1. Introduction

The field of child welfare has been charged with the responsibility of protecting children from abuse and neglect. There is a growing emphasis on the importance of program outcomes in child welfare, such as child safety, permanency, and well-being (Gendell, 2001). Data from the National Child Abuse and Neglect Data System indicate that during 2006, there were 905,000 children who were determined to be victims of child abuse or neglect (US DHHS, 2008). Of these 905,000 new cases, 60% was for neglect, 15% was for physical abuse, 10% was for sexual abuse, and 10% was for emotional abuse.

The purpose of this research was to evaluate the effectiveness of the Solution-Based Casework model of child welfare practice to prevent recidivism of child maltreatment for families involved with the public child welfare system. Previous research has focused primarily on casework, child, and family characteristics associated with maltreatment recidivism. Most prevention models have targeted high-risk families who have not yet entered this public child welfare system (primary prevention). Hence, this study addresses the need for the field to identify viable practice models for the public child welfare system to prevent re-abuse (secondary or tertiary prevention). This research compared recidivism referrals for a sample of workers who used the Solution-Based Casework model to those who did not use the model. There were 760 cases tracked over a 6-month time period. Results indicate that cases in which the Solution-Based Casework model was used experienced significantly fewer recidivism referrals than those in which the model was not used.

1.1. Predictors of recidivism

Characteristics of the child that have been linked to a higher risk of recidivism include age, gender, and disabilities. Several studies have shown that younger children are more likely to experience repeat maltreatment than older children (e.g., Coolhey, 2006; Fryer & Miyoshi, 1994; Marshall & English, 1999). Using data from all 50 states, the federal government identified that infants were 51% more likely to experience re-abuse than adolescents (US DHHS, 2008, Child Maltreatment, 2006). In addition to younger children, girls have also been found to be at greater risk of repeat maltreatment than boys (Fryer & Miyoshi, 1994). Finally, children with developmental delays are at greater risk than other children (Marshall & English, 1999). The national data indicate that children with disabilities were 52% more likely to experience recurrence (US DHHS, 2008).
Characteristics of the parents have also been associated with a higher risk of recidivism for abuse or neglect of their children. Marshall and English (1999) found that parental history of child maltreatment in their own families of origin increases the likelihood of recurrence. Cooley (2006) also found that a criminal history for mothers, as well as employment status and biological relationship of father to children was also a risk factor for recidivism.

In addition to parent and child characteristics, features of the maltreatment itself may also place children at greater risk of repeat maltreatment. For example, several studies found that victims of neglect are more likely to experience recidivism (Fryer & Miyoshi, 1994; Jonson-Reid, Drake, Chung, & Way, 2003). Other research identified that there is a higher rate of recidivism when there are multiple victims of maltreatment in the home (Fryer & Miyoshi, 1994) or when there is serious injury inflicted on a child (Cooley, 2006).

Lastly, there are variables related to the system’s response to maltreatment that have been associated with recidivism. One study found that cases that were originally unsubstantiated returned to the child welfare system at a much higher rate (Way, Chung, Jonson-Reid, & Drake, 2001). Jonson-Reid (2003) identified that a shorter length of stay in the system placed children at greater risk of repeat maltreatment. She also found that placement with relatives was associated with a lower risk of recidivism, while the provision of in-home services prior to foster care did not moderate later recidivism.

1.2. Prevention approaches

While understanding individual and organizational variables that increase the risk of recidivism is important, there is a need to identify effective interventions for families to decrease these risks. There is a growing body of evidence on effective approaches for the primary prevention of child abuse and neglect. For example, in a systematic review of the effectiveness of targeted prevention programs for child maltreatment, MacMillan, MacMillan, Offord, Griffith, and MacMillan (1994) identified that intensive home visitation by nurses to socially disadvantaged women perinatally was the most effective way to prevent child maltreatment. In a subsequent update of this review, Gonzalez and MacMillan (2008) again found that the Nurse Family Partnership, a nurse home visiting program for socially disadvantaged mothers and the Early Start program provided by nurses and social workers to at-risk families postnatally were effective approaches to preventing child maltreatment.

