer et al., 2011; Wetherell et al., 2011), and a provider's recommendation to patients that they participate is important for patient buy-in (McCracken et al., 2014). PCPs may not be aware of the importance their involvement holds with patients in groups. Educating providers about the importance of their involvement may lead to greater initial investment by the group member, and could be considered an element of appropriate group member preparation. Potential group members should be prepared by informing them of the rules and expectations for participation; the general purpose, format, and structure of the group; allowing group members to work through any potential resistances or concerns; and establishing specific goals for each group member (Turner, 2018; Yalom & Leszcz, 2005; Yalom V. J., 2013). One participant noted part of their preparation included discussing group as an aspect of their treatment plan: "I have overcome opposition to group recruiting by managing up benefits of group and insisting it is very important and a part of their

proposed treatment plan and treat it like a verbal contract.” The approach by this participant seems similar to the “opt-out” approach discussed earlier, which has been found to be an effective means of recruitment (Woodford et al., 2011). Although opt-out recruiting was not studied in this survey it may warrant further investigation for therapy groups in PC.

Limitations and Future Directions

This study is like many others in that one of the primary limitations was the recruitment of participants. The small sample size and uniformity of responses (e.g., only one participant indicated group has no advantages on item 12, and only one participant had not referred a patient for mental health services on item 13) did not allow for the hypotheses to be tested as proposed. Expected frequencies in each cell should be greater than five for at least 80% of cells in Chi-square analyses, and due to the skew of responses in this sample that condition was not met. Fisher’s exact test was used to account for this limitation, however the uniformity of responses was too great and no significant relationships were found. Future studies may want to modify this survey to Likert scale responses to allow for alternative statistical analyses. The skew of responses may also reflect a bias in this sample – PCPs who are pro-mental health may have self-selected into this survey.

Participants were also largely homogenous; they were majority white (96.30%) and female (92.59%). Although the ethnic or racial breakdown in this study is similar to census data in Tennessee indicating 78.7% of the state population is white (United States Census Bureau, 2016), this sample may not accurately reflect the population of men or women in PC, as women have been found to be a minority population among Tennessee physicians (Association of American Medical Colleges, 2017). Thus, the generalizability of any conclusions from this survey are limited since this sample may not be an appropriate representation of PCP responses in Appalachia or the greater United States.

The sample also did not effectively capture the “target” participants as intended; the author intended rural PCPs in Appalachia to be the primary sample, and although two-thirds identified themselves as healthcare providers, nearly one quarter identified themselves as a mental health specialist – the intended audience for this project. While mental health specialists were not the intended target for this sample, their responses were included in the results due to the perspective provided. For example, they too identified recruiting as a substantial barrier for groups in PC and were able to specify the problem as retention rather than initial recruitment. Nonetheless, any conclusions from this study will have limited implications for rural Appalachian PC settings; rural providers were not well-represented in this survey, as most participants indicated they were located in urban or suburban practices. Thus, this author’s findings about PCP beliefs of group therapy in rural Appalachia are limited and in need of further exploration. However several findings (e.g., top presenting concerns and recruiting techniques) were consistent with the literature and suggests there may be some validity in these results in spite of the skewed responses and non-representative sample.

Difficulties with recruiting rural PCPs to a research study is likely not a surprising limitation for many readers, however one particular limitation for recruiting in this study may come as a surprise – malware. Potential Phase II participants were recruited from April to October, 2017, and several computer vulnerabilities were widely publicized in that time. The “WannaCry” ransomware was globally distributed in May, 2017 (Norton, 2017) and computer users were cautioned to be wary of unsolicited emails. This was followed by “ExPetr” ransomware in June (Kaspersky, 2017), which impacted several major healthcare organizations. These cyberattacks reinforced the author’s decision to utilize PC practice managers as an initial point of contact, but may have made potential participants reluctant to open a hyperlink within an

email, limiting the sample size. Another technical limitation was several office managers' admission that their providers do not check email, and would be more receptive to a paper fax placed in their mailbox. This placed an added barrier between invitation and participation. Future rural PC researchers may want to consider paper-based data collections methods or ensure computer-based surveys are distributed from a source trusted by the target population.

