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Evaluating how Providers' Competency to Deliver SafeCare[®] Relates to
Provider Training and Family Outcomes

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Undergraduate Honors Thesis

Thesis advisor _____

Date _____

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Abstract

Evidence-based programs (EBPs) are the gold standard of prevention and intervention programs to address child maltreatment. SafeCare® is a parent-training EBP that significantly reduces risk factors and occurrences of child neglect and abuse. To ensure that EBPs are being implemented correctly and effectively, it is important to evaluate provider fidelity (adherence to program protocol) and competency (skill level to deliver protocol). Provider fidelity has been more frequently measured than provider competency. However, research has shown competency to be complementary to fidelity, and competency seems to be an important predictor of patient outcomes. The current study used SafeCare to analyze how provider competency relates to provider training and family outcomes. Results showed that provider competency was positively correlated with provider training quizzes but not to provider training role plays or family outcomes. These findings suggest that provider knowledge acquisition during training may be an important factor in providers achieving strong competency in the delivery of an EBP.

Evaluating how Providers' Competency to Deliver SafeCare[®] Relates to
Provider Training and Family Outcomes

Child maltreatment, known as a caregiver's action or lack of action resulting in physical or emotional harm to a child, affected 686,000 children in the U.S. in 2012 (U.S. Department of Health and Human Services, 2013). Child maltreatment includes neglect, physical abuse, psychological maltreatment, and sexual abuse, with neglect accounting for 78.3% of substantiated cases. The younger the child, the more susceptible he or she is to being a victim of child abuse or neglect. Eighty percent of abusers were parents of the victims, suggesting that parents are a key agency of change for prevention and intervention.

Evidence-based programs (EBPs), which are rooted in empirical evidence, have become the golden standard of prevention and intervention for addressing a wide array of childhood and family issues, including child maltreatment (Chaffin & Friedrich, 2004). While neglect is the most common form of child maltreatment, few programs have documented success with reducing the reoccurrence of neglect. SafeCare is a widely known EBP that significantly reduces occurrences of and risk factors for both child neglect and abuse (Chaffin, Hecht, Bard, Silovsky, & Beasley, 2012; Gershater-Molko, Lutzker, & Wesch, 2002 & 2003; Lutzker & Rice, 1984; Lutzker, Van Hasselt, Bigelow, Greene, & Kessler, 1998). As demands for EBP implementation have increased, so have expectations for providers to be held accountable for its outcomes (Schoenwald, Garland, Chapman, Frazier, Sheidow, & Southam-Gerow, 2011). Provider fidelity and competency must be evaluated to ensure that an EBP is being implemented correctly and effectively (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). Fidelity is the degree to which a provider adheres to the program's protocol, while competency is a provider's level of skill to effectively implement the program (Schoenwald et al., 2011).

To date, fidelity is more commonly measured in the implementation of EBPs and is more frequently studied than competency. Furthermore, researchers advise that equating the importance of measuring fidelity to the importance of measuring competency is an unwarranted conceptual leap (Waltz, Addis, Koerner, & Jacobson, 1993). These two assessments are likely associated but capture unique aspects of provider delivery of EBPs (Palmer, 2012). Without evaluations of provider competency, it is difficult to ensure that a program was delivered with high proficiency, even if fidelity assessments showed providers conducted the program the way it was developed. Furthermore, it is necessary to understand what influences competency (e.g., training, support) and how provider competency impacts desirable program outcomes (e.g., client improvement). Limited research exist(s) on provider competency, and most research has been conducted on the delivery of mental health programs. In the present study, we examined provider competency in delivering SafeCare, a home-based parent training program, and how it relates to provider training and parents' skill acquisition.

Evidence-Based Practices

EBPS are highly regarded in the realm of public health care with their promotion of programs and policies using scientific evidence to demonstrate their efficacy and utility. EBPs are objectively implemented with the development of manuals, and outcomes are documented through empirical evidence. Many parent training programs (e.g., The Incredible Years, Webster-Stratton & Hammond, 1997; Oregon Social Learning Center's Parent Management Training, Forgatch & Martinez 1999; Parent-Child Interaction Training, Eyberg & Robinson, 1982; SafeCare, Guastaferrro, Lutzker, Graham, Shanley & Whitaker, 2012) are identified by several highly regarded organizations as EBPs to address risk factors associated with child maltreatment including: Blue Prints for Violence prevention (Irwin, Elliott, Fagan, & Hansen,

2001), California Clearing House (CEBC, 2010), The Kauffman's Best Practice Report (Chadwick Center on Children and Families, 2004), and Substance Abuse and Mental Health Services Administration (SAMHSA; The National Registry for Evidence-Based Programs and Practices, 2010).

EBPS are becoming more widely disseminated and implemented within community, real-world applications. However, it is important to ensure that the EBPs are implemented correctly and with high quality. Goense and her colleagues' (2014) meta-analysis found that although 80% of programs assess fidelity, very few address therapist competence. Most programs have established fidelity measures; however, many lack or are in the process of developing competency measures. Much needed research on competency will help facilitate programs' development and demonstration of the utility and effectiveness of competency measures.