However, much less is known about the effective strategies to prevent recidivism of child maltreatment. In an evaluation of the effectiveness of these home visiting programs for the prevention of recidivism, Harder (2005) found that parents who participated in a home visiting program had fewer subsequent, substantiated reports to child protective services of child abuse or neglect than those parents who refused to participate or dropped out of the program.

On the contrary, when MacMillan et al. (2005) evaluated the effectiveness of a nurse home visiting program for disadvantaged parents, they did not find a significant impact on recidivism of child abuse/neglect. These researchers conducted a randomized controlled trial with families who had at least one child with a history of abuse or neglect. Results indicated that there was no difference in maltreatment recidivism between the experimental (home visiting) and control groups.

In addition to these home visiting approaches, Gershater-Molko, Lutzer, and Wesch (2002) evaluated a parent training program, Project SafeCare, to prevent recidivism. Parents who participated in Project SafeCare received training in three aspects of child care: treating illnesses and maximizing their health-care skills (health), positive and effective parent–child interaction skills (bonding), and maintaining hazard-free homes (safety) for their children. Families who participated in the program were compared to a control group over a 24-month period. Those who received the Project SafeCare services had significantly lower reports of child abuse and neglect than families in the comparison group.

1.3. Solution-Based Casework

While these specialized programs have demonstrated success in the prevention of child maltreatment, there have been no studies examining the impact of practice models of state child welfare systems on this key outcome. Solution-Based Casework (SBC) was first developed by Dana Christensen, from the University of Louisville, who was working with the child welfare system in the Commonwealth of Kentucky (Christensen & Todahl, 1998). The Solution-Based Casework model evolved from the best practice study groups conducted over a decade with front line workers and supervisors. The facilitated study groups experimented with approaches that were showing promise with other populations, attempting to adapt them to a casework management arena. These included cognitive behavioral therapy and solution-focused therapy, both having been used with substance abuse, anger management, and depression, common presenting issues in child welfare cases. The model moved from small group experimentation to full system implementation when it was absorbed into the statewide system during a time of rapid response to federal expectations of outcome performance. Although not all of the components of the Solution-Based Casework model (Christensen, Todahl, & Barrett, 1999) were incorporated into the Kentucky system, the training curriculum, information management system, and practice policy were all reworked to reflect the basic components and intent of the model. The fidelity of the model is monitored across the state through each of these systems, and through the quality assurance process, which contains considerable review elements tied to the model.

1.3.1. Brief overview of model

Solution-Based Casework (SBC) is a child welfare practice model based on three key elements: 1) that full partnership with the family is a critical and vital goal for each and every family case, 2) that the partnership for protection should focus on the patterns of everyday life of the family, and 3) that solutions should target the prevention skills needed to reduce the risk in those everyday life situations. Consistent with the strength based, family centered, and competency based models of casework, Solution-Based Casework draws on the theoretical foundations of solution-focused family therapy, family life cycle theory and relapse prevention (Christensen et al., 1999).

Solution-Based Casework anchors the assessment of problem patterns in the developmental life of a family (Carter & McGoldrick, 1980). While not excluding the assessment of deficit based criteria for risk, the model seeks to establish an overall consensus with the family about the nature of the problem. The use of family development theory allows the worker and client to describe the problem in terms that are not pathological and more situational and therefore universal. An example would be building a consensus around “the family finding a new way to teach their child to use the toilet” for a case in which a two-year old’s mother lost her temper during toilet training and jerked him off the toilet thus dislocating his arm in the process. While the example language given doesn’t yet address the mother’s anger management issues, the model does seek to establish working partnerships in which consensus can be reached on both family and individual issues. Solution-focused interviewing techniques (see Berg, 1994; Christensen et al., 1999) are used within the model to keep the child welfare caseworker and family focused on what is working as a way to battle the inherent discouragement families’ feel once involved with child protection agencies (Carter & McGoldrick, 1980). Solution-Based Casework additionally utilizes concepts about how to prevent relapse of destructive behavior patterns that are drawn from cognitive behavior therapy. These concepts are well researched and familiar to most treatment providers working with clients who have anger management issues, substance abuse problems, depression, or sexual
behavior problems. SBC structures the process of relapse prevention into four teachable (and measureable) steps: recognition of personal patterns, learning the details of those high-risk patterns, practicing small steps toward changing those patterns, and finally using all that information to create a long-term plan to prevent recurrences of the destructive behavior. Solution-Based Casework uses relapse prevention concepts and techniques to help child welfare clients learn what situations put them at-risk to abuse or neglect, how to detect their early warning signals, and to target personalized skills to prevent, interrupt or escape high-risk and potentially abusive situations in their life.

