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Assessing the Relationship between SafeCare Fidelity and Competence Measures

Rebecca Palmer
Georgia State University

ABSTRACT

Rebecca Palmer
Assessing the Relationship between SafeCare Fidelity and Competence Measures
(Under the direction of Daniel Whitaker, Ph.D.)

As more evidence-based programs are implemented in community settings, there is a strong need to ensure those models are implemented with integrity. Implementation of programs should be evaluated for fidelity, the degree of adherence to treatment protocols, and competence, the level of skill in implementation (Schoenwald et al., 2011). The purpose of this study was to review audio recordings of SafeCare® home visiting sessions to discover the relationship between the measures of fidelity and competence. Six coders were assigned 209 SafeCare home visiting audiotapes to be coded for fidelity and competence. A sample of audios were double coded to evaluate fidelity and competence scores for inter-rater reliability. Fidelity and competence items were classified into process and content categories, forming the six main variables of process fidelity, content fidelity, total fidelity, process competence, content competence, and total competence. Total fidelity correlated with total competence at a level of .615, with process fidelity and process competence correlating at a much lower level than content items. The total correlation level can be interpreted as that fidelity and competence are strongly related measures, but are not identical constructs. The goal for SafeCare coders would be to continue refining competence definitions and attempting to remove the subjective nature from the competence coding process. With these two efforts, competence reliability should increase to an acceptable level. Given the main fidelity and competence correlation level, it is advisable for SafeCare coders to continue to code both fidelity and competence to avoid missing valuable components of the session. Additional research may be needed once the competence scale becomes better established.

INDEX WORDS: implementation research, fidelity, competence, parent-training programs, evidence-based programs, SafeCare model

ASSESSING THE RELATIONSHIP BETWEEN SAFECARE FIDELITY AND COMPETENCE MEASURES

By

REBECCA PALMER

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By

REBECCA PALMER

Approved:

Daniel J. Whitaker, Ph.D.
_____
Committee Chair

Shannon Self-Brown, Ph.D._____
Committee Member

Anna Edwards-Gaura, Ph.D._____
Committee Member

___7-20-12_____
Date

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Student's Name: __Rebecca Palmer_____

Street Address: __1737 Beacon Hill Blvd_____

City, State, and Zip Code: __Atlanta, GA, 30329_____

The Chair of the committee for this thesis is:

Professor's Name: __Daniel Whitaker, Ph.D._____

Department: __Institute of Public Health_____

College: ____Health and Human Sciences_____

Georgia State University
P.O. Box 3995
Atlanta, Georgia 30302-3995

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CURRICULUM VITAE

Rebecca Jean Palmer

1737 Beacon Hill Blvd • Atlanta, GA 30329
Cell: 770-712-7982 • rpalmer9@student.gsu.edu

EDUCATION

GEORGIA STATE UNIVERSITY, Institute of Public Health, Atlanta, GA **GPA: 4.00**
Master's of Public Health, Prevention Sciences; Jan 2011 to August 2012

DUKE UNIVERSITY, Trinity College of Arts and Sciences, Durham, NC **GPA: 3.34**
Bachelor of Science, Biology (Neuroscience Concentration); Minor, Chemistry; Minor, Psychology; May, 2010

WORK EXPERIENCE

2012 **National SafeCare Training and Research Center,** Atlanta, GA
Practicum Student
- Coded ~150 SafeCare audiotapes for fidelity and competence
- Collected weekly SafeCare parent satisfaction surveys

2008-2009 **Cognitive Behavioral Research Training Program,** Durham, NC
Research Assistant
- Collaborated with the National Institute of Drug Abuse on drug addiction study
- Worked on study that explores the efficacy of virtual reality treatment for crack cocaine addiction
- Administered urinary analyses of study participants to track treatment progress

Summer 2008 **Department of Molecular Genetics and Microbiology,** Durham, NC
Research Assistant, Linney Lab
- Cared for, monitored, and maintained zebra fish population
- Tested water for chemicals, salinity, and temperature

LEADERSHIP AND INVOLVEMENT

2010-2012 **Children's Healthcare of Atlanta,** Egleston, Atlanta, GA
Student Volunteer
- Provided art therapy to patients throughout the hospital
- Assisted in Volunteer Services stockroom

2009 **Duke Autism Foundation,** Autism Society of America, Durham, NC
Student Volunteer
- Acquired donations for autism support groups and therapeutic summer programs
- Increased community awareness of autism through education

2007-2009 **Healing Expressions,** Durham, NC
Student Volunteer, *Duke University Medical Center Cancer Patient Support*
- Visited oncology waiting rooms and distributed art kits
- Provided art therapy to patients and family members through knitting and crocheting lessons

Summer 2009 **Emily K Summer Scholars Program,** Durham, NC
Teacher's Aide
- Mentored economically disadvantaged elementary school children
- Guided lessons, artwork, and fitness programs

2008 **Duke-UNC Basketball Marathon,** Durham, NC
Student Volunteer, Hospitality Committee
- Raised funds for BounceBack Kids, a non-profit group
- Empowered children with life-threatening illnesses through basketball

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Chapter I

INTRODUCTION

Purpose of the Study

As more evidence-based programs are implemented in community settings, there is a strong need to ensure those models are implemented with integrity. Implementation of programs should be evaluated for fidelity, the degree of adherence to treatment protocols, and competence, the level of skill in implementation (Schoenwald et al., 2011). Together, these two measures are components of the total "treatment integrity" (Schoenwald et al., 2011). Yet, the relationship between adherence and competence is not well understood. The purpose of this study was to review audio recordings of SafeCare® home visiting sessions to discover the relationship between measures of fidelity and competence. A literature review examines the issue of child maltreatment and how the SafeCare® program attempts to reduce child neglect and abuse. The literature review also explores how the concepts of fidelity and competence are measured in SafeCare® and other home visiting programs, and whether research exists for defining the relationship between the two measures.

The proposed study is needed because, although some research exists on implementation fidelity, there is a lack of studies examining measures of competence, and virtually no information regarding the relationship between fidelity and competence. In addition, progress in this area has been slow because of confusion in terminology. Schoenwald et al. (2011) states that "treatment adherence", (termed fidelity in the current

study) and competence are two of the three parts to treatment integrity (the third part being treatment differentiation). Cross and West state that "implementer adherence", and competence are the only two components of treatment integrity (2011). However, both of these conceptualizations agree that adherence/fidelity and competence are components of treatment integrity, but the relationship between the two measures is unclear. The aim of the current study is to add to the body of research concerning fidelity and competence measures of parent-training evidence based practices.

Research Question

1) What is the relationship between fidelity and competence?
2) Does the relationship differ according to SafeCare session and module type?

Chapter II

LITERATURE REVIEW

Overview of Child Maltreatment

The Child Abuse Prevention and Treatment Act defines child maltreatment as "any recent act or failure to act on part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation or an act or failure to act which presents an imminent risk of serious harm" (Mennen, Kim, Sang, & Trickett, 2010). Incidence of child maltreatment, which includes both child abuse and neglect, has fluctuated in recent decades. Although child abuse has declined twenty percent since peaking in 1993, child neglect has not seen a substantial decline (Jones, Finkelhor, & Halter, 2006). In 1986, there were 931,000 reported cases of child maltreatment; in 1997, there were 984,000 reported cases of maltreatment (U.S. Department of Health and Human Services, 1999). These numbers have decreased somewhat, with 794,000 claims of child maltreatment in 2007 (U.S. Department of Health and Human Services, 2009). Another source, the Fourth National Incidence Study of Child Abuse and Neglect (NIS-4), reported much higher maltreatment numbers with 1.25 million neglected and abused children in 2005 (Sedlak et al., 2010). Despite the differing statistics, the NIS-4 also reported a decline in maltreatment cases, with a nineteen percent decrease since the NIS-3 was released in 1993 (Sedlak et al., 2010). It should be noted that the decrease in child maltreatment reports does not necessarily indicate a true decrease in child maltreatment itself. Most child maltreatment statistics are gathered from child protection agencies,

which report only substantiated cases (McKenzie & Scott, 2011). Due to the agencies' policies and to the fact that most maltreatment goes unreported, the officially reported data on child maltreatment is likely a large underestimation of the true scope of the problem (McKenzie & Scott, 2011).

Although much of the focus of child maltreatment centers on physical and sexual abuse, neglect is by far the most common form of maltreatment (U.S. Department of Health and Human Services, 2009). While abuse usually involves an act that places a child in danger, neglect is the omission of an act, a distinction that may make neglect cases more difficult to report, diagnose, and treat (U.S. Department of Health and Human Services, 2009). Of the 794,000 substantiated claims of child maltreatment in 2007, 59% were cases of child neglect (U.S. Department of Health and Human Services, 2009). In 95% of these neglect cases, other types of maltreatment were also present, indicating that multiple forms of maltreatment often co-occur (U.S. Department of Health and Human Services, 2009). There are six types of neglect including physical, emotional, medical, and educational neglect as well as inadequate supervision and exposure to violent environments (Leeb, Paulozzi, Melanson, Simon, & Arias, 2008). Out of these subtypes, supervisory and environmental neglect were most common (Mennen et al., 2010). Young children are at greater risk for neglect with infants at highest risk (U.S. Department of Health and Human Services, 2010). Deaths resulting from severe neglect are also most common in young children (U.S. Department of Health and Human Services, 2010).

Preventing child maltreatment is an important public health priority (Hammond, Whitaker, Lutzker, Mercy, & Chin, 2006; Whitaker, Lutzker, Shelley, 2005).

Maltreatment in childhood can have long-lasting effects reaching into adulthood. Individuals with a history of childhood abuse have increased rates of psychological and medical illnesses including depression, anxiety disorders, eating disorders, post-traumatic stress disorder (PTSD), chronic pain syndrome, fibromyalgia, chronic fatigue syndrome and irritable bowel syndrome (Springer, Sheridan, Kuo, & Carnes, 2003). Child maltreatment also increases the likelihood of engaging in high-risk health behaviors as adults (Springer et al., 2003). The Adverse Childhood Experiences study (ACE) examined the effects of childhood abuse and other adverse experiences (reported retrospectively) on adult health and health risk behaviors (Felitti et al., 1998). Individuals with a history of child abuse or household dysfunction had higher rates of obesity, depression, suicide attempts, ischemic heart disease, cancer, chronic lung disease, skeletal fractures, and liver disease (Felitti et al., 1998). Abuse or neglect as a child also increased rates of smoking, physical inactivity, alcoholism, illicit drug use, sexually transmitted diseases, and high numbers of sexual partners in adulthood (Felitti et al., 1998).