SafeCare Model

SafeCare is an evidence-based, home-visitation program designed for parents with children ages 0 to 5 who are at risk for child maltreatment or have been reported for abuse or neglect (Guastafarro, Lutzker, Graham, Shanley & Whitaker, 2012; Lutzker & Bigelow, 2002; Shanley et al., 2013; Whitaker et al., 2012). Its three areas of focus are parent-child/infant interaction, health, and home safety.

The Parent-Child/Infant Interaction module consists of training on parenting skills to promote positive parent-infant interactions (birth to about 10 months) and parent-child interactions (walking to 5 years). The Health module teaches parents how to prevent childhood illnesses, identify symptoms of illnesses or injuries, and provide or seek appropriate treatment for their children through the use of health reference materials. The Home Safety module trains

parents to identify common household hazards, how to reduce or eliminate the hazards, and provide proper supervision.

SafeCare providers, referred to as Home Visitors, work with parents in their homes for approximately 18 to 20 sessions, with each module typically completed in six sessions. Each family session lasts approximately 60 to 90 minutes. Each module includes a baseline assessment, intervention (training), and a follow-up assessment to determine parents' behavior change. Providers adhere to a four-step training format in each module to promote parent skill acquisition: (1) explain the desired behavior and rationale behind it; (2) model each behavior; (3) ask parent to practice the behaviors; and (4) provide positive and corrective feedback. By working with the parent in the family's home across various situations, parent's skills are expected to generalize across time, behaviors, and settings. Home Visitors work with parents until the parent meets a set of skill-based criteria formulated specifically for each module (Gershater-Molko, Lutzker, & Wesch, 2003).

Various studies have demonstrated SafeCare to be efficacious and effective in significantly contributing to a number of behavioral changes and reducing the risk for and reports of child maltreatment. Families who received SafeCare experienced less depression, less parenting stress, positive effects on parent engagement and retention, increased parent satisfaction, increased compliance from their children, and a significant reduction in the overall number of hazards in their homes (Chaffin et al., 2012; Chaffin, Bard, Bigfoot, & Maher, 2012; Damashek, Doughty, Ware, & Silvosky, 2011; Gershater-Molko, Lutzker, & Wesch 2002; Guastafarro, Lutzker, Shanley, & Whitaker, 2012; Lutzker & Bigelow, 2002; Shanley, Graham, Lutzker, Edwards-Gaura, Whitaker, & Self-Brown, 2012). Several studies have compared families who participated in SafeCare to families who received alternative programs (e.g., family

preservation services, services as usual). Results indicated that SafeCare families had significantly lower rates of recidivism (Chaffin, Hecht, Bard, Silvosky, and Beaseley, 2012; Gershater-Molko, Lutzker, & Wesch 2002 & 2003; Lutzker & Bigelow, 2002).

SafeCare implementation progresses through a series of phases: exploration, preparation, implementation, and sustainment (Aarons et al., 2012). The exploration phase and preparation phase involves assessing multiple contextual levels, identifying any adaptations that should be made to the service context, and determining how to carry them out. During the implementation phase, levels of fidelity and competency are established to ensure providers' acquisition of skills. Program developers collaborate to ensure that, despite any adaptations, fidelity to the core components of the model will be preserved. During the sustainment phase, provider fidelity continues to be monitored.

Increased demands for EBPs such as SafeCare have emphasized the importance of proper implementation, which involves providers accurately and skillfully implementing the program. Since the early 1990s, EBPs have utilized treatment manuals so the program is transparent and replicable (Schoenwald et al., 2011). However, research indicates that using solely a manual for training does not guarantee providers are effectively implementing the program (Forgatch et al., 2005). Therefore, it is necessary for EBPs to be evaluated for program integrity so outcomes can be accurately attributed to the use of the intervention itself and delivery of the intervention (Fixsen et al., 2005).

Assessing Fidelity and Competency for Evidence-Based Practices

According to Schoenwald and colleagues (2011), program integrity consists of three components: 'fidelity,' the degree to which providers utilize the treatment's specific protocols, 'differentiation,' how much the program differs from others, and 'competency,' the providers'

level of skill in implementing the treatment. For the purpose of this paper, we will focus on fidelity and competency. Researchers report that exclusively using fidelity measures as a manipulation check is not sufficient enough to ensure that a treatment was delivered skillfully (Waltz et al., 1993).

Fidelity is the extent to which a provider delivers the critical elements of a program's protocol. Typically, fidelity is measured by rating the occurrence or absence of each required behavior or activity to be performed (Waltz et al., 1993), and often summarized as a percentage of elements conducted out of how many total behaviors were to be performed. Fidelity data reveals the extent to which these critical program components were implemented (Schoenwald et al., 2011). It can also be used to ensure internal validity by identifying which factors (the program curriculum or application of the program) influenced program outcomes (Mowbray, Holter, Teague, & Bybee, 2003; Perepletchikova, Treat, & Kazdin, 2007). However, it is not just about whether specific program protocol factors are implemented, but how they are implemented in order to promote positive outcomes (Forgatch et al., 2005).