In spite of these limitations, the results from this study offer a wide range of potential topics for exploration in future research. Reported rates of PC psychopathology in this study should be evaluated with extreme caution, however, the results do suggest there is more work to be done in distinguishing between disorders which are frequently seen in Appalachian PC and those which require substantial time and attention. This would inform group providers about how to better manage their time and resources to meet the needs of both patients and PCPs. The long-term retention of group members was also a concern for respondents, and group practitioners may find value in educating providers about group dynamics, appropriate preparation procedures, and the importance of their ongoing involvement to increase patient buy-in.

Respondents also noted the importance of systemic and patient limitations for group, such as schedule flexibility and patient access. Creative solutions to schedule flexibility for both providers and patients are beyond the expertise of this author and likely highly variable from one site to the next; but this topic is a much-needed area of future research. Lastly, continuing to identify efficacious group interventions for PC settings (e.g., standardized or manualized treatments), as well as the impact of peer factors on patient outcomes (which was particularly important to the respondents in this sample) is in need of further exploration.

Conclusions

Conclusions from this study should be considered with caution due to the small sample size and statistical limitations. However the results may suggest some areas for further

consideration in research and practice. Many PC locations appear to be utilizing group mental health interventions to meet the needs of their patients, though there is still significant room for growth and it is possible that more sites are delivering group services without adequate resources. Finding providers with appropriate training and expertise is a concern for PCPs in Appalachia, and although billing limitations may not be as prevalent as the research suggests, schedule flexibility and the availability of services certainly is.

Group practitioners should appropriately assess their environment, provide education where needed, and be mindful of their audience when advocating for group services. Time-efficiency and cost savings are arguments frequently made in favor of group therapy, but PCPs may be more receptive to emphasizing peer support factors. Providers in this sample found depressive disorders to be a significant area of need, and group therapists would be wise to focus their efforts on this population. However, anxiety disorders may not be as much of a burden as the literature suggests; substance and trauma or stress disorders were reported to be much more demanding of PCP resources.

Providers in this sample found provider referrals and patient-self referrals to be a good source of group members, but member retention is a concern. Most providers held favorable views of mental health and group therapy in PC, but some may not realize the importance of their involvement. Systemic interventions and appropriate group preparation may improve these difficulties.

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APPENDICES

Appendix A. Group Therapy Needs Assessment Questionnaire

Group Therapy Needs Assessment Questionnaire for Primary Care Providers

Demographic Information

1. What is your age?
2. How would you identify your gender?
 - a. Male
 - b. Female
 - c. Transgender
 - d. Other (Please Specify)
3. How would you describe your ethnicity?
 - a. White
 - b. Hispanic or Latino
 - c. Black or African American
 - d. Native American or American Indian
 - e. Asian/Pacific Islander
 - f. Other (Please Specify)
4. Where is your clinic located?
 - a. Northeast United States
 - b. Southern United States
 - c. Midwest United States
 - d. Western United States
 - e. Other (Alaska, Hawaii, Puerto Rico, etc., or outside of the U.S.)
5. How would you describe your location?
 - a. Urban (Population 50,000+)
 - b. Suburban or Urban Cluster (Population 2,500 – 49,999)
 - c. Rural (Population \leq 2,499)
6. Are you a...(check all that apply)
 - a. Physician (i.e., M.D. or D.O.)
 - b. Nurse/Nurse Practitioner
 - c. Physician's Assistant
 - d. Specialist (please explain)
 - e. Administrator/Staff
 - f. Other
7. What is your primary role/duty at work?
 - a. Physician (i.e., M.D. or D.O.)
 - b. Nurse/Nurse Practitioner
 - c. Physician's Assistant
 - d. Specialist (please explain)
 - e. Administrator/Staff
 - f. Other

8. What is your secondary role/duty at work?
 - a. Physician (i.e., M.D. or D.O.)
 - b. Nurse/Nurse Practitioner
 - c. Physician's Assistant
 - d. Specialist (please explain)
 - e. Administrator/Staff
 - f. Other
 - g. I do not have any of these secondary responsibilities
9. I have been practicing for...
 - a. ___ years