Research also supports the link between child maltreatment and risky sexual behavior later in life (Wilson & Widom, 2011). A longitudinal study by Wilson and Widom (2011) followed children with documented cases of maltreatment into adulthood, a study spanning over forty years. They found that children with a history of abuse and neglect were at increased risk for prostitution and early sexual initiation and displayed higher rates of HIV and other sexually transmitted diseases (Wilson & Widom, 2011). The association between risky sexual behavior and maltreatment was present across all three types of maltreatment (physical abuse, sexual abuse, and neglect), but was strongest

for neglect (Wilson & Widom, 2011). Seventeen percent of adults with a history of maltreatment reported risky sexual behaviors, three times the rate of the control adult group (Wilson & Widom, 2011).

Risky lifestyle choices are not limited to sexual behaviors, however. Individuals with a history of abuse and neglect are also at increased risk for delinquency and adult criminality (Widom & Maxfield, 2001). In a similar longitudinal study, Widom and Maxfield tracked cases of child maltreatment through criminal records over a period of twenty-five years (2001). The risk for being arrested as a juvenile increased fifty-nine percent, as an adult increased twenty-eight percent, and for a violent crime increased thirty percent in adults who were maltreated as children (Widom & Maxfield, 2001). Individuals with abusive pasts were also younger at first arrest, committed twice as many offenses, and were arrested more frequently than the control group adults (Widom & Maxfield, 2001). In total, "childhood abuse and neglect increased the odds of future delinquency and adult criminality overall by twenty-nine percent" (Widom & Maxfield, 2001, p.1). These findings support the cycle of violence hypothesis, which suggests that a history of childhood physical abuse will increase the likelihood of committing violence in adulthood (Widom & Maxfield, 2001). However, the authors state that this cycle of violence appears to be present in not only physical and sexual abuse cases, but child neglect cases as well (Widom & Maxfield, 2001).

Adverse health and behavioral outcomes resulting from a history of child maltreatment can lead to decreased life functioning, an association present in both males and females (Springer et al., 2003). If multiple types of maltreatment are present in childhood, the likelihood of developing health problems as an adult increases (Springer,

Sheridan, Kuo, & Carnes, 2007). The ACE study found a dose-response relationship in child maltreatment, with risk of disease and risky behaviors increasing with number of childhood exposures to early adverse experiences including abuse and neglect (Felitti et al., 1998). Another study found that the association between childhood abuse and poor adult health outcomes decreased but was still present after controlling for family background and childhood adversity variables (Springer et al., 2007). The persistence of the association demonstrates that the act of maltreatment has extremely damaging consequences that persevere into adulthood.

Treatment Approaches to Child Maltreatment

Families with suspected or confirmed maltreatment are often referred to "parenting programs" to improve parenting skills. The prevailing treatment strategies in such programs can be described as supportive case management. Case management services for child maltreatment are usually managed through Child Protective Services, the Division of Family and Children Services, or similar governmental agencies (U.S. Department of Health and Human Services, 2005). Each child maltreatment case is assigned a case manager who develops a family case plan and arranges for services to assist in achieving the goals detailed in the plan (U.S. Department of Health and Human Services, 2005). The case manager monitors and coordinates services, assesses risk, and makes decisions regarding out-of-home placement of children (U.S. Department of Health and Human Services, 2005). A study examined the efficacy of case management of child maltreatment cases in the German healthcare system (Goldbeck, Laib-Koehnemund, & Fegert, 2007). Case managers had a variety of professions including social workers, counselors, psychotherapists, and physicians (Goldbeck et al., 2007).

Researchers found no support for the hypothesis that case workers found the interventions to be effective (Goldbeck et al., 2007). Similarly, controlled studies examining the efficacy of family preservation services have found no effects on out-of-home placements and recurrence of maltreatment (Littell & Schuerman, 2002; Schuerman, Rzepnicki, & Littell, 1994). Duration of services, number of services received, and intensity of caseworker contact also did not affect rates of out-of-home placement, recurrence of maltreatment, or case closing within the agency (Littell & Schuerman, 2002). The Illinois Family First Study, a randomized experiment, examined families assigned to family preservation services compared to those assigned to a minimal services control group (Schuerman et al., 1994). The study found no differences between the two groups (Schuerman et al., 1994). Possible reasons for the inefficacy of case management strategies include case mangers feeling overwhelmed by their responsibilities and full caseloads, difficulties in inter-institutional cooperation, and barriers to interagency collaborations and communication (Goldbeck et al., 2007). Perhaps due to these issues, some child welfare systems are seeking to implement evidence-based strategies (Chaffin & Friedrich, 2004).

Evidence-based practices (EBP) are services supported by "best-available clinical science" and have been demonstrated to be both safe and effective (Chaffin & Friedrick, 2004). EBP are programs that have been shown in randomized trials to reduce maltreatment, and that can be replicated a systematic manner (Chaffin & Friedrich, 2004) EBP are usually implemented with high standards of competence and fidelity (Chaffin & Friedrich, 2004).

Some of the evidence-based strategies for child maltreatment include programs such as Parent-Child Interaction Therapy (PCIT), MultiSystemic Therapy (MST), the Incredible Years, the Triple P model, and SafeCare® (Chaffin & Friedrick, 2004). PCIT focuses on the parent-child relationship with both parent and child participating in the program in an effort to improve interaction skills and decrease problem behavior (Borrego, Gutow, Reicher, & Barker, 2008). In families reported to Child Protective Services for child maltreatment, PCIT significantly reduced the reoccurrence of child abuse (Borrego et al., 2008). The Nurse Family Partnership Model is a home-visiting program provided by nurses to low-income, first-time mothers (MacMillan et al., 2009). The program has been extensively tested in randomized controlled trials in a variety of patient samples and geographic regions (MacMillan et al., 2009). The results of the trials found that the Nurse Family Partnership Model was effective in preventing future child abuse and neglect as well as child injuries (Olds et al., 1997). Lastly, the Triple P model, also known as the Positive-Parenting Program, is a system of parenting and family support that aims to enhance parental competence and reduce risk factors for child maltreatment (Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009). Evaluations of the program have found that the Triple P model has a preventive effect on substantiated cases of child maltreatment, out-of-home child placements, and child maltreatment injuries (Prinz et al., 2009).

The SafeCare® Program

The SafeCare® program was developed from its predecessor, Project 12-Ways, which also aimed to prevent child abuse and neglect (Lutzker & Rice, 1984). Whereas Project 12-Ways included skill training in twelve components, SafeCare® includes only

three (Gershater-Molko, Lutzker, & Wesch., 2003). Project 12-Ways and SafeCare® focus on improving parental skills in several areas and improving the home environment (Gershater-Molko et al., 2002). For example, in Project 12-Ways, parents were taught several new skill sets including basic skills training, stress reduction, assertiveness training, money management, home safety, job training, and parent-child interaction training (Gershater-Molko et al., 2002).

SafeCare® is an evidence-based, parent-training program for parents at-risk for child maltreatment or for parents who have been reported for abuse or neglect (Gershater-Molko et al., 2002). The model focuses on three skills: child health, home safety, and parent-child interaction (or parent-infant interaction depending on the age of the child). Parents participate in six weekly sessions in each module, with the full program lasting 18 – 20 weeks (Gershater-Molko et al., 2002). The SafeCare® model is unique in that it is one of the only home visiting programs that teach health, safety, and interaction skills in a brief and targeted manner (Gershater-Molko et al., 2002). Thus, it focuses on both neglect and physical abuse in newborns to children five years of age, an age group that is often neglected in maltreatment research (Gershater-Molko et al., 2002).

Evidence for SafeCare®

During the development of the SafeCare model, the three modules (parent-child or infant interaction, health, and safety) were validated using case studies. Researchers found that parents at risk for child abuse and neglect are often deficient in child interaction skills (Lutzker, Megson, Webb, & Dachman, 1985). A task analysis of possible interaction skills was performed to develop a complete list of validated behaviors to be included in the training lessons. Following the experiment, participants

were judged to display better interaction skills (Lutzker et al., 1985). Cases of child neglect are often cited when the home environment presents a danger to health (Tertinger, Greene, & Lutzker, 1984). The validation case study for the safety module involved the development of the Home Accident Prevention Inventory (HAPI), a tool to assess hazards in the home (Tertinger et al., 1984). Selected families underwent a baseline hazard assessment, were given feedback about hazards present, and were instructed on methods for making hazards inaccessible (Tertinger et al., 1984). Follow-up assessments showed decreases in hazards in the home, a characteristic that was maintained during an extended follow-up period (Tertinger et al., 1984). The health module was also assessed in a validation case study that evaluated the success of the health training portion of SafeCare. The study included three pairs of participants that were given health training in the form of written handouts, verbal instructions, modeling, practice, and reinforcement (Delgado & Lutzker, 1988). Following completion of the program, participant health knowledge and skill level was assessed to determine level of skill acquisition (Delgado & Lutzker, 1988). The study found that written materials alone did not improve parental skills, but actions of modeling, role-playing, and practicing were more successful in achieving positive results (Delgado & Lutzker, 1988). Validation of each of the measures allowed researchers to incorporate the three modules in future SafeCare studies.

Project SafeCare® was a four-year research grant project, using recidivism data to evaluate the efficacy of the SafeCare® program (Gershater-Molko et al., 2002) using a quasi-experimental design. In the study, researchers examined two sets of families, the comparison group received the standard “Family Preservation” program and the other set

received SafeCare® (Gershater-Molko et al., 2002). Families who completed SafeCare or FP were followed for child maltreatment recidivism, or additional reports of child maltreatment (Gershater-Molko et al., 2002). Three years after the start of the intervention, 15% of SafeCare® families had reports of child maltreatment compared to 44% of families who received the Family Preservation program (Gershater-Molko et al., 2002). Thus, the SafeCare® model was responsible for about a 2/3rds reduction in maltreatment reports to Child Protective Services (Gershater-Molko et al., 2002).