1.3.2. Evidence of effectiveness

Two chart file review studies were conducted to evaluate the effectiveness of the Solution-Based Casework (SBC) model for child welfare practice (Antle, Barbee, Christensen, & Martin, 2008). These two chart file review studies of 148 cases found that Solution-Based Casework can be implemented across cases differing in type of maltreatment, co-morbid factors, and other demographic variables. Implementation was greatest when teams of child welfare supervisors and workers were trained together. Results indicated that workers were more actively involved in case planning and service acquisition for families when Solution-Based Casework was implemented. These workers were more likely to contact referral sources directly and attend initial sessions with their clients in order to develop collaborative service plans. Families were significantly more compliant with casework requirements, as evidenced by higher rates of completion of tasks assigned by the worker, following of visitation guidelines, and other compliance indicators. Lastly, families experienced greater success with their casework, as they achieved more case goals and objectives than those for whom the model was not used.

One potential mediator of the impact of Solution-Based Casework was historical involvement of families with child welfare (Antle, Barbee, Christensen et al., 2008). The results of these studies supported that the Solution-Based Casework model was particularly effective with families who are repeatedly involved with child welfare. These families achieved significantly more goals/objectives than those who did not have prior involvement with the system. Solution-Based Casework requires workers to examine exceptions to the problem and family strengths. If families have had previous cases that were opened and closed, then they have made some progress in parenting. This progress and exiting of the system may be viewed as a family strength and a period of time when the problem was not present.

Families with historical involvement with CPS may also have had a number of pathologizing experiences. The solution-focused approach tested here may have been a refreshing change for these families, as they were assumed to have strengths and the capacity to overcome challenges. The model may also help workers overcome their biases toward families with such histories, as the tendency is to assume the family has insurmountable problems based upon their repeated involvement with the system. The model forces workers to identify strengths and to remain involved through direct contact with collaraters. Hence, Solution-Based Casework may help child welfare workers with one of the most difficult sub-groups in child welfare.

1.4. Current research

The purpose of this research was to examine the impact of the Solution-Based Casework model on the higher level outcome of child maltreatment recidivism. While previous research demonstrated the model produced higher levels of compliance and goal achievement, particularly for families with a history of repeat maltreatment, the present research attempted to examine the impact of Solution-Based Casework on the prevention of future maltreatment. This research addresses a gap in the literature by evaluating the impact of a statewide practice model that has been fully integrated in the public child welfare service delivery system on the key outcome of repeat maltreatment. Previous research has focused on risk factors or predictors of recidivism, as well as the effectiveness of specialized home visiting programs or other approaches that are not part of the core child welfare system approach.

A secondary purpose of this research was to explore organizational and team mediators of model effectiveness. Previous research found that team training was critical to implementation (Antle, Barbee, Christensen et al., 2008), and supervisor learning readiness and support for learning were significant predictors of short-term outcomes of model implementation (the transfer of casework skills; Antle, Barbee, & van Zyl, 2008). Therefore, this research also sought to build upon these earlier findings by evaluating the impact of supervisor and organizational mediators on model effectiveness for the target outcome of recidivism prevention. These supervisor and organizational mediators included variables such as learning readiness and the team/organizational support for learning. These variables may serve as important mediators of model effectiveness when a new practice model is introduced into the child welfare system.

The questions for this research were as follows: 1) What is the impact of the use of Solution-Based Casework model on child abuse recidivism? 2) What are the training mediators of these recidivism outcomes?