Site Suitability

10. Does your site currently provide mental health services? If so, are any therapy sessions in a group format?
 - a. We do not provide mental health services
 - b. We provide mental health services, but DO NOT host group therapy sessions
 - c. We provide mental health services, and DO host some group therapy sessions
11. Does your site have suitable/sufficient resources to host group therapy sessions?
 - a. Yes
 - b. No
 - c. Unsure
12. Which of the following do you believe might limit your site's ability to host group therapy sessions successfully? (Check all that apply)
 - a. How patients were/are recruited for groups
 - b. Limited schedule flexibility
 - c. Lack of adequately-sized rooms available (e.g., a room that could hold 10-12 patients and at least one provider)
 - d. Unable to bill for group services
 - e. Lack of demand or interest from patients
 - f. Lack of physician or practitioner need for such services
 - g. None of the above – my site is suitable for group therapy
 - h. Other (Please specify)

Provider Interest

13. What advantages do you believe group therapy may have over traditional one-on-one encounters? (Check all that apply)
 - a. Peer support
 - b. Peer comparison (seeing others with worse conditions, better coping skills, etc.)
 - c. More efficient use of provider time
 - d. More cost-effective than individual treatment
 - e. Other (Please specify)
 - f. I do not believe group therapy is any more advantageous than individual therapy
14. Have you ever referred a patient to a mental health provider for non-crisis purposes?
 - a. Yes
 - b. No

15. If so, was that provider...
 - a. On-Site
 - b. Off-Site
16. Have other providers in your practice referred patients to a mental health provider for non-crisis purposes?
 - a. Yes
 - b. No
 - c. Not Sure
17. How effective do you believe group therapy is for treating patients with mental illness/psychopathology?
 - a. Very Effective
 - b. Somewhat Effective
 - c. Neither Effective nor Ineffective
 - d. Somewhat Ineffective
 - e. Very Ineffective
18. Would you be willing to refer a patient to a therapy group?
 - a. Yes
 - b. No
 - c. Not Sure

Population Needs

19. What are the top three mental health disorders you believe are *most in need* of care at your site?
 - a. Anxiety Disorders
 - b. Bipolar and Related Disorders
 - c. Depressive Disorders
 - d. Eating Disorders
 - e. Somatoform Disorders
 - f. Substance Abuse Disorders
 - g. Trauma or Stressor-Related Disorders
 - h. Other (Please specify)
20. What are the top three mental health disorders you believe *require the most attention* at your site?
 - a. Anxiety Disorders
 - b. Bipolar and Related Disorders
 - c. Depressive Disorders
 - d. Eating Disorders
 - e. Somatoform Disorders
 - f. Substance Abuse Disorders
 - g. Trauma or Stressor-Related Disorders
 - h. Other (Please specify)

21. What are the top three mental health disorders you *believe you see most frequently* (*greatest numbers*) at your site?
- Anxiety Disorders
 - Bipolar and Related Disorders
 - Depressive Disorders
 - Eating Disorders
 - Somatoform Disorders
 - Substance Abuse Disorders
 - Trauma or Stressor-Related Disorders
 - Other (Please specify)

Recruitment Techniques

22. Have you ever attempted to recruit patients into any sort of organized group (i.e., a research study, therapy, peer support, didactic, etc.)?
- Yes
 - No
23. If you have attempted to recruit patients into groups, what techniques did you employ? (Check all that apply)
- Medical referral of specific patients
 - Medical record search for qualifying patients
 - Front desk or other clinic staff (non-providers) recruited patients
 - Patient self-referral
 - Solicitation of other local healthcare providers
 - Local media or flyer distribution
 - Internet outreach
 - Monetary or other incentives
 - Other (Please specify)
 - I have not attempted to recruit patients
24. When recruiting patients, which method resulted in the *greatest total number* of potential recruits?
- Medical referral of specific patients
 - Medical record search for qualifying patients
 - Front desk or other clinic staff (non-providers) recruited patients
 - Patient self-referral
 - Solicitation of other local healthcare providers
 - Local media or flyer distribution
 - Internet outreach
 - Monetary or other incentives
 - Other (Please specify)
 - I have not attempted to recruit patients