In a more recent study, researchers examined SafeCare® in a statewide full-scale implementation setting (Chaffin, Hecht, Bard, Silovsky, & Beasley, 2012). The study involved 2175 parents in the Child Protective Services program and 219 SafeCare® home visitors (Chaffin et al., 2012). The study was a two by two randomized cluster experiment evaluating SafeCare® versus services as usual and coached versus uncoached implementation strategies (Chaffin et al., 2012). The families were followed for an average of six years for recidivism data (Chaffin et al., 2012). The SafeCare® program was found to be effective in future reducing child maltreatment reports relative to services as usual with hazard ratios of 0.74-0.83 (Chaffin et al., 2012). The authors estimated that for every one thousand cases, assuming the observed recidivism rate of 45% annually, the implementation of SafeCare® would prevent between sixty-four and one hundred and four cases of child maltreatment recurrences (Chaffin et al., 2012).

Importance of Programs such as SafeCare®

Evidence-based practices are useful because these programs must be proven effective and safe prior to implementation (Chaffin & Friedrich, 2004). This policy of evaluating programs prevents the implementation of ineffective programs, saving

agencies time and resources. Most evidence-based practices rely on cognitive-behavioral strategies, which have been proven effective in producing positive outcomes (Gershater-Molko et al., 2002). The SafeCare® program targets primary care-givers of the child, usually a parent, who have received a child maltreatment complaint or who display risk factors for child maltreatment (Gershater-Molko et al., 2002). In 2006, 75.5% of child maltreatment perpetrators were the mother, father, or both parents (U.S. Department of Health and Human Services, 2008). Since parents are responsible for the majority of child maltreatment cases, parent education and training programs like SafeCare® are important in reducing incidence of child abuse and neglect.

Importance of treatment integrity

Theory-based treatments are made replicable through the use and development of treatment manuals (Schoenwald et al., 2011). The use of manuals alone, however, does not ensure that the treatment is being replicated with fidelity, or in the way the researchers intended (Schoenwald et al., 2011). In fact, several studies have shown that manuals by themselves are generally not sufficient to produce implementation with fidelity (Forgatch, Patterson, & DeGarmo, 2005; Mihalic, 2004; Schoenwald & Henggeler, 2004). Evaluating the fidelity of the treatment delivery is thus a key to understanding outcomes (Schoenwald et al., 2011). Specifically, fidelity data allows one to understand the extent to which the critical elements of a program were implemented. Thus, if there is a failure to find significant effects of an intervention, having fidelity data can help one know whether the lack of effectiveness was due to a failure of implementation (that is, the program was not implemented as intended) or a true failure of the program to produce differences (Schoenwald et al., 2011). Fidelity is also a

necessary measure to ensure internal validity (Mowbray, Holter, Teague, & Bybee, 2003). Fidelity data is important because it can be used to improve the quality of both the training and the treatment (Waltz, Addis, Koerner, & Jacobson et al., 1993).

Schoenwald et al. states that there are three components to treatment integrity: therapist treatment adherence, treatment differentiation, and therapist competence (2011). Therapist treatment adherence, referred to here as "fidelity", is the degree to which a therapist uses proscribed procedures; treatment differentiation is the degree to which treatments differ from one another; therapist competence is the level of skill and judgment in executing treatment (Schoenwald et al., 2011). Each of these three components captures a unique aspect that may influence treatment outcomes (Schoenwald et al., 2011). While some research exists on implementation fidelity, there is a lack of studies examining measures of competence, and little information regarding the relationship between fidelity and competence. The current study reviews audio recordings of SafeCare® home visiting sessions in an attempt to discover the relationship between measures of fidelity and competence.

Fidelity

Fidelity, the degree of adherence to treatment protocols, must be measured and analyzed in order to adequately interpret program outcomes (Schoenwald et al., 2011). As outlined by Schoenwald and colleagues (Schoenwald, et al., 2011), there are four main steps in the process of measuring fidelity. The first step is to identify relevant treatment components, which can include aspects of both treatment structure and process (Mowbray et al., 2003). The second is to determine who will provide ratings on these components. The third and fourth steps are to collect the data and to devise a summary

score based on the findings. Fidelity data is usually coded as "occurrence" versus "nonoccurrence" of a particular event as described in the treatment manual (Waltz et al., 1993). Fidelity can be assessed using direct or indirect methods (Schoenwald et al., 2011). A direct method of assessment involves observations of video or audio-taped sessions or live observations; this method requires a trained observer (Schoenwald et al., 2011). An indirect method of assessment involves questionnaires and checklists that are completed by the therapist or client (Schoenwald et al., 2011).

Fidelity indicators should be evaluated for reliability and validity (Mowbray et al., 2003). First, reliability should be assessed across various coders, examining the rate of inter-rater agreement (coefficient kappa, percent agreement, or Pearson correlations) (Mowbray et al., 2003). Coders of fidelity must adhere to coder protocols that will allow high inter-rater reliability (Schoenwald et al., 2011). Next, the internal structure of the data should be examined "empirically and in relation to expected results" (Mowbray et al., 2003). This can be done through a confirmatory factor analysis, internal consistency reliability, or cluster analysis (Mowbray et al., 2003). Lastly, validity should be assessed, examining differences between various sources of information and data (Mowbray et al., 2003). In the present study, inter-rater reliability data will be calculated as well as factor analysis data of the fidelity variables. Since all of the data comes from a set of audio recordings, achieving validity data will be difficult. SafeCare® fidelity is typically assessed using the "occurrence/nonoccurrence" method via direct observation either by live, in-person assessors, or by review of audio recordings of sessions.

Findings suggest that evidence-based programs with high fidelity are linked to more effective outcomes. In a study examining adherence to multisystemic therapy

(MST) consultation protocol, researchers examined the relationship among consultant behavior, therapist fidelity, and child outcomes (Schoenwald, Sheidow, & Letourneau, 2004). Pre- and post-treatment reports of youth behavior and functioning were obtained as a measure of child outcomes (Schoenwald et al., 2004). Positive associations were found supporting the link between therapist fidelity and improved youth behavior and functioning (Schoenwald et al., 2004).

Competence

In contrast to methods of measuring fidelity, competence data is usually measured on a frequency scale (Waltz et al., 1993). Due to the subjective nature of competence measures, raters should be knowledgeable of the program and have the ability to recognize session context (Waltz et al., 1993). In a study assessing the Oregon Model of Parent Management Training, researchers evaluated five dimensions of competence: knowledge, structure, teaching skill, clinical skill, and overall effectiveness (Forgatch et al., 2005). Coders scored competence using ten-minute segments from videotapes of therapy sessions (Forgatch et al., 2005). Each of the five dimensions was scored on a nine-point scale, with nine being the most competent value (Forgatch et al., 2005). The five items remained separate during analysis and were evaluated using principal components factor analysis, Cronbach's alpha reliability, and intraclass correlation coefficients (Forgatch et al., 2005). Another study scored competence on a five-point scale, rating the extent to which the six or seven core elements were present in the session (Luborsky, Woody, McLellan, O'Brien, & Rosenzweig, 1982). A score of one meant the element did not occur at all, a score of five meant the element was "very much" present in the session (Luborsky et al., 1982). In this study, there were two main raters, and the

researchers performed inter-rater reliability tests (Luborsky et al., 1982). Correlation tests among the items revealed high degrees of intercorrelation, preventing further statistical analyses to examine how the scores varied by treatment type (Luborsky et al., 1982).

As stated previously, therapist competence is a component of treatment integrity involving the level of skill and judgment in executing treatment (Schoenwald et al., 2011). The treatment protocol should be executed in such a way to promote behavioral change (Forgatch, Patterson, & DeGarmo, 2005). In program implementation, therapists must stay true to theory but also be able to adapt to the specifics of the treatment context (Forgatch et al., 2005) such as degree of impairment of client, client's life situation and stress, particular problems of the client, stage of therapy, degree of improvement, and sensitivity to intervention timing (Waltz et al., 1993).

This ability to adapt to circumstances appears to increase with therapist experience (Forgatch et al., 2005). In the evaluation of the Oregon Model of Parent Management Training, experienced therapists spent 60% of the time on the session agenda, compared to 80% of the time for less experienced therapists (Forgatch et al., 2005). The less experienced therapists had higher rates of dropout, suggesting that therapist competence may increase family retention. Competence is necessary to an evidence-based program to ensure that the program is being implemented in the way it was intended. High levels of competence may also correlate to better outcomes. A recent study supported this hypothesis where high therapist competence ratings predicted change in observed parenting practices (Forgatch et al. 2005). Competence data can

inform the training of therapists, improving the quality of both the training and treatment for future implementations (Waltz et al., 1993).

Past Research on the Fidelity and Competence Relationship

Although fidelity and competence are both considered components of treatment integrity (Schoenwald et al., 2011), little research has been conducted to understand the relationship between the two constructs. Some researchers have combined the two measures into a single concept called "competent adherence" (Forgatch et al., 2005). Competent adherence requires both for the procedures to be carried out and for the procedures to be carried out with sophisticated skill that promotes behavioral change (Forgatch et al., 2005). As noted, the two constructs are typically measured in a different manner; fidelity an occurrence/nonoccurrence, and competence on a frequency scale (Waltz et al., 1993). While some research exists on fidelity of evidence-based programs, little research exists on competence and almost no research exists examining the relationship between the two measures. It reasons that the two concepts would be related as they are both part of overall treatment integrity, but the exact relationship is still to be determined. Moreover, little is known about which of the variables is more important in changing the behavior of the client or family. That is, is it more important to have a therapist who is highly adherent to a protocol, one that is highly competent, or both?

The current research

The current study aims to fill the gap in the literature regarding the relationship between fidelity and competence. This goal will be accomplished by coding SafeCare® audio recordings for measures of both fidelity and competence and then analyzing the data for reliability and correlations. In keeping with prior conventions, fidelity will be

scored as occurrence/non-occurrence, and competence will be scored on a likert-type scale.

Chapter III

METHODS AND PROCEDURES

This study, (Protocol Number: H09125), was approved by Georgia State University Institutional Review Board in October, 2011.