2. Methodology

2.1. Design

This study utilized a quasi-experimental design with comparison of multiple groups over time. Recidivism outcomes were compared for two groups: a Solution-Based Casework group that had demonstrated a high degree of implementation of the key skills for the model, and a comparison group that did not implement the Solution-Based Casework model. The implementation of key skills from the model was evaluated in a separate study and reported elsewhere (see Antle, Barbee, Sullivan, & Christensen, submitted for publication). In the study, the use of Solution-Based Casework assessment and case planning skills was assessed through a chart file review study, and those in the Solution-Based Casework group reported here showed statistically significant differences in level of use of these skills. Workers were matched in other dimensions, including geographic characteristics, type of caseload, years of experience, education level, and basic training. The base rate of child maltreatment recidivism was also confirmed to be similar across regions independent of use of the Solution-Based Casework model by the individual workers in the study (Antle & Moran, 2005). Hence, the key difference between the experimental and comparison group was the implementation of the model.

Recidivism data were tracked for a 6-month time period to allow time for relapse to occur. This standard is also consistent with the federal definition of recurrence or recidivism derived from the Child and Family Service Reviews, which asks, “Of all children who were victims of substantiated or indicated abuse or neglect during the first 6 months of the reporting year, what percent did not experience another incident of substantiated or indicated abuse or neglect within a 6-month period?” (The Data Measures, Data Composites, and National Standards to be Used in the Child and Family Services Reviews, as cited in US DHHS, 2009, para. 22). Recidivism data were obtained through standardized state data reports that are utilized to track federally mandated Adoption and Safe Families Act (ASFA) (PL 105-89) outcomes of safety, permanency, and well-being. Recidivism or repeat maltreatment is a key indicator of child safety as measured by the CSFRs and is reported by regions and teams on a monthly basis as the number of abuse/neglect referrals for families with current or prior involvement with the child welfare agency.
2.2. Sample

All cases for the two groups (Solution-Based Casework and comparison groups) that were in an open status during the target date range were included in the study. The total sample size of workers was 39 in the Solution-Based Casework group and 38 in the comparison group. The total number of cases tracked over the 6-month period for the Solution-Based Casework group was 339, and the total number of cases for the comparison group was 421. All cases from the caseloads of the workers in these groups were included in the study. This provided a balance of cases by type of maltreatment, severity of maltreatment, comorbid factors, prior involvement with the child welfare agency, and demographic characteristics of the families.

2.3. Variables and measurement

Recidivism was operationalized as the number of children who experienced another incident of substantiated or indicated abuse or neglect within a 6-month period. This definition is derived from the Child and Family Service Reviews, and the data is routinely collected through the Recidivism Referral Report.

The supervisor and organizational mediators of model effectiveness that were included in this study were supervisor learning readiness, team learning conditions, and organizational learning conditions. Learning readiness incorporates such concepts as transfer of learning skills, use of feedback, learning as a life skill, support for learning, and self-directedness in learning (Van Zyl & Van Zyl, 2000). Learning readiness was measured using the Learning Benefit Inventory, developed and validated by van Zyl and van Zyl in the 2000 study. This scale contains 70 items to which subjects respond on five-point Likert scales, ranging from none of the time to all of the time. The internal consistency reliability of the scale was determined to be satisfactory, with the Cronbach alpha scores of factors or sub-scales ranging from 0.75 to 0.89. The construct validity (unidimensionality) of the scale was established using structural equation modeling. Four of the six factors were able to be combined into a super factor (Rentler-Bonnet non-normed fit index = 1.002, comparative fit index = 1.000), supporting the measurement of a single construct (learning readiness) by the scale.