Competence is the extent to which a provider has the knowledge and skills during the application of an EBP that are necessary to produce desired outcomes (Fairburn & Cooper, 2011). There is more variability in how competencies scores are derived (Muse & McManus, 2013), including what modality is used to assess these behaviors (e.g., direct observations, self-report, client report) and how each behavior is rated (type of scale used to indicate level of competency for each item). A provider's knowledge, performance, action, skills, and attitude all contribute to his or her level of competency (Ilic, 2009). These skills involve the ability to take relevant aspects of the therapeutic context into account and respond to these contextual variables appropriately (Waltz et al., 1993). These relevant aspects include but are not limited to: (a) client

variables (e.g. degree of impairment, life stressors and situation); (b) awareness of the different stages in a program and the degree of improvement a client has already achieved; (c) and sensitivity to timing of program deliveries within a session. These behaviors are usually rated in terms of their frequency and extensiveness (Waltz et al., 1993).

Fidelity and competency have some overlap, as competency presupposes fidelity. In order for a provider to deliver a program with competence, the critical elements must be delivered. However, studies reveal that the two measures are not strongly correlated and are recommended to be evaluated separately (Perletchikova, Treat, & Kazdin, 2007; Waltz et al., 1993).

One difference between fidelity and competency is a conceptual distinction (Perletchikova, Treat, & Kazdin, 2007). Fidelity is a quantitative measure (how frequently a provider implements the correct procedures during programs), while competence is a qualitative measure (how well providers implement the procedures). Fidelity and competence also differ in their complexity and specificity, and therefore, also differ in the level of expertise needed to rate these measures (Waltz et al., 1993). Recognizing particular behaviors from a set program protocol are fairly straight forward, allowing less experienced raters to code fidelity reliably. On the other hand, it is much more difficult to accurately assess competency or quality of these skills. For example, evaluating how a provider should adjust his or her behavior in relation to a client's resistance requires training to gain knowledge and understanding to accurately assess. A third difference is the criterion for how the provider's behavior is compared. Fidelity measures may compare a provider's implementation of a particular intervention to the program's manual guidelines (Waltz et al., 1993). On the other hand, competency measures may compare the provider's performance in relation to an established level of competence, an expert's sense of

adequate competence, or how well his or her delivery fits the specific client's problems or situation. Fidelity has been more frequently measured than competency; however, without evaluations of provider competency, it is difficult to ensure that a program was delivered with high proficiency (Schoenwald et al., 2011; Waltz et al., 1993).

Even if providers adhere to the protocol, an incompetent deliverance can threaten the validity of interpretations of the program's outcomes. For example, without measuring providers' levels of competency, researchers are unable to identify whether confounding variables, the program itself, or the program provider was the cause for the program's effect or lack of effect (Perepletchikova, Treat, & Kazdin, 2007). Fidelity focuses on what providers are expected to do in a given session, while competency requirements are established to indicate how providers should deliver protocols. Without competency criteria, researchers are challenged to document with certainty whether the program was delivered effectively (Weck, Bohn, Ginzburg, & Ulrich, 2011). Analyzing provider competence, especially its impact on client behavior and outcome, is an important measure for EBPs and is vital for proper dissemination of programs into real-world settings (Roth & Pilling, 2007; Ilic, 2009).

Association of Competency with Provider and Family Factors

Limited research is available on what influences provider competency and how it impacts desired client outcomes. In regard to provider training, Chu and her colleagues (2012) state that training with increased attention to the competencies required for public mental health services allows providers to utilize their combination of analytical, training, and clinical skills to deliver treatments.

Research has shown positive effects of provider training on their competency to deliver EBPs. Several studies document that the impact of provider training in EBPs, particularly

cognitive-behavioral treatments, is related to competency. Providers reported themselves more competent as psychotherapists after completing a cognitive-behavioral training program (Schneider & Rees, 2012). In two different studies by Karlin and colleagues (Karlin et al., 2012; Karlin et al., 2013), providers' competency scores in treatment delivery increased significantly after participating in a training on cognitive behavioral therapy for insomnia and for depression. Of research to date on provider training and competency, there appears to be an important relation between how providers are trained and their competency to deliver EBPs.

In addition to the growing literature on the importance of training and EBP competencies, research has documented the effects of provider competency on desired client outcomes including: client retention rates, improvement scores, and satisfaction with services. Existing research indicate competence ratings to be positively correlated with better outcomes for several mental health disorders, including: depression, panic disorder, and generalized anxiety disorder (Burns & Nolen-Hoeksema, 1992; Kingdon, Tyrer, Seivewright, Ferguson, & Murphy, 1996; Kuyken & Tsivrikos, 2009; Strunk, Brotman, DeRubeis, & Hollon, 2010; Trepka, Rees, Shapiro, & Barkham, 2004; Westbrook, Sedgwick-Taylor, Bennett-Levy, Butler, & McManus, 2008; Westra, Constantino, Arkowitz, & Dozois, 2011). Two studies evaluated therapists' competence during cognitive therapy sessions and found competence ratings to be significantly predictive of clients' outcomes (Trepka, Rees, Shapiro, & Barkham, 2004; Kuyken & Tsivrikos, 2009). In a more recent study, Strunk, Brotman, DeRubeis, and Hollon (2010) examined competence ratings as a predictor of subsequent symptom change for 60 moderately to severely depressed outpatients from a clinical trial. Results revealed that competence ratings predicted session-to-session symptom change during early treatment. Owen and colleagues (2011) evaluated provider competency related to multi-cultural aptitudes and found that higher multi-cultural competency

scores predicted better therapy outcomes for clients. In regard to client satisfaction, research in the medical field suggests that patients who report their doctors as more competent also reported higher satisfaction ratings (Sahin & Tatar, 2006).