Description of Data and Data Source

The data for this study was obtained from 209 audio recordings of SafeCare sessions made by home visitors during implementing SafeCare in Georgia. At the time the data was aggregated, the Georgia statewide implementation of SafeCare® had involved a total of 50 agencies and 295 individuals receiving training (Whitaker et al., 2012). Audio recordings were selected for coding as part of a larger evaluation of SafeCare in Georgia. Out of 1320 audios, 217 audios were selected to be coded by NSTRC research staff. Eight of the 217 audios were incomplete or corrupt and were removed from the dataset, bringing the final number to 209 audios. The audios were selected from audios from 61 different home visitors (who were coached by 34 individuals). Selection of audios for coding was done to distribute recordings across home visitors and coaches as much as possible to examine variation according to those factors (not reported here). When available, each home visitor had a minimum of two audios selected for coding. For these analyses, 6 home visitors contributed 1 recording, 16 contributed 2 recordings, 8 contributed 3 recordings, 10 contributed 4 recordings, 4 contributed 5 recordings, 5 contributed 6 recordings, 1 contributed 7 recordings, 4 contributed 8 recordings, and 2 contributed 9 recordings. The audio recordings covered

all three SafeCare® modules: home safety (N = 61), health (N = 68), and parent child (N = 46) or infant interaction (N = 34). Sessions were either baseline assessment sessions (n = 52), training sessions (n = 137), or end of module sessions (n = 20). The number of audios in each module and session type are described in Table 1.

Table 1. *Number of Audios Stratified by Module and Session Type*

		Module			Total
		Safety	Health	PCI/PII	
Session Type	Assessment	14	19	12/17	52
	Training	41	43	29/24	137
	End-of-Module	6	6	5/3	20
Total		61	68	46/34	209

Demographic Information of Home Visitors

Demographic information was available for 232 of the 295 individuals receiving training, as 63 did not complete the demographic forms (Whitaker et al., 2012). The average age of the trainees was 39.8 years, 88.1% were female, and 60% were African American (Whitaker et al., 2012). The group of trainees was highly educated with 86.1% having a Master's degree or Ph.D, and largely new to the field with 76.6% having less than five years work experience (Whitaker et al., 2012). Note that these numbers represent the overall pool of home visitors, not necessarily the home visitors whose audios were included in this study. While these figures may not be fully representative of

the home visitors for the present study, the information is presented to give an idea of the qualifications and demographic characteristics often found in a SafeCare home visitor.

Study Procedure

Coding of fidelity and competence was conducted by six individuals (two full time staff and four Masters of Public Health graduate students). Coders were trained in the fidelity coding process before beginning the current study. Training included review of the training manual containing detailed session outlines that home visitors followed as well as the fidelity checklists with definitions for each item. Coders attended weekly group meetings to assess coding procedures, discuss problems encountered in coding, and to make improvements in the definitions that would improve coder reliability. Several practice audio recordings were coded as a group during these meetings to establish reliability and resolve discrepancies. Coders established reliability on the fidelity measure of greater than 90% prior to independent coding.

At the beginning of the study, a six-item three-point competence scale was created for each type of session (assessment, training, and end-of-module). Because the competence measures were new (unlike fidelity measures), coders met extensively with NSTRC faculty to discuss and refine the competence definitions. Because the competence scales were newly developed, there was no minimum reliability score for coders prior to independent coding. Coders scored several audios for competence as a group in an effort to make the coding as reliable as possible. Due to time constraints of the current project, it was not possible to wait until reliability for competence coding reached 90% before beginning the study.

Each coder was assigned audio recordings to code over the course of four months by the study coordinator. Eleven percent (n = 22) of recordings were double coded for inter-rater fidelity reliability; ten percent (n=20) of recordings were double coded for inter-rater competency reliability.

Description of Fidelity and Competence Checklists

In keeping with normal convention for SafeCare implementation, coders scored fidelity using three standard SafeCare® fidelity checklists, one each for assessment, training, and end of module sessions (See Appendix A for checklists). Coders also scored competence using three standard SafeCare® competence checklists, one each for assessment, training, and end of module sessions (See Appendix B for checklists). The three fidelity and competence checklists contained slightly different content that was pertinent to the type of session being conducted.

During the period of coding for this project, the SafeCare fidelity checklists were undergoing a revision. As a result, two slightly different sets of fidelity forms were used in the coding of this project. One hundred forty four audios were coded using one set of items, and 65 were coded the slightly different set of items. To utilize all the data, items across the two forms were "combined" into a single set of 34 items common to both forms (both forms captured all of the important content of SafeCare; the revision was made to simply and clarify some items). The final set of fidelity items included 7 items unique to the assessment form, 6 items unique to the training form, 7 items unique to the end-of-module form, 1 item included in both the assessment and training forms, 1 item included in both the training and end-of-module forms, and 12 items found in all three checklists. The final sets of items for each form are included in Appendix C.

All fidelity checklists were scored on a dichotomous scale with a “not applicable” option. Using the definitions provided in the training manual, each item was scored as a “+”, “-“, or “n/a”, indicating whether the behavior was performed or not, or was not relevant (either the provider did not have the opportunity to perform the item, the item did not apply to that specific session, or the coder was unsure whether the action occurred because of the audio recording).

A six-item, three-point competency scale was developed for the purpose of scoring SafeCare® home visiting audio recordings. Three competency checklists were created that differed slightly depending on the session. All three competency checklists (assessment, training, and end of module), contained the items “Home Visitor Conduct”, “Clinical Skills”, “Home Visitor Responsivity” and “Session Closing Skills”. The assessment checklist contained the items “Module and Session Illustration” and “Formal Assessment Skills”. The training checklist contained the items “Session and Assessment Illustration” and “Training Skills”. The end of module checklist contained the items “Session and Assessment Illustration” and “Feedback and Generalization of Skills”. The six competence items were determined to be similar constructs across all three forms, and thus six final competence items were formed for the dataset: “Module/Session/Assessment Illustration”, “Home Visitor Conduct”, “Clinical Skills”, “Formal Assessment/Training/Feedback Skills”, “Home Visitor Responsivity”, and “Session Closing Skills” (see Appendix D).

Competence was rated on a one to three scale with the option of “n/a” for “Module/Session/Assessment Illustration” and “Home Visitor Responsivity”. Definitions accompanied each score to guide the coders in how to rate the item. A score of “1” was

usually a case in which the home visitor neglected large portions of the guidelines, or performed actions in a manner that was ineffective or offensive to the parent. A score of "2" was usually a case in which the home visitor accomplished some goals, but not all, or the items were accomplished in a manner that could be improved. A score of "3" indicated no room for improvement; the home visitor accomplished everything stated in the session guidelines in an effective manner. Scores of "n/a" were used in cases where the items were not captured on the audio or where opportunities for the item did not arise.

Inter-rater Reliability

Reliability was assessed by computing percent agreement on an item-by-item basis for both fidelity and competence. Responses for each audio were compared using a binary variable method (yes/no), representing the agreement between the two coders. For example, if both coders scored "+" for fidelity item 1, it counted as a "yes" for fidelity agreement. Similarly, if both coders scored a "3" for competence item 1, it counted as a "yes" for competence agreement. Percent agreement was calculated by adding up total items agreed upon divided by total number of items scored. Eleven percent of audios (n=22) were double coded for inter-rater fidelity reliability. The average fidelity percent agreement for all twenty-two audios was 92.2%. Inter-rater fidelity reliability stratified by session and module type is shown in Tables 2 and 3, respectively. Reliability appeared somewhat lower for end of module sessions, but note that only two sessions were included. Ten percent of audios (n=20) were double coded for inter-rater competence reliability. The average competence percent agreement for all twenty audios was 70.8%. Inter-rater reliability for competence stratified by session and module type is shown in Tables 4 and 5, respectively.

Table 2. *Inter-rater Reliability for Fidelity by Session Type*

	Session Type		
	Assessment (n=4)	Training (n=16)	End-of-Module (n=2)
Percent Agreement (%)	97.70	91.85	83.95 Total = 92.2

Table 3. *Inter-rater Reliability for Fidelity by Module Type*

	Module Type		
	Safety (n=9)	Health (n=7)	PCI/PII (n=6)
Percent Agreement (%)	90.3	92.24	94.99 Total = 92.2

Table 4. *Inter-rater Competence Reliability by Session Type*

	Session Type		
	Assessment (n=4)	Training (n=15)	End-of-Module (n=1)
Percent Agreement (%)	79.17	68.89	66.67 Total = 70.83

Table 5. *Inter-rater Competence Reliability by Module Type*

	Module Type		
	Safety (n=8)	Health (n=6)	PCI/PII (n=6)
Percent Agreement (%)	79.17	66.67	63.89 Total = 70.83

Statistical Analyses

Data were entered and analyzed using SPSS version 18. Fidelity responses were input in the format: "-"= 0, "+"= 1, and "N/A"= missing. Competency responses were input in the format: "1"= 1, "2"= 2, "3"= 3, and "N/A"= missing. Before conducting the primary analyses examining the relationship between fidelity and competence, analyses were conducted to examine the properties of each scale.

Chapter IV

RESULTS

Analysis of Fidelity Scale

Fidelity Factor Analysis

Factor analyses were performed on fidelity items in an attempt to examine the dimensions that may be present on the fidelity scales. Because each fidelity checklist contained different items, factor analyses were conducted by module type (e.g., one factor analysis for ratings of assessment sessions, one for training sessions, and one for end-of-module sessions). This reduced the number of cases available for the factor analyses to 52 for assessment sessions, 137 for treatment sessions, and 20 for end of module sessions. Because of the sample sizes, factor analyses were focused on the assessment and treatment sessions. However, due to the high rates of missing data (n/a's) and low variance (very few "-"), stable factor structures could not be found. When the n/a's were set to missing, too few cases remained to interpret the results. A coding structure in which "-", "n/a", and "+" were coded as -1, 0, and 1 respectively was attempted. However, there was too little variance on some items to yield a reliable factors structure. Some items had no variance at all.

Classification of Fidelity Checklist Items

To examine two aspects of fidelity prominent in the literature (Moncher & Prinz, 1991), and in keeping with past research (Tiwari, 2010), fidelity checklist items were then classified into two categories: process fidelity and content fidelity. Process fidelity

items involved communication skills and the ability to interact with the family (Tiwari, 2010). Content fidelity items involved integral components of the SafeCare model and parent skills training (Tiwari, 2010). Categorization of assessment and training checklist items were collected from previous research (Tiwari, 2010). Tiwari's (2010) research process involved three NSTRC staff and one faculty member reviewing the items and classifying each as "content", "process", or "both" (overlap between the two categories) (Tiwari, 2010). If three responses were in agreement, the item was classified as content or process. Items classified as "both" were considered as both content and process. If the raters did not reach an agreement, the item was not classified. The same process was utilized for several additional items (those found on the end-of-module checklist) that were not categorized in Tiwari's work. Four raters were asked to categorize an additional seven end-of-module fidelity items. In total, 9 items were categorized as process fidelity, 19 were categorized as content fidelity, and 6 were not categorized. Three main variables were created for the dataset: content fidelity (n=19), process fidelity (n=9), and total fidelity (n=34). Each variable was created by calculating the percent of "+" over the total number of items scored as "+" or "-". The breakdown of fidelity item categorization can be found in Appendix C.