Team support was measured using the Team Learning Conditions Sub-Scale of the Training Transfer Inventory (Coetsee, 1998). The Training Transfer Inventory was validated by Coetsee through a study of 2810 mine workers, supervisors, and managers in South Africa. The theoretical foundations and previous scales upon which this instrument was based include the works of Rouiller and Goldstein (1993) and Deschant and Marsick (1993). The Team Learning Conditions sub-scale measures the degree to which the team is open to or supportive of new information and processes in the workplace. This scale contains 30 items to which subjects respond on five-point Likert scales, ranging from strongly disagree to strongly agree. This sub-scale has acceptable internal consistency reliability, with a Cronbach alpha of 0.778. The construct validity of the sub-scale was tested using structural equation modeling. The items on this sub-scale emerged as a single factor and were not able to be combined with any other sub-scales. The use of this and other sub-scales of the Training Transfer Inventory (see below) was validated in the United States and with the public child welfare workforce was validated through the work of Antle, Barbee, & van Zyl (2008). This study of 331 child welfare workers and 72 supervisors found the scales to be both reliable and valid for this population. Organizational support was measured using the Organizational Learning Conditions and Support Sub-Scale of the Training Transfer Inventory (Coetsee, 1998). This sub-scale assesses the degree to which the organization supports or maintains an environment of learning. The scale contains 17 items to which subjects respond on five-point Likert scales, ranging from strongly disagree to strongly agree. This sub-scale has acceptable internal consistency reliability, with a Cronbach alpha of 0.789. The construct validity of the sub-scale was tested using structural equation modeling. The items on this sub-scale emerged as a single factor and were not able to be combined with any other sub-scales.

2.4. Procedure

The data on casework outcomes were collected through routine state reports. These reports derive data from the state information system, which tracks certain key indicators, such as recidivism. The requested parameters for these reports (workers and date ranges) were provided to state information systems personnel. Reports were then sent via encrypted electronic files to the faculty on this project for analysis. Data on team and organizational mediators of effectiveness were collected through paper and pencil surveys administered to workers and their supervisors in this study. No identifying information for the families or workers was recorded from this data. All workers were assigned a numerical code in the database. The study was reviewed and approved by the Institutional Review Boards of both the university and public child welfare agency.

2.5. Data analysis

In order to answer the primary research question (What is the impact of the use of Solution-Based Casework model on child abuse recidivism?), an independent sample t-test was conducted to compare the number of recidivism referrals for the SBC and comparison groups. In order to answer the secondary research question (What are the training mediators of these recidivism outcomes?), Pearson’s correlations were used to analyze the relationship between the recidivism outcome and individual, team and organizational variables measured in this study (see variables and measurement above).

3. Results

There was a positive impact of the use of the Solution-Based Casework model on child maltreatment recidivism. The Solution-Based Casework group had significantly fewer recidivism referrals for child maltreatment than the comparison group, t (73) = −4.52, p < .0001. The Solution-Based Casework group had an average of 350.69 recidivism referrals and the comparison group had an average of 538.00 recidivism referrals over the past 6 months (Fig. 1).

![Fig. 1. Recidivism referrals over a 6-month period by group.](image-url)
There was a significant negative correlation between supervisor learning readiness and recidivism referrals, $r (76) = - .90, p < .0001$. There was a significant negative correlation between team learning conditions and recidivism referrals, $r (76) = - .258, p < .05$. There was a significant negative correlation between organizational learning conditions and recidivism referrals, $r (76) = - .915, p < .0001$. The greater the support for learning new concepts such as those of the Solution-Based Casework model, the fewer recidivism referrals workers reported.

4. Discussion

This study showed that the use of the Solution-Based Casework model was associated with better outcomes for child maltreatment recidivism. There were significantly fewer Recidivism Referral Reports for the Solution-Based Casework group than for the comparison group. This finding is consistent with previous research on the Solution-Based Casework model that showed high levels of success (goal achievement) for families with a history of involvement with the child welfare agency (Antle et al., submitted for publication). This is also consistent with other research on effective models for prevention of repeat maltreatment, such as Project SafeCare (Gershater-Molko et al., 2002) and Project 12-Ways (Lutzker & Rice, 1987) that utilized a family-centered, educational approach. The distinction between the Solution-Based Casework model and these other secondary prevention programs is the integration of the Solution-Based Casework model into the state child welfare system as the core practice approach. Hence, this research makes a significant contribution to the field through its presentation of data on the prevention of repeat maltreatment by a statewide child welfare practice model.

The secondary purpose of this research was also accomplished through the identification of key contextual variables that may mediate model effectiveness. Recidivism was negatively correlated with supervisor learning readiness, as well as team and organizational learning conditions. This suggests that the more open supervisors, teams, and organizations are to learning concepts such as those associated with a new practice model, the better the impact of the model on outcomes may be. This finding is consistent with previous research by these authors demonstrating the strong relationship between supervisor learning readiness and organizational support for learning on intermediate outcomes such as model implementation (transfer of skills; Antle, Barbee, & van Zyl, 2008).