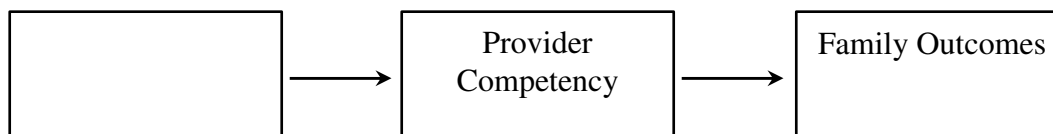
There is a growing focus on understanding how to conceptualize competence, what influences providers' competency skills, and the influence on client outcomes, particularly in professional psychology (Kaslow et al., 2004) and the delivery of psychotherapy (Roberts, Borden, Christiansen, & Lopez, 2005). There is dearth of competence research, however, in the realm of EBPs focused on child welfare, parent training, and home visiting. The current study aims to fill this gap in the literature by examining provider competency while implementing a home-based parent training program.

Present Study

While a lack of research exists on the effects of provider training on provider competence, a growing body of literature is supporting the impact of provider competency to produce significantly positive effects on patient outcomes and to be a vital measure to be considered during the EBP implementation process. The current study aims to contribute to the limited research by examining the relationship among SafeCare provider competency scores and provider training and family outcomes. Specifically, we hypothesized that higher ratings of provider competence would be associated with higher provider training scores and greater family outcomes (Figure 1). That is, provider competency scores would positively correlate with parents' improvement scores during each module session and their satisfaction scores after each module session. It was also hypothesized that provider competency scores would positively correlate with providers' average scores on role playing during module training and quiz scores

at the end of module training (or their first score in each module if there was more than one module).

Figure 1. Relationship between provider training, provider competency, and family outcomes



Method

Participants

This study (Protocol number H09125) was approved by the Georgia State University Institutional Review Board. Fifty-five providers were represented from the 209 audio recordings randomly selected from a larger pool of audios (these recordings were collected as part of a larger study; Whitaker et al., 2012). Many providers did not complete the demographics form (Whitaker et al., 2012). The average provider age at Home Visitor training was 39.9 years ($SD = 11.43$), and 88.6% were female. The racial distribution was 24.0 % Caucasian, 51.9% African American, 5.6% other, and 18.5% unknown/refused to answer. Providers' minimal education level was a Bachelor's degree, with a majority having post-bachelorette degrees. Providers had an average of 4 years ($SD = 2.74$) working in their field (e.g., social work, psychology).

Eighty families were represented across the 209 audio recordings. Demographics information was available for 55 of the families. Parents' average age was 24 ($SD = 6.4$) and 92.7% were female. The racial distribution was 40.0% Caucasian, 25.0% African American,

3.8% other race, and 31.2% unknown/refused to answer. Parents had an average of 2 children (SD = 1.16) and their average monthly income was \$1,205.36.

Measures

SafeCare Planned Activities Checklist (PAT HV). The PAT HV was used by home visitors to assess various parent behaviors during routine parent-child activities. The home visitor observed the parent and child interacting in one play and two daily routine activities (e.g., meal time, getting dressed). The observations lasted between three and five minutes. The home visitor assessed the parent on 10 skills (e.g., praising, providing rules, and consequences) for the parent-child interaction module and 4 skills (e.g., smiling, touch) for the parent-infant interaction module. Each skill was scored with a minus, check, or check plus, and the total score for each observation was derived from the percentage of behaviors that were present (check or check plus) or absent. For the purpose of this project, we subtracted the post-module scores from the pre-module scores and took the average of these change scores across the three activities. The average change score was used as a measure of family outcome in the PCI and PII modules.

SafeCare Home Accident Prevention Inventory (HAPI HV). The HAPI HV was used by home visitors to record the number of hazards in a room across 10 different categories (e.g., poisonous solids and liquids, fire and electrical hazards, small objects and choking hazards). The home visitor assessed three rooms in the home commonly used by the child (e.g., kitchen, family room). The home visitor counted the number of individual hazards in each room. If there were more than 10 of one given item (e.g., pennies), the home visitor notes 10+, and a total score is derived by summing up the number of hazards. In this study, the average change score across the three rooms was used as a measure of family outcome in the Safety module.