Analysis of the Competence Scale

Internal consistency

Correlations were performed for the six competence items (shown in Table 6). For the most part, ratings were not highly correlated. Item 2 (Home Visitor Conduct) correlated with item 5 (Home Visitor Responsivity) at a level of .503. Item 3 (Clinical

Skills) correlated with item 5 (Home Visitor Responsivity) at a level of .40. All of the other correlations fell below .40.

Cronbach's Alpha reliability test was performed using the six competence items. Due to the high rates of missing data for item 5 (Home Visitor Responsivity), this item was omitted and the test was repeated using items 1, 2, 3, 4, and 6. The Cronbach's Alpha for the five items was .464. The competence scale was clearly not unidimensional.

Table 6. *Correlation of All Six Competence Items*

		Competence Item					
		Module Illustration	Home Visitor Conduct	Clinical Skills	Formal Assessment /Training/ Feedback Skills	Home Visitor Responsivity	Closing Skills
Module Illustration	Pearson Corr.	1					
	Sig. (2 tailed)						
	N	207					
Home Visitor Conduct	Pearson Corr.	-.024	1				
	Sig. (2 tailed)	.731					
	N	207	209				
Clinical Skills	Pearson Corr.	.03	.348**	1			
	Sig. (2 tailed)	.67	.000				
	N	207	209	209			
Formal Assessment/ Training/ Feedback Skills	Pearson Corr.	.216**	.160*	.097	1		
	Sig. (2 tailed)	.002	.021	.163			
	N	206	208	208	208		
Home Visitor Responsivity	Pearson Corr.	-.183	.503**	.400*	.134	1	
	Sig. (2 tailed)	.286	.002	.014	.43		
	N	36	37	37	37	37	
Closing Skills	Pearson Corr.	.183**	.151*	.239**	.156*	.240	1
	Sig. (2 tailed)	.009	.031	.001	.026	.159	
	N	203	205	205	204	36	205

** = significant at the .01 level
* = significant at the .05 level

Competence Factor Analysis

Initially, a principal components factor analysis with Varimax rotation was performed on the six competency items. However, all but 35 cases were eliminated due to the large numbers of missing values (n/a's) for the Home Visitor Responsivity item. Thus, a factor analysis with Varimax rotation was conducted with the remaining five items (N=202). Results showed that a two-factor structure fit the data best. As seen in Table 7, there were two eigenvalues greater than one, and the two-factor solution accounted for 56% of the variation among the items. The first factor included two items that loaded at greater than .60 (Home Visitor Conduct and Clinical Skills), and was termed *process competency* as it involves communication and interaction skills, similar to process fidelity (see Table 8). The second factor included three items that loaded at greater than .50 (Module/Session/Assessment Illustration, Formal Assessment/Training/Feedback Skills, and Closing Skills) and was termed *content competency* as it involves components of the SafeCare model, similar to content fidelity (see Table 8). Given the results of the factor analysis, three variables were created for competency: content competency (the mean of 3 items), process competency (the mean of 2 items), and total competency (the mean of all 6 competency items).

Table 7. *Factor analysis results from the five competence items*

Components	Initial Eigenvalues	
	Total	% of Variance
1	**1.629**	32.589
2	**1.164**	23.272
3	.865	17.308
4	.723	14.451
5	.619	12.38

Table 8. *Loadings for two-factor solution from factor analysis of competence items.*

	Dimension	
	Process Competence	Content Competence
Module/Session/Assessment Illustration	-.191	**.796**
Home Visitor Conduct	**.801**	.02
Clinical Skills	**.786**	.111
Formal Assessment/ Training/ Feedback Skills	.146	**.645**
Closing Skills	.339	**.545**

Correlations between the two raters for the mean competence score were examined, as well as the process and content competence means (shown in Table 9). The two raters scores for total competence were modestly correlated, $r = 0.498$ ($p < .05$), but scores for process competence ($r = .33$) and for content competence ($r = .159$) were not significantly correlated. There was some variation in correlations by module type and session type with Safety sessions and assessment sessions having the highest correlations, but there are likely too few cases to suggest meaningful differences. These low correlations, along with the reliability results presented above, suggest that inter rater reliability for competence was poor.

Table 9. *Correlation of Inter-rater Competence Reliability*

	Competence Dimension		
	Process Competence (n=20)	Content Competence (n=20)	Total Competence (n=20)
Pearson correlation	.333	.159	498*

** = significant at the .01 level
* = significant at the .05 level

Primary Analyses: Fidelity-Competence Correlations

Pearson correlation analyses were performed with the six main variables: content fidelity, process fidelity, total fidelity, content competence, process competence, and total competence. Table 10 displays descriptive statistics for all sessions combined and Table 11 shows correlation data for all sessions combined. The bolded values in Table 11

highlight the correlations between process fidelity and process competence, content fidelity and content competence, and total fidelity and total competence (correlations that we would expect to be the highest). Process fidelity correlated with process competence at .383, content fidelity correlated with content competence at .629, and total fidelity correlated with total competence at .615. The overall correlations of .615 suggest that fidelity and competence are strongly related, but are perhaps different constructs.

Correlations by session type were also examined (assessment, training, end of module). Table 12 shows descriptive statistics of fidelity and competence session type, and Table 13 presents the results of the correlational analyses. The bolded values in Table 13 highlight values for process fidelity and process competence, content fidelity and content competence, and total fidelity and total competence correlations. For process fidelity and process competence correlations, assessment sessions were most highly correlated at .528, with training sessions lowest at .285, and end-of-module sessions in the middle at .444. For content fidelity and content competence correlations, all session types were relatively equal with correlation values of .621, .637, and .641 for assessment, training, and end-of-module sessions, respectively. For total fidelity and total competence correlations, all session types were relatively equal with correlation values of .641, .616, and .613 for assessment, training, and end-of-module sessions, respectively.

Correlation analyses were repeated, stratifying the data according to module type (shown in Table 15). Table 14 shows descriptive statistics stratified by module type. The bolded values in Table 15 highlight values for process fidelity and process competence, content fidelity and content competence, and total fidelity and total competence. For process fidelity and process competence correlations, health module

sessions were most highly correlated at .452, with safety sessions lowest at .259, and parent-child/parent-infant interaction sessions in the middle at .379. For content fidelity and content competence correlations, parent-child/parent-infant interaction sessions were most highly correlated at .726, health sessions were lowest at .395, and safety sessions were in the middle at .636. For total fidelity and total competence correlations, parent-child/parent-infant interaction and health sessions were relatively equal with .657 and .636 respectively, with safety sessions slightly lower at .568.

Table 10. *Descriptive Statistics for Fidelity and Competence ratings for All Sessions*

	Mean	Standard Deviation	N
Process Fidelity	.95	.095	209
Content Fidelity	.922	.131	209
Total Fidelity	.933	.085	209
Process Competence	2.696	.395	209
Content Competence	2.453	.443	209
Total Competence	2.557	.335	209

Table 11. *Fidelity-Competence Correlation Analysis for All Sessions*

		Process Fidelity	Content Fidelity	Total Fidelity
Process Competence	Pearson corr.	.**383****	-.016	.214**
	Sig. (2-tailed)	.000	.822	.002
	N	209	209	209
Content Competence	Pearson corr.	.348**	.**629****	.669**
	Sig. (2-tailed)	.000	.000	.000
	N	209	209	209
Total Competence	Pearson corr.	.467**	.469**	.**615****
	Sig. (2-tailed)	.000	.000	.000
	N	209	209	209

** = significant at the .01 level
*= significant at the .05 level

Table 12. *Descriptive Statistics for Fidelity and Competence Ratings by Session Type*

	Session Type					
	Assessment (N=52)		Training (N= 137)		End-of-Module (N = 20)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Process Fidelity	.9185	.139	.9668	.0659	.9165	.0999
Content Fidelity	.9354	.128	.9196	.132	.9035	.136
Total Fidelity	.920	.0916	.940	.0804	.922	.094
Process Competence	2.587	.428	2.719	.388	2.825	.294
Content Competence	2.468	.454	2.438	.443	2.517	.425
Total Competence	2.52	.350	2.558	.333	2.645	.309

** = significant at the .01 level
* = significant at the .05 level

Table 13. *Fidelity-Competence Correlation Analysis Stratified by Session Type*

	Session Type								
	Assessment (n=52)			Training (n=137)			End-of-Module (n=20)		
	Process Fidelity	Content Fidelity	Total Fidelity	Process Fidelity	Content Fidelity	Total Fidelity	Process Fidelity	Content Fidelity	Total Fidelity
Process Competence									
Pearson corr.	.**528****	-.113	.287*	.**285****	.042	.168	.**444***	-.017	.267
Sig. (2-tailed)	.000	.425	.039	.001	.629	.05	.05	.944	.254
Content Competence									
Pearson corr.	.355**	.**621****	.637**	.40**	.**637****	.712**	.523*	.**641****	.602**
Sig. (2-tailed)	.01	.000	.000	.000	.000	.000	.018	.002	.005
Total Competence									
Pearson corr.	.550**	.425**	.**641****	.458**	.493**	.**616****	.615**	.535*	.**613****
Sig. (2-tailed)	.000	.002	.000	.000	.000	.000	.004	.015	.004

** = significant at the .01 level
* = significant at the .05 level

Table 14. *Descriptive Statistics for Fidelity and Competence by Module Type*

	Module Type					
	Health (N = 68)		Safety (N = 61)		PCI/PII (N = 80)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Process Fidelity	.945	.127	.956	.0732	.950	.0779
Content Fidelity	.953	.079	.932	.109	.888	.170
Total Fidelity	.946	.073	.945	.0691	.914	.100
Process Competence	2.632	.429	2.746	.372	2.713	.380
Content Competence	2.471	.393	2.536	.436	2.375	.478
Total Competence	2.540	.343	2.624	.342	2.520	.319