4.1. Limitations and future research

One of the primary limitations of this research was the quasi-experimental design. Workers were not randomly assigned to the Solution-Based Casework or comparison groups. They were assigned to groups based upon degree of implementation of the model. Hence, there may have been other characteristics of these workers that contributed to the differences in outcomes. Efforts were made to comparison for these differences by matching the sample along a number of dimensions known to affect child welfare outcomes. Random assignment to conditions is difficult given that the Solution-Based Casework model has been implemented statewide in the Kentucky child welfare system. An experimental design would also be impossible with a cross-state comparison, as workers could not be assigned to work in different states.

There may also have been case characteristics that contributed to differences in recidivism outcomes. Researchers and policy-makers must be cautious when making comparisons of aggregate state data pre- and post-implementation of the model, as there is a multiplicity of alternative explanations for such findings (APHSA, 2005). Although these case characteristics were not measured in the current study, previous research on Solution-Based Casework found that the model can be implemented and demonstrated similar levels of effectiveness regardless of type of maltreatment, comorbid factors, race/ethnicity of the family, and other key characteristics (Antle, Barbee, Christensen et al., 2008).

Another limitation was the measurement period for the recidivism outcome. Although the 6-month measurement period allowed for the detection of statistically significant differences between groups, different patterns may have emerged if this outcome had been tracked over a greater period of time. Other researches on programs to prevent recidivism have involved 2 or 5-year follow-up periods (Gershater-Molko et al., 2002; Lutzker & Rice, 1987). However, given the statewide implementation of the Solution-Based Casework model and ongoing training of child welfare workers in this approach, the availability of a comparison group within the state of Kentucky quickly dissipated. Future research could attempt to compare the Solution-Based Casework model in Kentucky to an alternative approach in another state for a longer period of time.

A final concern is the need to identify the relative contribution of the Solution-Based Casework model versus the community services to which families were referred for reducing recidivism of maltreatment. The Solution-Based Casework model helps families identify and develop key prevention skills, including an understanding of their high-risk situations and early warning signals, as well as strategies to avoid, interrupt, and escape those situations. However, the assumption remains that these families will obtain mental health, substance abuse, and other services in the community to address individual and family needs that contributed to maltreatment. In fact, one of the primary differences between workers who use the Solution-Based Casework model and those who do not is the higher level of involvement with community collaterals (direct contact, attending sessions; Antle, Barbee, Christensen et al., 2008). Hence, future research should explore the relative contribution of the Solution-Based Casework model and the outside services the family receives in preventing recidivism.

4.2. Implications for policy and practice

This research adds to the growing evidence regarding effective child welfare practice models and necessary organizational supports to promote child welfare outcomes of safety, permanency, and well-being. The Solution-Based Casework practice model provides a balance of child protection through its focus on the management of high-risk situations for child maltreatment, as well as family support through the family development framework and solution-focused intervention skills. While previous research demonstrated the effectiveness of the Solution-Based Casework model for intermediate outcomes such as family engagement and achievement of goals from the case plan (Antle, Barbee, Christensen et al., 2008), this study advances the evidentiary support for this model to the level of federally mandated outcomes such as recidivism of child maltreatment.

Policy-makers and practitioners should consider the importance of 1) having a practice model to guide practice among front line child welfare workers and 2) utilizing a practice model such as Solution-Based Casework that clearly gives workers the necessary skills to help families prevent future child maltreatment. The long-term implications of a system utilizing such a specific approach to front line child welfare practice should be that more children will be able to be reunified with their parents without the fear of recidivism. In this sense, the part of Adoption and Safe Families Act (ASFA) that emphasizes family involvement in the case plan and efforts to reunify without increasing recidivism risk will be achievable. This then could lead to a greater reinforcement of this approach and rewarding reuniification, rather than adoption (currently states get a bonus for all completed adoptions, but no such bonus for reunifications).