SafeCare Sick or Injured Child Checklist (SICC HV). SICC HV was used by the home visitor to assess the parent's skills across three medical scenario types: caring at home, calling the doctor, and seeking emergency treatment. To assess each scenario type, the home visitor presented the parent with a scenario describing a child's illness or injury. The home visitor followed a script, asking the parent questions about the scenario, including what symptoms are present and what the parent would do in each scenario (e.g., call the doctor). Each question was scored as correct or incorrect, and each scenario received a percentage score indicating the percent correct. For the present study, the average change in the pre and post module scores was used as the family's outcome for the Health module.

SafeCare Parent Module Satisfaction Survey. The survey was completed by parents at the end of each module to assess their overall satisfaction with that module. The survey contains questions related to the home visitor (e.g., the home visitor was warm and friendly), session factors (e.g., practicing during the sessions was useful), and module specific questions. Each item was rated on a 5-point Likert scale, ranging from scores of "1" (strongly agree) to "5" (strongly disagree). Each of the surveys contains 11 items, with Safety containing 13. For the present study, the specific module survey score was used as the family's module satisfaction score.

SafeCare Home Visitor Workshop Role Plays. Providers' individual performance on in-workshop role-plays were measured by SafeCare trainers using a standardized fidelity checklist to indicate providers' uptake of session skills. Providers perform role-plays for one session in each of the SafeCare modules. Each item was rated as present or absent. Total percentage scores were calculated based on the percentage of items the provider performed. For the purpose of this study, providers' module role play score was used in the analyses.

SafeCare Home Visitor Workshop Quizzes. Following workshop training, providers completed quizzes for each of the four SafeCare modules to assess their conceptual knowledge of the practices and procedures of each module. The quizzes are “take-home”, thus allowing providers to use all SafeCare materials provided during training. Each item was rated as correct or incorrect, and the total score was derived by summing up the total correct divided by the total number of items. For the present study, providers’ module quiz scores were compared to provider module competency.

SafeCare Competency Assessment Form. The audio recordings were analyzed and coded using the SafeCare Competency measure. The SafeCare competency scale is a six-item, three-point competency scale developed for scoring SafeCare home visiting session recordings. It includes three competency checklists which are tailored to each session type: The Assessment Checklist, the Training Checklist, and the End of Module Checklist. Each of the forms includes six competence measures: “Module/Session/Assessment Illustration,” “Home Visitor Conduct,” “Clinical Skills,” “Formal Assessment/Training/Feedback Skills,” “Home Visitor Responsivity,” and “Session Closing Skills.” Competency is rated on a 1 to 3 point scale, with an “n/a” option for “Module/Session/Assessment Illustration” and “Home Visitor Responsivity.” Each score is paired with a definition to guide coders in rating each item. A score of “1” indicates that the home visitor neglects large portions of the guidelines. A score of “2” indicates that the home visitor accomplishes some goals, but not all of them, or that the items are accomplished in a manner that could be improved. A score of “3” indicates that there is no room for improvement; the home visitor accomplishes everything stated in the session guidelines in an effective manner. Scores of “n/a” are used in cases where the items were not captured on audio, or the opportunities for those items did not arise. Total percentage scores are calculated by adding up

the scores and dividing by the total possible score. For the present study, we used the provider's first available module competency score in the analyses comparing provider training variables, and the provider's average module competency score for each family when comparing family outcomes.

Procedure

The session recording data used in this study were randomly selected from 1,320 audio recordings available for the purpose of another study examining the relationship between reliability and competency (Palmer, 2012). Initially, 217 recordings were selected for coding; however, eight were removed from the data set due to corruption or incompleteness, resulting in 208 audio recordings. The recordings included all three SafeCare modules: home safety ($n = 61$), health ($n = 68$), and parent-child interaction ($n = 46$) or parent-infant interaction ($n = 34$). Six individuals (two staff members and four Masters of Public Health graduate students), who were a part of the development and refinement of the competency measure, coded the recordings for competency.

Ten percent ($N = 20$) of the recordings were coded by two coders to determine interrater reliability. At the time of this study, the competency measure was still in the refinement phase, as earlier iterations were found to have low interrater reliability. The interrater reliability of these 20 recordings was 70.8%, which is considered a modest reliability (Lance, Butts, & Michels, 2006).

Results

A Pearson correlation test was computed to assess the relationship among provider competency scores, provider training, and family outcome variables. In regard to provider training, we hypothesized that higher provider competency scores would relate to higher

provider role play scores and quiz scores. Two measures were used to compare competency to training. First we compared provider module quizzes to their module competency score. Results indicated a significant correlation between providers' module competency scores and providers' module quiz scores, $r(92) = .275$, $p < .05$, one-tailed. That is, providers with higher module quiz scores were more likely to have a higher competency score for the same module. We also compared provider module role-play scores with competency. Results showed no significant correlation between provider module competency scores and providers' module role play scores, $r(78) = .108$, $p > .05$, one-tailed. That is, how well providers did on a module role play during training was not associated with their competency score for the corresponding module when working with families.

In regard to family outcomes, we hypothesized that higher provider competency scores would be associated with higher scores on parents' module outcome scores and satisfaction scores. We compared the provider's average module score for each family to the parent's average module improvement score and module satisfaction score. Results showed no significant correlation between provider competency scores and parents' module outcome scores, $r(51) = -.044$, $p > .05$, one-tailed. Also, no significant correlation was found between providers' competency scores and parents' module satisfaction scores, $r(16) = -.062$, $p > .05$, one-tailed. That is, providers' competency scores were not related to family module improvements nor family's satisfaction with the module.