** = significant at the .01 level
* = significant at the .05 level

Table 15. *Fidelity-Competence Correlation Analysis Stratified by Module Type*

	Module Type								
	Health (n=68)			Safety (n=61)			PCI/PII (n=80)		
	Process Fidelity	Content Fidelity	Total Fidelity	Process Fidelity	Content Fidelity	Total Fidelity	Process Fidelity	Content Fidelity	Total Fidelity
Process Competence									
Pearson corr.	.**452****	.197	.479**	.**259***	.187	.338**	.**379***	-.182	.002
Sig. (2-tailed)	.000	.108	.000	.044	.150	.008	.001	.107	.983
Content Competence									
Pearson corr.	.435**	.**395****	.574**	.325*	.**636****	.554**	.324*	.**726****	.767**
Sig. (2-tailed)	.01	.001	.000	.011	.000	.000	.003	.000	.000
Total Competence									
Pearson corr.	.533**	.376**	.**636****	.373**	.565**	.**568****	.485**	.522*	.**657****
Sig. (2-tailed)	.000	.002	.000	.003	.000	.000	.000	.000	.000

** = significant at the .01 level
* = significant at the .05 level

Chapter V

DISCUSSION

The purpose of this study was to examine the relationship between measures of fidelity and competence. While some research exists on implementation fidelity, there is a lack of studies examining measures of competence, and relatively little information regarding the relationship between fidelity and competence. Fidelity and competence, two key components of treatment integrity, are vital to evidence-based programs. If the current study demonstrates that fidelity and competence to be highly related and perhaps the same construct, programs such as SafeCare can choose to evaluate only one measure, thus eliminating repetitive coding procedures.

To answer the research question, 209 SafeCare home visiting audiotapes were coded for fidelity and competence. Fidelity and competence items were classified into process and content categories, forming the six main variables of process fidelity, content fidelity, total fidelity, process competence, content competence, and total competence.

Reliability Analyses

Inter-rater reliability analyses revealed that reliability of fidelity coding was excellent at 92%, but reliability of competence coding fell far short of that figure at 70% agreement. Competence reliability was stratified by session and module type to see if any category met the reliability standard, however all of the categories fell below 90% reliability. When examining the correlations between two raters' competence scores, correlations were significant at .50, but far below standards for considering coders reliable. Since the competence scale was newly developed and was undergoing revisions,

it was much more difficult to code in a reliable manner. Additionally, ratings on the competence scale are more subjective than the fidelity scale, contributing to the lack of reliability for the former. The lack of reliability in competence coding must be considered when interpreting the main results of the study

Factor Analyses

Results from the five-item competence factor analysis showed that a two-factor structure fit the data best. Two process-related items, Home Visitor Conduct and Clinical Skills, loaded onto the first factor. These items involve communication and interaction skills, similar to process fidelity. Three content-related items, Module/Session/Assessment Illustration, Formal Assessment/Training/Feedback Skills, and Closing Skills, all loaded onto the second factor. These items involve components of the SafeCare model, similar to content fidelity. This two-factor competence structure not only supports the existing two-factor fidelity model, the loading pattern supports the categorization of "process" and "content" items for both fidelity and competence measures.

Primary Analyses

The main analysis included performing correlations on the six main variables of content fidelity, process fidelity, total fidelity, content competence, process competence, and total competence. The results show that content items were more highly correlated than process items as well as all the items together. Process items involve communication skills and rapport with the family; since these are often skills that cannot be taught, the correlations may be lower than for more concrete, training skills. The total correlation level can be interpreted as that fidelity and competence are strongly related

measures, but are not identical constructs. Since fidelity and competence are two parts of treatment integrity, it is expected that they should be somewhat related.

The fidelity-competence relationship was examined by session type as well. There was relatively little variation in the fidelity-competence relationship for total scores and for content scores, but process scores showed some variation with training sessions having a relatively low correlation compared to assessment and end of module sessions. During training sessions, the home visitor may be more focused on teaching skills to the parent and may neglect conversational aspects common to process fidelity and process competence items. Training sessions may be the most important type of sessions to attend to process issues, however, as home visitors provide the client with corrective feedback.

The fidelity-competence relationship was examined by module as well. The overall fidelity-competence relationship showed little variation by module, but content fidelity-competence was most strongly related in parent interaction sessions, and most weakly related in health sessions. In contrast, process fidelity-competence was most strongly related in health sessions and most weakly related in safety sessions. All three modules involve similar evaluation, teaching, and feedback processes, so the variation in correlation values is not expected and may be a reflection of the new competence scale.

Study Limitations

There were several areas of limitations for the current study. One limitation was related to the time frame in which the study was carried out. In order to meet deadlines, coding of audiotapes and data analysis occurred within a single semester, not allowing for full development of the competence scale or for competence reliability to achieve 90% prior to independent coding. Another limitation was that the coders had different levels

of experience with regard to SafeCare; two of the six coders were new members and had little prior exposure to fidelity and competence coding. The six-item three-point competence scale was newly developed at the beginning of the study, another point of weakness to the study. The new competence scale and changing item definitions could partly account for the low competence reliability data as well as the poor correlational data. Several audios had poor sound quality, possibly affecting scores. Use of the audio format might have also been a weakness. Out of the original set of fidelity items, 9 were items requiring visual cues that we were unable to score using the audio format. The exclusion of these items might have led to skewed data. Lastly, there was little prior research examining the relationship between fidelity and competence measures, and thus there were no standardized procedures for conducting this study.

Implications for SafeCare

Reliability coding for fidelity measures met SafeCare standards of 90% reliability and above. However, inter-rater reliability for competence measures fell well below this standard (a level that does not control for chance). The goal for SafeCare coders would be to continue refining competence definitions and attempting to remove the subjective nature from the competence coding process. With these two efforts, competence reliability should increase to an acceptable level.

The correlation level of total fidelity to total competence suggests that the two measures are strongly related, but are not identical constructs. Since the correlation does not approach one (meaning they do not measure they same thing), it is advisable for SafeCare coders to continue to code both fidelity and competence to avoid missing valuable components of the session.

Future Research Aims

Future research could repeat this study, allowing time for the competence scale to become more fully developed. A study using two established scales would produce more reliable data and allow for better conclusions. A study with a larger audio sample size and better sound quality would also help coders produce the most reliable data. Coders who are well informed about SafeCare and who are knowledgeable in coding fidelity and competence would be the best choice for future studies.

Home visitor process fidelity and process competence had higher mean values than home visitor content fidelity and content competence. Future studies could examine if process items should be included in SafeCare training manuals or if these items are characteristics innate to the home visitor. If the latter is true, more time and energy could be devoted to increasing standards of the content items. Content competence items had the lowest correlation to the reliability coder, suggesting difficulties coding content items as well.

Future research is needed to examine the relationship between fidelity, competence and client outcomes. It has been suggested that programs with high levels of fidelity and competence correlate to greater client behavior change (Schoenwald et al., 2004; Forgatch et al. 2005), but there is no research to identify which of the two factors relates more strongly to client behavior change (or whether they are equally important). Is it better to have high fidelity, high competence, or are both constructs necessary to achieve positive results? Increased data on the effects of treatment integrity on parental outcomes would not only add to the knowledge base for evidence-based programs, but also inform future SafeCare practices regarding fidelity and competence of home visitors.

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APPENDIX A: Fidelity Checklists

Home Visitor Fidelity Checklist: Assessment

Home Visitation Staff _____ Session Date _____ Family #_____
Coach_____ Module_____ In-person or Recorded?_____

Opens the session				
1	Exchanges an appropriate initial greeting	+	-	n/a
2	States goals for the session	+	-	n/a
Demonstrates appropriate demeanor				
3	Communicates empathy, warmth, understanding	+	-	n/a
Uses active listening techniques				
4	Uses words/expressions (e.g., "uh-huh") to encourage the parent to talk	+	-	n/a
5	Uses open-ended questions	+	-	n/a
6	Uses reflecting statements	+	-	n/a
7	Uses summarizing statements	+	-	n/a
Gives overviews				
8	Module overview	+	-	n/a
9	Session overview	+	-	n/a
Explains the assessment				
10	Explains the purpose of the assessment	+	-	n/a
11	Explains the process of the assessment	+	-	n/a
Completes the assessment				
12	Assesses the required number of activities/rooms/scenarios	+	-	n/a
13	Assesses the required variety of activities/rooms/scenarios	+	-	n/a
14	Completes the necessary forms	+	-	n/a
15	Provides general, positive feedback about the assessments	+	-	n/a
Addresses issues that arise during the session				
16	Encourages the parent to ask questions and express concerns	+	-	n/a
17	Responds to parent questions and concerns	+	-	n/a
18	Uses problem solving approaches as appropriate	+	-	n/a
Follows an appropriate closing sequence				
19	Summarizes the session	+	-	n/a
20	Asks for and answers parent questions	+	-	n/a
21	Gives positive feedback	+	-	n/a
22	Schedules meeting date/time for next week	+	-	n/a
		Items scored +		
Percent correct = Items scored + / Total items scored		Total items scored + or -		

Home Visitor Fidelity Checklist: Training

Home Visitation Staff _____ Session Date ___ Family #_____
Coach_____ Module_____ In-person or Recorded?_
__

Opens the session				
1	Exchanges an appropriate initial greeting	+	-	n/a
2	States goals for the session	+	-	n/a
Demonstrates appropriate demeanor				
3	Communicates empathy, warmth, understanding	+	-	n/a
Uses active listening techniques				
4	Uses words/expressions (e.g., "uh-huh") to encourage the parent to talk	+	-	n/a
5	Uses open-ended questions	+	-	n/a
6	Uses reflecting statements	+	-	n/a
7	Uses summarizing statements	+	-	n/a
Conducts assessments as needed				
8	Conducts assessments as indicated in the Outline	+	-	n/a
9	Explains the purpose of the assessments	+	-	n/a
10	Explains the process of the assessments	+	-	n/a
Trains the parent				
11	Uses the appropriate material (SICC-P and scenarios, HAPI-P, PAT-P, PAT-Infant) to train the parent	+	-	n/a
12	Models steps and behaviors	+	-	n/a
13	Has parent practice an appropriate number of times	+	-	n/a
14	Balances explain vs. modeling behaviors and steps	+	-	n/a
15	Provides specific, positive feedback	+	-	n/a
16	Provides specific, corrective feedback	+	-	n/a
Addresses issues that arise during the session				
17	Encourages the parent to ask questions and express concerns	+	-	n/a
18	Responds to parent questions and concerns	+	-	n/a
19	Uses problem solving approaches as appropriate	+	-	n/a
Follows an appropriate closing sequence				
20	Summarizes the session	+	-	n/a
21	Gives positive feedback	+	-	n/a
22	Schedules meeting date/time for next week	+	-	n/a
		Items scored +		
Percent correct =		Total items scored + or -		