25. When recruiting patients, which method resulted in the greatest number of patients *who were a good fit* for your group or sample?
- Medical referral of specific patients
 - Medical record search for qualifying patients
 - Front desk or other clinic staff (non-providers) recruited patients
 - Patient self-referral
 - Solicitation of other local healthcare providers
 - Local media or flyer distribution
 - Internet outreach
 - Monetary or other incentives
 - Other (Please specify)
 - I have not attempted to recruit patients
26. Have you ever heard of “opt-out recruiting” or “assertive recruitment”?
- Yes
 - No
27. To the best of my understanding, “opt-out recruiting” or “assertive recruiting” refers to...
- Providing patients the choice to opt out of being contacted for any research or therapy groups when they fill out their initial paperwork
 - Contacting potential participants with invitations and requiring them to specify if they do not wish to receive any more information
 - Telling patients they will comply with a referral or be indefinitely discharged from the clinic
 - Using assertive techniques (i.e., finding the “win-win”, identifying patients’ and providers’ needs, using “I statements”, etc.) to convince a patient that they should participate in a group
28. If one of your patients was qualified for a therapy group would you prefer to be involved in their recruitment process?
- Yes, I would like to be involved
 - No, they can/should be recruited to the group without my facilitation
29. If you engage in scholarly work, such as publishing scientific findings, do you typically report the specifics of how you recruited patients into your sample?
- Yes
 - No
 - I do not publish academic articles

Free Response

30. What are your thoughts about the role of mental health in the primary care setting?
- [Free Response]
 - I do not have any opinions I would like to share (Skip to next question)
31. Do you find it difficult to find your patients adequate care for their mental health needs? Why or why not?
- [Free Response]
 - I do not have any opinions I would like to share (Skip to next question)

32. If you have ever recruited patients to a group (i.e., a research study, therapy, peer support, didactic, etc.), what was that experience like? Did you encounter setbacks? Were you able to overcome any setbacks, and if so, how?
- [Free Response]
 - I do not have any opinions I would like to share (Skip to next question)
33. If group therapy services are/were available, would you be interested in referring patients to therapy groups focusing on mental health? Why or why not?
- [Free Response]
 - I do not have any opinions I would like to share (Skip to next question)
34. What is your opinion of group therapy for the treatment of mental illness/psychopathology? Do you believe it is effective or worthwhile?
- [Free Response]
 - I do not have any opinions I would like to share (Skip to next question)
35. What is your opinion of group modalities of care (mental health, physical health, or otherwise) in the primary care setting? Do you see a deviation from traditional one-on-one interventions as a feasible undertaking? Why or why not?
- [Free Response]
 - I do not have any opinions I would like to share (Skip to next question)

Appendix B. Email to Experts for Content Validation

Dear _____,

I am a graduate student in the Department of Clinical Psychology at East Tennessee State University. I am currently working on my dissertation which is examining the readiness of primary care sites to implement mental health treatment groups. This questionnaire covers several areas of importance as identified in a literature review:

Site suitability: Adequate space, schedule flexibility, etc.

Provider interest: Assesses a respondent's opinion about group therapy, history of referrals, and willingness to refer patients to groups.

Population needs: Examines which mental health disorders are in the most need of services, require the most attention, most frequently seen, and percentage of patients seen with psychiatric concerns. This may aid potential mental health professionals in identifying what type of group would be most appropriate for a given site.

Recruitment techniques: Evaluates the respondent's history of recruiting patients to groups (research, therapy, peer support, etc.) in primary care. Recruiting is an under-studied area in psychology, and a common barrier to starting therapy groups.

Free response: Respondents provide their opinions about the role of mental health in primary care, adequacy of mental health care in their area, experience with recruiting patients, and thoughts about group therapy.

More specifically, what I am hoping to do with my study is: 1) To validate a needs assessment questionnaire aimed at facilitating the implementation of therapy groups; 2) To evaluate potential obstacles mental health professionals may face when attempting to begin or sustain group interventions in primary care clinics in the Appalachian region; 3) To explore providers' beliefs and opinions about group therapy; 4) To evaluate which patient populations in the Appalachian region may benefit most from group mental health interventions; 5) To explore an under-reported topic of primary care providers' experiences with recruiting patients into treatment groups; and 6) To evaluate qualitative responses to expand upon quantitative responses, and elucidate other related avenues for future exploration.

The results of this study will provide clinicians and researchers, especially in the Appalachian region, with information about possible obstacles and areas of need for implementing group mental health interventions in primary care. Expansion of group treatments could drastically improve the availability of mental health services in Appalachia, a region that is traditionally underserved in psychological care, by serving more patients with fewer providers. Finally, this study could inform future research by examining Appalachian primary care providers' thoughts about integrated care, recruiting difficulties, and group therapy.

Before I distribute the survey to hundreds of primary care providers across the Appalachian region, I hope to have content and clinical experts in the field read over and comment on the clarity and relevance of its items. As such, I am contacting you to ask if you would be willing to assist me with this project.