Discussion

Provider competency, in addition to program fidelity, is an important factor in understanding the impact of evidence-based programs (EBPs) on desired outcomes, such as patient improvement. The intention of this study was to determine how providers' training

related to providers' competency scores when working with families, as well as how these competency scores related to family outcomes. This is one of the first studies to examine provider competency for an in-home parent training program, using SafeCare as the evidence-based program.

We hypothesized that provider competency would relate to training performance (i.e., module role plays) and knowledge acquired during training (i.e., module quiz scores). A significant and positive correlation was found between provider's module quiz scores from training and the provider's competency score for the same module. However, there was no significant correlation between providers' competency scores and providers' role playing scores. These findings suggest that providers' knowledge acquisition during training provides a foundation for how competently they can deliver sessions with families. However, providers' skill demonstration in training does not appear to correspond with how well they deliver SafeCare with families. These results support previous findings on the effects of training to positively affect competency ratings (Karlin, et al., 2012; Karlin et al., 2013; Schneider & Rees, 2012).

We also hypothesized that provider competency would positively correlate with family outcomes (i.e., module improvement and satisfaction scores). No significant associations were found among competency and family improvement or satisfaction. This is contrary to previous findings that reported higher competency levels to produce greater client outcomes (Burns & Nolen-Hoeksema, 1992; Kingdon, Tyrer, Seivewright, Ferguson, & Murphy, 1996; Kuyken & Tsivrikos, 2009; Trepka, Rees, Shapiro, & Barkham, 2004; Strunk, Brotman, DeRubeis, & Hollon, 2010; Westbrook, Sedgwick-Taylor, Bennett-Levy, Butler, & McManus, 2008; Westra, Constantino, Arkowitz, & Dozois, 2011).

Overall, our findings suggest provider knowledge acquisition during training may be an important consideration when promoting providers' abilities in real world settings, working directly with clients. Most trainings are intended to provide a foundational knowledge that is refined during client sessions. Many evidence-based programs, including SafeCare, emphasize the importance of real world "coaching", conducting fidelity monitoring and feedback to providers as they deliver the program with clients. Our findings reinforce the need to ensure providers have enough information during training in order to optimize their performance with families and to deliver the program with fidelity but also with competency. Research is still needed to fully understand the mechanisms involved in how provider competency influences desired client outcomes.

Limitations

While this is one of the first studies to evaluate provider competency in a home-based EBP addressing child maltreatment, there are a number of limitations for the present study. First, this study was conducted using an existing database, which had a different purpose than the current study. As a result, the competency scores used in the analyses may not have been the most optimal scores to be used to analyze the current study's hypotheses. Future research should look at how provider training impacts providers' competency as providers begin to implement an EBP, as well as how this relates to their development of higher competency over time. The second limitation is that the SafeCare competency measure was not coded with high reliability among coders, which could also impact the results of this study. It is suggested that the SafeCare competency measure be refined before future research be conducted on provider training and outcomes for the SafeCare model.

References

- Aarons, G. A., Hurlburt, M., & Horwitz, S. (2011). Advancing a conceptual model of evidence-based practice implementation in public service sectors. *Administration and Policy in Mental Health and Mental Health Services Research, 38*(1), 4-23. doi:10.1007/s10488-010-0327-7
- Burns, D. D., & Nolen-Hoeksema, S. (1992). Therapeutic empathy and recovery from depression in cognitive-behavioral therapy: a structural equation model. *Journal of Consulting and Clinical Psychology, 60*(3), 441.
- Chadwick Center on Children and Families (2004). Closing the quality chasm in child abuse treatment: Identifying and disseminating best practices. San Diego, CA: Author.
- Chaffin, M., & Friedrich, B. (2004). Evidence-based treatments in child abuse and neglect. *Children and Youth Services Review, 26*(11), 1097-1113.
doi:10.1016/j.childyouth.2004.08.008
- Chaffin, M., Hecht, D., Bard, D., Silovsky, J. F., & Beasley, W. H. (2012). A statewide trial of the SafeCare home-based services model with parents in Child Protective Services. *Pediatrics, 129*(3), 509-515.
- Chaffin, M., Bard, D., Bigfoot, D. S., & Maher, E. J. (2012). Is a structured, manualized, evidence-based treatment protocol culturally competent and equivalently effective among American Indian parents in child welfare? *Child Maltreatment, 17*(3), 242-252.
- Chu, J. P., Emmons, L., Wong, J., Goldblum, P., Reiser, R., Barrera, A. Z., & Byrd-Olmstead, J. (2012). Public psychology: A competency model for professional psychologists in community mental health. *Professional Psychology: Research And Practice, 43*(1), 39-49. doi:10.1037/a0026319