Home Visitor Fidelity Checklist: End of Module

Home Visitation Staff _____ Session Date _____ Family #_____
Coach_____ Module_____ In-person or Recorded?_____

Opens the session				
1	Exchanges an appropriate initial greeting	+	-	n/a
2	States goals for the session	+	-	n/a
Demonstrates appropriate demeanor				
3	Communicates empathy, warmth, understanding	+	-	n/a
Uses active listening techniques				
4	Uses words/expressions (e.g., "uh-huh") to encourage the parent to talk	+	-	n/a
5	Uses open-ended questions	+	-	n/a
6	Uses reflecting statements	+	-	n/a
7	Uses summarizing statements	+	-	n/a
Conducts assessments and further training as needed				
8	Conducts assessments as indicated in the Outline	+	-	n/a
9	Explains the purpose of the assessments	+	-	n/a
10	Explains the process of the assessments	+	-	n/a
11	Provides descriptive, corrective input to help the parent achieve mastery/success	+	-	n/a
12	Tactfully communicates to parent if they cannot move to the next module	+	-	n/a
13	Provides specific, positive feedback	+	-	n/a
14	Provides specific, corrective feedback	+	-	n/a
Addresses issues that arise during the session				
15	Encourages the parent to ask questions and express concerns	+	-	n/a
16	Responds to parent questions and concerns	+	-	n/a
17	Uses problem solving approaches as appropriate	+	-	n/a
Follows an appropriate closing sequence				
18	Summarizes the session	+	-	n/a
19	Gives general positive feedback	+	-	n/a
20	Provides overview of the next session/Module, if appropriate	+	-	n/a
21	Completes forms for next module (Daily Activities/Home Safety Consent), if needed	+	-	n/a
		Items scored +		
Percent correct =		Total items scored + or -		

APPENDIX B: Competence Checklists

Competence Definitions—Assessment

Module and Session Illustration N/A 1 2 3		
Score 1	Score 2	Score 3
• The home visitor does not state goals for the session, or provide appropriate module or session overview **-OR-** • They do 1 or both, but inaccurately (i.e. explanation of goals contradicts session outlines)	• The home visitor states goals and module/session overviews, but discusses goals in a vague way that an average parent may have some difficulty understanding **-OR-** • Does not respond well to follow-up questions	• If the home visitor states goals and module/session overview clearly and responds to questions appropriately so that the parent understands what is expected, as well as why the session is being conducted
N/A: Unable to determine		

Home Visitor Conduct 1 2 3		
Score 1	Score 2	Score 3
• If home visitor does not greet parent appropriately and insults parent, behaves in an offensive manner, or responds inappropriately towards parent's sentiments throughout session	• If home visitor is flat or reflects a neutral, unconcerned tone towards parent during session opening and throughout the session more than a few times	• If the home visitor consistently behaves in an empathetic way with the parent, by opening the session and responding in a caring and friendly way to the parent concerns and questions throughout the session
Note: It is important that home visitor be responsive to the parent's interaction style. For instance, if the parent does not seem to be comfortable with engaging in an opening dialogue, the home visitor should be respectful of this and not continue questioning.		

Home Visitor Responsivity to Questions and Concerns		N/A 1 2 3
Score 1	Score 2	Score 3
**Do not take into account questions and concerns that are scored in any other competency rating (e.g. *Session and Assessment Illustration*, *Training Skills*, or *Session Closing Skills*).		
• If home visitor does not respond to parents questions or concerns • Does not use the problem solving worksheet when necessary or attempts to use it, but discusses the problem solving steps in an ineffective or incorrect way with parent • Undermines parent's questions or concerns or gives an inappropriate response • Cannot deviate from the outline • Allows an issue that arises to derail the session such that no SafeCare session goals are met	• If the home visitor responds to issues and concerns of parent (excluding those covered in other Competency ratings), OR • If home visitors decides to use problem solving steps with parent, the interaction results in some type of plan for the parent problem, but there is room for improvement (i.e. provider was not competent in guiding the parents through the steps, no clear plan for how to solve the problem was generated) **-OR-** • If the home visitor allows an issue that arises to derail the session such that few SafeCare session goals are met	• If home visitor appropriately breaks away from outline to address issues and concerns of parent (excluding those covered in other Competency ratings) • uses problem solving worksheet if necessary and implements steps involved with problem solving effectively, such that the parent has a clear concise plan when steps are completed • Home visitor brings appropriate closure to issues brought up by parent • Home visitor avoids getting so off track when issues arise, that other SafeCare session objectives fail to be completed
N/A: If no problems, issues, or questions arise during the session		

Clinical Skills		1 2 3
Score 1	Score 2	Score 3
• If the home visitor's verbal skills do not promote or encourage parent verbal communication • Home visitor does not use words/expressions, questions, or reflective/summarizing statements to encourage parent to talk. For instance, you do not hear any statements such as "uh-huh", "mm-hmm", or "tell me a little more about that," or reflecting statements like "what I heard you say is…", "that must make you feel...", or "that must have been..."	• If the home visitor occasionally or minimally uses words/expressions, questions, or reflective/summarizing statements to encourage parent to talk, but misses a lot of opportunities to convey active listening	• If the home visitors consistently uses words/expressions, questions, or reflective/summarizing statements to encourage parent to talk consistently throughout the session
Note: To help with scoring competence in active listening, you may benefit from using a tally system where you note how many opportunities you hear for active listening techniques vs. how many a home visitor provides. This will help you attend to the session and provide the opportunity to compute a ratio to help determine the appropriate score.		

Formal Assessment Skills		**1** **2** **3**
Score 1	Score 2	Score 3
• If home visitor does not describe the assessment procedures, or does so in a way that might be confusing to parents **-OR-** • Home visitor inappropriately responds to parent questions or concerns about the assessment **-OR-** • There is no clear communication with parent about when to start and finish to the assessment segment • OR • Home visitor does not complete the correct number or types of assessment	• If home visitor does describe the assessment procedures in a clear way, but does not have clear communication with parent about when to start and finish to the assessment segment • AND • Home visitor conducts the correct number and types of assessments according to the session outlines.	• If home visitor thoroughly describes assessment procedures so that parent understands what is expected, as well as why the assessment is being conducted. The home visitor should also communicate a clear start and finish to the assessment segment of the session, and provide general feedback to parent. • AND • Home visitor conducts the correct number and types of assessments according to the session outlines.

Session Closing Skills		**1** **2** **3**
Score 1	Score 2	Score 3
• If the home visitor does not summarize the session in a clear way • Does not provide general, positive feedback to parent at session closing • Does not provide an overview of the next session	• If the home visitor summarizes the session using feedback that is not tailored it to parent's specific performance during that session and gives an overview of the next session	• If the home visitor summarizes the session by tailoring the summary to current session using appropriate feedback on parent's performance and gives an overview of what should be expected at the next session

Competence Definitions--Training

Session and Assessment Illustration N/A 1 2 3		
Score 1	Score 2	Score 3
• The home visitor does not describes goals/session overview and assessment procedures **-OR-** • They do 1 or both, but inaccurately (i.e. explanation of goals contradicts session outlines)	• The home visitor describes goals/session overview and assessment procedures, but discusses goals in a vague way that an average parent may have some difficulty understanding **-OR-** • Does not respond well to follow-up questions	• If the home visitor describes goals/session overview and assessment procedures clearly and responds to questions appropriately so that the parent understands what is expected, as well as why the session is being conducted
N/A: Unable to determine		

Home Visitor Conduct 1 2 3		
Score 1	Score 2	Score 3
• If home visitor does not greet parent appropriately and insults parent, behaves in an offensive manner, or responds inappropriately towards parent's sentiments throughout session	• If home visitor is flat or reflects a neutral, unconcerned tone towards parent during session opening and throughout the session more than a few times	• If the home visitor consistently behaves in an empathetic way with the parent, by opening the session and responding in a caring and friendly way to the parent concerns and questions throughout the session
Note: It is important that home visitor be responsive to the parent's interaction style. For instance, if the parent does not seem to be comfortable with engaging in an opening dialogue, the home visitor should be respectful of this and not continue questioning.		

Home Visitor Responsivity to Questions and Concerns		N/A 1 2 3
Score 1	Score 2	Score 3
**Do not take into account questions and concerns that are scored in any other competency rating (e.g. *Session and Assessment Illustration*, *Training Skills*, or *Session Closing Skills*).		
• If home visitor does not respond to parents questions or concerns • Does not use the problem solving worksheet when necessary or attempts to use it, but discusses the problem solving steps in an ineffective or incorrect way with parent • Undermines parent's questions or concerns or gives an inappropriate response • Cannot deviate from the outline • Allows an issue that arises to derail the session such that no SafeCare session goals are met	• If the home visitor responds to issues and concerns of parent (excluding those covered in other Competency ratings), OR • If home visitors decides to use problem solving steps with parent, the interaction results in some type of plan for the parent problem, but there is room for improvement (i.e. provider was not competent in guiding the parents through the steps, no clear plan for how to solve the problem was generated) **-OR-** • If the home visitor allows an issue that arises to derail the session such that few session goals are met	• If home visitor appropriately breaks away from outline to address issues and concerns of parent (excluding those covered in other Competency ratings) • uses problem solving worksheet if necessary and implements steps involved with problem solving effectively, such that the parent has a clear concise plan when steps are completed • Home visitor brings appropriate closure to issues brought up by parent • Home visitor avoids getting so off track when issues arise, that other SafeCare session objectives fail to be completed
N/A: If no problems, issues, or questions arise during the session		

Clinical Skills		1 2 3
Score 1	Score 2	Score 3
• If the home visitor's verbal skills do not promote or encourage parent verbal communication • Home visitor does not use words/expressions, questions, or reflective/summarizing statements to encourage parent to talk. For instance, you do not hear any statements such as "uh-huh", "mm-hmm", or "tell me a little more about that," or reflecting statements like "what I heard you say is…", "that must make you feel...", or "that must have been..."	• If the home visitor occasionally or minimally uses words/expressions, questions, or reflective/summarizing statements to encourage parent to talk, but misses a lot of opportunities to convey active listening	• If the home visitors consistently uses words/expressions, questions, or reflective/summarizing statements to encourage parent to talk consistently throughout the session

Note: To help with scoring competence in active listening, you may benefit from using a tally system where you note how many opportunities you hear for active listening techniques vs. how many a home visitor provides. This will help you attend to the session and provide the opportunity to compute a ratio to help determine the appropriate score.