If you are interested in participating in this project you may click on, or paste the following link into your internet browser:

<https://www.surveymonkey.com/>

Thank you for your time and your interest in participating in this important project!

Sincerely,

Philip Randall, M.A.
Doctoral Candidate
Department of Clinical Psychology
East Tennessee State University
Johnson City, TN

Appendix C. Feedback Questions for Content Validation

1. How relevant do you feel the above item is to the intended subject of this study?

1 not relevant 2 somewhat relevant 3 fairly relevant 4 very relevant

If you feel that the item is in need of revision to enhance relevance, please specify how you suggest it should be revised:

2. How clear do you feel that the above item is?

1 not clear 2 somewhat clear 3 fairly clear 4 very clear

If you feel that the item is in need of revision to enhance clarity, please specify how you suggest it should be revised:

Appendix D. Email Invitation Sent to Primary Care Providers

Dear Primary Care Provider,

My name is Philip Randall, and I am a graduate student at East Tennessee State University, studying the role of group therapy in primary care settings. I am asking for your help to better understand how mental healthcare providers can effectively adapt group interventions to a setting like yours.

You may access the 35-item questionnaire online at:

www.surveymonkey.com

The survey should take approximately 10-20 minutes to complete.

I would also appreciate if you forwarded this email to other healthcare providers at your office (e.g., physicians, nurses, nurse practitioners, physician assistants, or specialists) who many not have received this email, and invite them to participate.

If you have any questions, comments, or concerns, please contact me.

Thank you for your time and your interest in participating in this important project!

Sincerely,

Philip Randall, M.A.
Doctoral Candidate
Department of Clinical Psychology
East Tennessee State University
Johnson City, TN

Appendix E. Revised Needs Assessment Questionnaire

Group Therapy Needs Assessment Questionnaire for Primary Care Providers

Demographic Information

1. What is your age?
2. How would you identify your gender?
 - a. Male
 - b. Female
 - c. Transgender
 - d. Genderqueer
 - e. Non-binary
 - f. Other (Please Specify)
3. How would you describe your ethnicity?
 - a. White
 - b. Hispanic or Latino
 - c. Black or African American
 - d. Native American or American Indian
 - e. Asian/Pacific Islander
 - f. Biracial or Multiracial
 - g. Other (Please Specify)
4. Where is your clinic located?
 - a. Northeast United States
 - b. Southern United States
 - c. Midwest United States
 - d. Western United States
 - e. Other (Alaska, Hawaii, Puerto Rico, etc., or outside of the U.S.)
5. How would you describe your location?
 - a. Urban (Population 50,000+)
 - b. Suburban or Urban Cluster (Population 2,500 – 49,999)
 - c. Rural (Population \leq 2,499)
6. Are you a...(check all that apply)
 - a. Physician (i.e., M.D. or D.O.)
 - b. Nurse/Nurse Practitioner
 - c. Physician's Assistant
 - d. Mental Health Specialist
 - e. Other Specialist (please explain)
 - f. Administrator/Staff
 - g. Office or Practice Manager
 - h. Other
7. I have been practicing my area of specialty for...
 - a. ___ years

Site Suitability

8. Does your site currently provide mental health services? If so, are any therapy sessions in a group format?
 - a. We do not provide mental health services
 - b. We provide mental health services, but DO NOT host group therapy sessions
 - c. We provide mental health services, and DO host some group therapy sessions
9. If your site provides mental health services to patients are those services *primarily*...
 - a. Integrated (mental health provider on staff)
 - b. Co-located (mental health provider is not staff but provides on-site services)
 - c. Consultation (mental health providers not on site but available via phone or email for consultation)
 - d. Referred out (mental health services referred to the community)
 - e. We do not provide mental health services
 - f. Other (please specify)
10. Does your site have suitable/sufficient resources to host group therapy sessions?
 - a. Yes
 - b. No
 - c. Unsure
11. Which of the following do you believe might limit your site's ability to host group therapy sessions successfully? (Check all that apply)
 - a. How patients were/are recruited for groups
 - b. Limited schedule flexibility
 - c. Lack of adequately-sized rooms available (e.g., a room that could hold 10-12 patients and at least one provider)
 - d. Unable to bill for group services
 - e. Lack of demand or interest from patients
 - f. Lack of physician or practitioner need for such services
 - g. Lack of providers with group therapy training or expertise
 - h. None of the above – my site is suitable for group therapy
 - i. Other (Please specify)