- Damashek, A., Doughty, D., Ware, L., & Silovsky, J. (2011). Predictors of client engagement and attrition in home-based child maltreatment prevention services. *Child maltreatment, 16*(1), 9-20.
- Eyberg, S. M., & Robinson, E. A. (1982). Parent-child interaction therapy: Effects on family functioning. *Journal of Clinical Child Psychology, 11*, 130-137.
- Fairburn, C. G., & Cooper, Z. (2011). Therapist competence, therapy quality, and training. *Behaviour Research and Therapy, 49*(6) doi:10.1016/j.brat.2011.03.005.
- Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M. & Wallace, F. (2005). Implementation Research: A Synthesis of the Literature. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231).
- Forgatch, M. S., & Martinez, C. R., Jr. (1999). Parent management training: A program linking basic research and practical application. *Journal of Consulting and Clinical Psychology, 67*, 711-724.
- Gaskin, E. H., Lutzker, J. R., Crimmins, D. B., & Robinson, L. (2012). Using a digital frame and pictorial information to enhance the SafeCare® parent-infant interactions module with a mother with intellectual disabilities: Results of a pilot study. *Journal of Mental Health Research in Intellectual Disabilities, 5*(2), 187-202. doi:10.1080/19315864.2012.674871
- Gershater-Molko, R. M., Lutzker, J. R., & Wesch, D. (2002). Using recidivism data to evaluate Project SafeCare: Teaching bonding, safety, and health care skills to parents. *Child Maltreatment, 7*(3), 277-285.

- Gershater-Molko, R.M., Lutzker, J.R., Wesch, D. (2003) Project SafeCare: Improving health, safety, and parenting skills in families reported for, and at risk for child maltreatment. *Journal of Family Violence, 18*, 377-386.
- Graf, F. A., Grumm, M., Hein, S., & Fingerle, M. (2014). Improving parental competencies: Subjectively perceived usefulness of a parent training matters. *Journal of Child and Family Studies, 23*(1), 20-28. doi:10.1007/s10826-012-9682-1
- Hatala, R., & Guyatt, G. (2002). Evaluating the teaching of evidence-based medicine. *Journal of the American Medical Association, 288*(9), 1110-1112.
- Ilic, D. (2009). Assessing competency in evidence based practice: Strengths and limitations of current tools in practice. *BioMed Central Medical Education, 9*(1), 53.
- Irwin, K., Elliott, D., Fagan, A., & Hansen, D. (2001). *Blueprints for violence prevention* (pp. 1-15). Washington, DC: US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention. Retrieved February 17, 2014.
- Jabaley, J. J., Lutzker, J. R., Whitaker, D. J., & Self-Brown, S. (2011). Using iPhones™ to enhance and reduce face-to-face home safety sessions within SafeCare®: An evidence-based child maltreatment prevention program. *Journal of Family Violence, 26*(5), 377-385. doi:10.1007/s10896-011-9372-6
- Jackson, D. R., Cooper-Thomas, H. D., van Gelderen, M., & Davis, J. (2010). Relationships among developmental competency measures and objective work outcomes in New Zealand retail context. *Human Resource Development Quarterly, 21*(2), 169-186. doi:10.1002/hrdq.20042
- Karlin, B. E., Trockel, M., Taylor, C., Gimeno, J., & Manber, R. (2013). National dissemination of cognitive behavioral therapy for insomnia in veterans: Therapist- and patient-level

- outcomes. *Journal of Consulting and Clinical Psychology*, 81(5), 912-917.
doi:10.1037/a0032554
- Karlin, B. E., Brown, G. K., Trockel, M., Cuning, D., Zeiss, A. M., & Taylor, C. (2012). National dissemination of cognitive behavioral therapy for depression in the department of veterans affairs health care system: Therapist and patient-level outcomes. *Journal of Consulting and Clinical Psychology*, 80(5), 707-718. doi:10.1037/a0029328
- Kuyken, W., & Tsivrikos, D. (2008). Therapist competence, comorbidity and cognitive-behavioral therapy for depression. *Psychotherapy and psychosomatics*, 78(1), 42-48.
- Lance, C. E., Butts, M. M., & Michels, L. C. (2006). The Sources of Four Commonly Reported Cutoff Criteria: What Did They Really Say?. *Organizational Research Methods*, 9(2), 202-220. doi:10.1177/1094428105284919
- Lutzker, J.R. & Rice, J.M. (1984). Project 12-Ways: Measuring outcome of a large in-home service for treatment and prevention of child abuse and neglect. *Child Abuse and Neglect*, 8, 519-524.
- Lutzker, J. R., Van Hasselt, V. B., Bigelow, K. M., Greene, B. F., & Kessler, M. L. (1998). Child abuse and neglect: Behavioral research, treatment, and theory. *Aggression and Violent Behavior*, 3, 181-196.
- Lutzker, J. R., & Bigelow, K. M. (2002). *Reducing child maltreatment: A guidebook for parent services*. New York, NY US: Guilford Press.
- Muse, K., & McManus, F. (2013). A systematic review of methods for assessing competence in cognitive-behavioural therapy. *Clinical psychology review*, 33(3), 484-499.
- Owen, J., Leach, M. M., Wampold, B., & Rodolfa, E. (2011). Client and therapist variability in clients' perceptions of their therapists' multicultural competencies. *Journal of Counseling Psychology*, 58(1), 1-9. doi:10.1037/a0021496