Training Skills		**1** **2** **3**
Score 1	Score 2	Score 3
• Home visitor did not effectively explain, model, have parent practice, or provide feedback (SafeCare 4) to parent about the practice in order to train parent in the targeted skills **-OR-** • Home visitor did use the SafeCare 4 with the parent, but was disrespectful or overly critical during the target skill training	• If home visitor uses the SafeCare 4 to train the parent in the targeted skills required on the session outline, but there is room for improvement in providing instruction or feedback to the parent	• If home visitor utilizes the SafeCare 4 as indicated on the session outline in an engaging and directive way to educate the parent about targeted skills, to practice the targeted skills, and provide very clear, specific corrective feedback such that the parent appears to understand what he/she is doing well and where more practice is needed

Session Closing Skills		**1** **2** **3**
Score 1	Score 2	Score 3
• If the home visitor does not summarize the session in a clear way • Does not provide general, positive feedback to parent at session closing • Does not provide an overview of the next session	• If the home visitor summarizes the session using feedback that is not tailored it to parent's specific performance during that session and gives an overview of the next session	• If the home visitor summarizes the session by tailoring the summary to current session using appropriate feedback on parent's performance and gives an overview of what should be expected at the next session

Competence Definitions—End of Module

Session and Assessment Illustration	N/A	1	2	3
Score 1	Score 2	Score 3		
• The home visitor does not describes goals/session overview and assessment procedures **-OR-** • They do 1 or both, but inaccurately (i.e. explanation of goals contradicts session outlines)	• The home visitor describes goals/session overview and assessment procedures, but discusses goals in a vague way that an average parent may have some difficulty understanding **-OR-** • Does not respond well to follow-up questions	• If the home visitor describes goals/session overview and assessment procedures clearly and responds to questions appropriately so that the parent understands what is expected, as well as why the session is being conducted		
N/A: Unable to determine				

Home Visitor Conduct	1	2	3
Score 1	Score 2	Score 3	
• If home visitor does not greet parent appropriately and insults parent, behaves in an offensive manner, or responds inappropriately towards parent's sentiments throughout session	• If home visitor is flat or reflects a neutral, unconcerned tone towards parent during session opening and throughout the session more than a few times	• If the home visitor consistently behaves in an empathetic way with the parent, by opening the session and responding in a caring and friendly way to the parent concerns and questions throughout the session		
Note: It is important that home visitor be responsive to the parent's interaction style. For instance, if the parent does not seem to be comfortable with engaging in an opening dialogue, the home visitor should be respectful of this and not continue questioning.				

Home Visitor Responsivity to Questions and Concerns		N/A 1 2 3
Score 1	Score 2	Score 3
**Do not take into account questions and concerns that are scored in any other competency rating (e.g. *Session and Assessment Illustration*, *Training Skills*, or *Session Closing Skills*).		
• If home visitor does not respond to parents questions or concerns • Does not use the problem solving worksheet when necessary or attempts to use it, but discusses the problem solving steps in an ineffective or incorrect way with parent • Undermines parent's questions or concerns or gives an inappropriate response • Cannot deviate from the outline • Allows an issue that arises to derail the session such that no SafeCare session goals are met	• If the home visitor responds to issues and concerns of parent (excluding those covered in other Competency ratings), OR • If home visitors decides to use problem solving steps with parent, the interaction results in some type of plan for the parent problem, but there is room for improvement (i.e. provider was not competent in guiding the parents through the steps, no clear plan for how to solve the problem was generated) **-OR-** • If the home visitor allows an issue that arises to derail the session such that few SafeCare session goals are met	• If home visitor appropriately breaks away from outline to address issues and concerns of parent (excluding those covered in other Competency ratings) • uses problem solving worksheet if necessary and implements steps involved with problem solving effectively, such that the parent has a clear concise plan when steps are completed • Home visitor brings appropriate closure to issues brought up by parent • Home visitor avoids getting so off track when issues arise, that other SafeCare session objectives fail to be completed
N/A: If no problems, issues, or questions arise during the session		

Clinical Skills		1 2 3
Score 1	Score 2	Score 3
• If the home visitor's verbal skills do not promote or encourage parent verbal communication • Home visitor does not use words/expressions, questions, or reflective/summarizing statements to encourage parent to talk. For instance, you do not hear any statements such as "uh-huh", "mm-hmm", or "tell me a little more about that," or reflecting statements like "what I heard you say is…", "that must make you feel...", or "that must have been..."	• If the home visitor occasionally or minimally uses words/expressions, questions, or reflective/summarizing statements to encourage parent to talk, but misses a lot of opportunities to convey active listening	• If the home visitors consistently uses words/expressions, questions, or reflective/summarizing statements to encourage parent to talk consistently throughout the session

Note: To help with scoring competence in active listening, you may benefit from using a tally system where you note how many opportunities you hear for active listening techniques vs. how many a home visitor provides. This will help you attend to the session and provide the opportunity to compute a ratio to help determine the appropriate score.

Feedback and Generalization of Skills		**1** **2** **3**
Score 1	Score 2	Score 3
• If home visitor does not communicate a clear start and finish to the assessment segment of the session **-OR-** • If home visitor does not provide descriptive, corrective feedback to help parent achieve mastery/success and does not require extra practice by parent when needed **-OR-** • If home visitor does not discuss how skills trained on throughout the module can be used in other situations • OR • If home visitor does not complete the correct number of types of assessments (if they don't do this, they can't give appropriate feedback)	• If home visitor conducts the appropriate number and types of assessments and communicates a clear start and finish to the assessment segment of the session **-BUT-** • Home visitor needs improvement on providing descriptive, corrective feedback to help parent achieve mastery/success **-OR-** • Home visitor needs improvement on describing how skills trained on throughout the module can be used in other situations	• If home visitor conducts the appropriate number and types of assessments and communicate a clear start and finish to the assessment segment of the session • If home visitor provides descriptive, corrective feedback to help parent achieve mastery/success and requires extra practice by parent if necessary • If home visitor discusses how skills trained on throughout the module can be used in other situations

Session Closing Skills		**1** **2** **3**
Score 1	Score 2	Score 3
• If the home visitor does not summarize the session in a clear way • Does not provide general, positive feedback to parent at session closing • Does not provide an overview of the next session	• If the home visitor summarizes the session using feedback that is not tailored it to parent's specific performance during that session and gives an overview of the next session	• If the home visitor summarizes the session by tailoring the summary to current session using appropriate feedback on parent's performance and gives an overview of what should be expected at the next session

APPENDIX C: Fidelity Item List

34 Unique Fidelity Items		
Item #	**Session type**	**Item definition**
6 **(P)**	(A, T, & EOM)	Exchanges an appropriate greeting
7 **(C)**	(A, T, & EOM)	States goals for the session
9 **(P)**	(A, T, & EOM)	Communicates empathy, warmth, understanding
12 **(P)**	(A, T, & EOM)	Uses words/expressions to encourage parent to talk
13 **(P)**	(A, T, & EOM)	Uses open-ended questions
14_15_16 **(P)**	(A, T, & EOM)	Uses reflecting or summarizing statements (did 1 = yes)
17 **(C)**	(A)	Module overview
18 **(C)**	(A)	Session overview
19 **(C)**	(T & EOM)	Conducts assmts as indicated in outline
20_21_29 **(C)**	(A, T, & EOM)	Explains purpose or process of assmts (did 1 = yes)
22 **(C)**	(EOM)	Provides descriptive, corrective input
23 **(C)**	(EOM)	Determines mastery/success according to rules
24 **(P)**	(EOM)	Tactfully communicates to parent if cannot move on
25 **(P)**	(EOM)	Provides general, positive feedback
26 **(C)**	(EOM)	Provides specific, corrective feedback
30 **(C)**	(A)	Assesses required # of activities/rooms/scenarios
31 **(C)**	(A)	Assesses required variety of activities/rooms/scenarios
32 **(C)**	(A)	Completes necessary forms
33 **(N/C)**	(A)	Provides general, positive feedback about assmts
34_35 **(C)**	(T)	Uses appropriate material to train parent
36_38 **(C)**	(T)	Models steps and behaviors
37_40 **(C)**	(T)	Balances explain vs. modeling behaviors and steps
39 **(C)**	(T)	Has parent practice appropriate number of times
41 **(N/C)**	(T)	Provides general, positive feedback
42 **(C)**	(T)	Provides specific, corrective feedback
43 **(P)**	(A, T, & EOM)	Encourages parent to ask questions & concerns
44 **(P)**	(A, T, & EOM)	Responds to parent questions & concerns
45_46 **(N/C)**	(A, T, & EOM)	Uses problem solving approaches as appropriate
47 **(C)**	(A, T, & EOM)	Summarizes session
48 **(N/C)**	(A)	Asks for and answers parent questions (in closing)
49_50 **(N/C)**	(A, T, & EOM)	Gives general positive feedback (in closing)
51 **(N/C)**	(A & T)	Schedules meeting for next week
52 **(C)**	(EOM)	Provides overview for next session/module
53 **(C)**	(EOM)	Completes forms for next module

(C) = Content fidelity item, **(P) =** Process fidelity item, **(N/C) =** Not classified

APPENDIX D: Competence Item List

Item 1 (C): “Module/Session/Assessment Illustration”

Item 2 (P): “Home Visitor Conduct”

Item 3 (P): “Clinical Skills”

Item 4 (C): “Formal Assessment/Training/Feedback Skills”

Item 5 (N/C): “Home Visitor Responsivity”

Item 6 (C): “Session Closing Skills”

(P) = Process competence
(C) = Content competence
(N/C) = Not classified