Provider Interest

12. What advantages do you believe group therapy may have over traditional one-on-one encounters? (Check all that apply)
 - a. Peer support/learning
 - b. Peer comparison (seeing others with worse conditions, better coping skills, etc.)
 - c. More efficient use of provider time
 - d. More cost-effective than individual treatment
 - e. Other (Please specify)
 - f. I do not believe group therapy is any more advantageous than individual therapy
13. Have you ever referred a patient to a mental health provider for non-crisis purposes?
 - a. Yes
 - b. No

14. If you have referred a patient to a mental health provider, was that provider...
 - a. On-Site
 - b. Off-Site
15. How effective is group therapy for treating patients with mental illness/psychopathology?
 - a. Very Effective
 - b. Somewhat Effective
 - c. Neither Effective nor Ineffective
 - d. Somewhat Ineffective
 - e. Very Ineffective
16. Would you be willing to refer a patient to a therapy group?
 - a. Yes
 - b. No
 - c. Not Sure

Population Needs

17. What are the top three mental health disorders you believe are ***most in need*** of care at your site?
 - a. Anxiety Disorders
 - b. Bipolar and Related Disorders
 - c. Depressive Disorders
 - d. Eating Disorders
 - e. Somatoform Disorders
 - f. Substance Abuse Disorders
 - g. Trauma or Stressor-Related Disorders
 - h. Diet & Exercise
 - i. Other (Please specify)
18. What are the top three mental health disorders you believe ***require the most attention*** at your site?
 - a. Anxiety Disorders
 - b. Bipolar and Related Disorders
 - c. Depressive Disorders
 - d. Eating Disorders
 - e. Somatoform Disorders
 - f. Substance Abuse Disorders
 - g. Trauma or Stressor-Related Disorders
 - h. Diet & Exercise
 - i. Other (Please specify)

19. What are the top three mental health disorders you *believe you see most frequently* (*greatest numbers*) at your site?
- Anxiety Disorders
 - Bipolar and Related Disorders
 - Depressive Disorders
 - Eating Disorders
 - Somatoform Disorders
 - Substance Abuse Disorders
 - Trauma or Stressor-Related Disorders
 - Diet & Exercise
 - Other (Please specify)

Recruitment Techniques

20. Have you ever attempted to recruit patients into any sort of organized group (i.e., a research study, therapy, peer support, didactic, etc.)?
- Yes
 - No
21. If you have attempted to recruit patients into groups, what techniques did you employ? (Check all that apply)
- Medical provider referral of specific patients
 - Medical record search for qualifying patients
 - Front desk or other clinic staff (non-providers) recruited patients
 - Patient self-referral
 - Requesting referrals from local healthcare providers
 - Local media or flyer distribution
 - Internet outreach
 - Monetary or other incentives
 - Other (Please specify)
 - I have not attempted to recruit patients
22. When recruiting patients, which method resulted in the *greatest total number* of potential recruits?
- Medical provider referral of specific patients
 - Medical record search for qualifying patients
 - Front desk or other clinic staff (non-providers) recruited patients
 - Patient self-referral
 - Requesting referrals from local healthcare providers
 - Local media or flyer distribution
 - Internet outreach
 - Monetary or other incentives
 - Other (Please specify)
 - I have not attempted to recruit patients

23. When recruiting patients, which method resulted in the greatest number of patients *who were a good fit* for your group or sample?
- Medical provider referral of specific patients
 - Medical record search for qualifying patients
 - Front desk or other clinic staff (non-providers) recruited patients
 - Patient self-referral
 - Requesting referrals from local healthcare providers
 - Local media or flyer distribution
 - Internet outreach
 - Monetary or other incentives
 - Other (Please specify)
 - I have not attempted to recruit patients
24. If one of your patients was qualified for a therapy group would you prefer to be involved in their recruitment process?
- Yes, I would like to be involved
 - No, they can/should be recruited to the group without my facilitation