- Palmer, Rebecca, "Assessing the Relationship between SafeCare Fidelity and Competence Measures" (2012). Public Health Theses. Paper 227.
- Perepletchikova, F., Treat, T. A., & Kazdin, A. E. (2007). Treatment integrity in psychotherapy research: Analysis of the studies and examination of the associated factors. *Journal of Consulting and Clinical Psychology, 75*(6), 829-841. doi:10.1037/0022-006X.75.6.829
- Roberts, M. C., Borden, K. A., Christiansen, M. D., & Lopez, S. J. (2005). Fostering a Culture Shift: Assessment of Competence in the Education and Careers of Professional Psychologists. *Professional Psychology: Research and Practice, 36*(4), 355.
- Sahin, B., & Tatar, M. (2006). Analysis of Factors Affecting Patient Satisfaction: Focus on Asthma Patients. *Disease Management & Health Outcomes, 14*(3), 171-183. doi:10.2165/00115677-200614030-00006
- Schoenwald, S. K., Garland, A. F., Chapman, J. E., Frazier, S. L., Sheidow, A. J., & Southam-Gerow, M. A. (2011). Toward the effective and efficient measurement of implementation fidelity. *Administration and Policy in Mental Health and Mental Health Services Research, 38*(1), 32-43. doi:10.1007/s10488-010-0321-0
- Schneider, K., & Rees, C. (2012). Evaluation of a combined cognitive behavioural therapy and interpersonal process group in the psychotherapy training of clinical psychologists. *Australian Psychologist, 47*(3), 137-146. doi:10.1111/j.1742-9544.2012.00065.x
- Silovsky, J. F., Bard, D., Chaffin, M., Hecht, D., Burris, L., Owora, A., & ... Lutzker, J. (2011). Prevention of child maltreatment in high-risk rural families: A randomized clinical trial with child welfare outcomes. *Children and Youth Services Review, 33*(8), 1435-1444. doi:10.1016/j.childyouth.2011.04.023

Shanley, J.R., Graham, M.L., Lutzker, J.R., Edwards-Gaura, A., Whitaker, D.J., & Self-Brown, S. (2013). Lessons learned from national and international implementations of

SafeCare®. *International Public Health Journal*, 5(1), 31-38.

Strunk, D. R., Brotman, M. A., DeRubeis, R. J., & Hollon, S. D. (2010). Therapist competence in cognitive therapy for depression: Predicting subsequent symptom change. *Journal of consulting and clinical psychology*, 78(3), 429.

Substance Abuse and Mental Health Services Administration [SAM- HSA]. (2010). SAMHSA's national registry of evidence-based programs and practices. Retrieved February 17, 2014, from <http://www.nrepp.samhsa.gov/>.

Trepka, C., Rees, A., Shapiro, D. A., Hardy, G. E., & Barkham, M. (2004). Therapist competence and outcome of cognitive therapy for depression. *Cognitive Therapy and Research*, 28(2), 143-157.

Tyrer, P., Murphy, S., Kingdon, D., Brothwell, J., Gregory, S., Seivewright, N., ... & Johnson, A. L. (1988). The Nottingham study of neurotic disorder: comparison of drug and psychological treatments. *The Lancet*, 332(8605), 235-240.

Waltz, J., Addis, M. E., Koerner, K., & Jacobson, N. S. (1993). Testing the integrity of a psychotherapy protocol: Assessment of adherence and competence. *Journal Of Consulting And Clinical Psychology*, 61(4), 620-630. doi:10.1037/0022-006X.61.4.620

Webster-Stratton, C., & Hammond, M. (1997). Treating children with early-onset conduct problems: A comparison of child and parent training interventions. *Journal of Consulting and Clinical Psychology*, 65, 93-99.

- Weck, F., Bohn, C., Ginzburg, D. M., & Stangier, U. (2011). Assessment of adherence and competence in cognitive therapy: comparing session segments with entire sessions. *Psychotherapy Research, 21*(6), 658-669.
- Westra, H. A., Constantino, M. J., Arkowitz, H., & Dozois, D. A. (2011). Therapist differences in cognitive-behavioral psychotherapy for generalized anxiety disorder: A pilot study. *Psychotherapy, 48*(3), 283-292. doi:10.1037/a0022011
- Westbrook, D., Sedgwick-Taylor, A., Bennett-Levy, J., Butler, G., & McManus, F. (2008). A pilot evaluation of a brief CBT training course: impact on trainees' satisfaction, clinical skills and patient outcomes. *Behavioural and Cognitive Psychotherapy, 36*(05), 569-579.
- Whitaker, D. J., Ryan, K. A., Wild, R. C., Self-Brown, S., Lutzker, J. R., Shanley, J. R., & ... Hodges, A. E. (2012). Initial implementation indicators from a statewide rollout of SafeCare within a child welfare system. *Child Maltreatment, 17*(1), 96-101. doi:10.1177/1077559511430722