Free Response

25. What are your thoughts about the role of mental health in the primary care setting?
- [Free Response]
 - I do not have any opinions I would like to share (Skip to next question)
26. Do you find it difficult to find your patients adequate care for their mental health needs in your community? Why or why not?
- [Free Response]
 - I do not have any opinions I would like to share (Skip to next question)
27. If you have ever recruited patients to a group (i.e., a research study, therapy, peer support, didactic, etc.), what was that experience like? Did you encounter setbacks? Were you able to overcome any setbacks, and if so, how?
- [Free Response]
 - I do not have any opinions I would like to share (Skip to next question)
28. If group therapy services are/were available, would you be interested in referring patients to therapy groups focusing on mental health? Why or why not?
- [Free Response]
 - I do not have any opinions I would like to share (Skip to next question)

VITA

PHILIP A. RANDALL

- Education: Ph.D. Psychology, concentration in Clinical Psychology, East Tennessee State University, Johnson City, TN (2018). Dissertation: *Assessing readiness for group therapy in primary care: An initial survey exploring need*
M.A. Psychology, East Tennessee State University, Johnson City, TN (2013) Thesis: *Actively caring about the Actively Caring Survey: Evaluating the reliability and validity of a measure of dispositional altruism.*
<http://dc.etsu.edu/etd/2275/>
B.S. Psychology, Virginia Polytechnic Institute and State University, Blacksburg, VA (2009)
- Clinical Experience: *Counselor*, University Counseling Center at Florida State University
Intern, University Counseling Center at Florida State University
Externships at ETSU Behavioral Health and Wellness Clinic; First Tennessee Human Resources Agency; Alternative Community Corrections Program; Cherokee Health Systems
Clinical Practicum at ETSU Behavioral Health and Wellness Clinic; Johnson City, Kingsport, and Bristol ETSU Family Medicine clinics
- Teaching Experience: *Instructor*, Principles of Psychological Research Lab
Guest Lecturer, Introduction to Psychology
Guest Lecturer, *Clinical Interviewing Techniques*
- Work Experience: *Collaborator for introductory psychology textbook*, “Psychology: The Science of Human Experience” with Drs. E. Scott Geller and Chris Dula for publishing by Pearson Prentice Hall.
Graduate Lab Coordinator, ETSU Applied Psychology Laboratory
Graduate Assistant, ETSU Introduction to Psychology
Center Coordinator, Virginia Tech Center for Applied Behavior Systems
- Other Professional Experiences: *College of Medicine Group Facilitator*, ETSU College of Medicine’s Human Sexuality course

Publications/Presentations:

- Teie, S., *Randall, P.*, & Ozanne-Cobb, R. (April, 2013). Recognizing Prosocial Behavior Worldwide: A Qualitative Analysis of Caring Stories. Presentation for the Virginia Psychological Association's 2013 Annual Conference, McLean, VA.
- Shults, L.S., Oatts, S.L., Akens, A.B., Jackson, H.M., *Randall, P.*, & Dula, C.S. (November, 2011). You Wouldn't Like Me When I'm Anxious! I Get Inattentive and Angry. Poster session for Tennessee Psychological Association's 2011 Annual Convention, Nashville, TN.
- Druery, R.C., Gibson, B., *Randall, P.*, & Dula, C.S. (March, 2011). Do Parental Influences Or Self-Efficacy Affect Students GPA Or Academic Aspirations? Poster session for East Tennessee State University's 2011 Appalachian Student Research Forum, Johnson City, TN.
- Randall, P.A.*, Cunningham, T.R., Arnold, R.L., & Geller, E.S. (2010, August). Effective Feedback Mechanisms for Behavior Change. Poster session for American Psychological Association's 2010 Annual Conference, San Diego, CA.
- Arnold, R.L., Cunningham, T.R., *Randall, P.A.*, & Geller, E.S. (2009, May). Good words are worth much and cost little: The Value of content analysis in measuring hospital error rates. Poster session for the 35th Annual Convention of the Association for Behavior Analysis International, Phoenix, AZ.
- Cunningham, T.R., Arnold, R.L., *Randall, P.A.*, & Geller, E.S. (2009, May). Fool me once, shame on the system—fool me twice, where is the intervention? Improving patient safety through responses to error. Symposium presentation at the 35th Annual Convention of the Association for Behavior Analysis International, Phoenix, AZ.

Invited Talks:

- Randall, P.*, & Burchby, K. (2017, December). Anxiety & stress management.
- Randall, P.*, & Petruzzelli, J. (2017, April). Anxiety & stress management.
- Randall, P.*, & Petruzzelli, J. (2016, December). Anxiety & stress management.
- Randall, P.*, (2016, March). Anxiety & stress management.