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Priming Learning To Improve Applicability Of Motivational Interviewing For Child Welfare Workers

Todd E. Sage

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PRIMING LEARNING TO IMPROVE APPLICABILITY OF MOTIVATIONAL
INTERVIEWING FOR CHILD WELFARE WORKERS

by

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A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

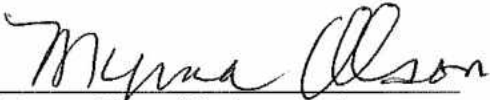
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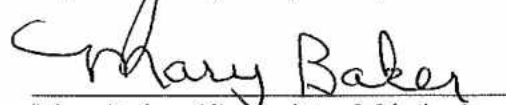
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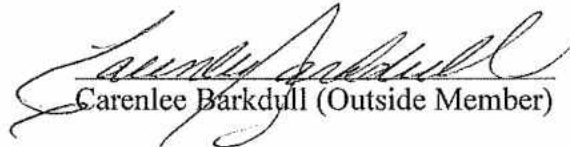
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This Dissertation meets the standards for appearance, conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.


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ABSTRACT

This research explored the use of a cognition primer to increase the perception of applicability of Motivational Interviewing for child welfare workers. Andragogy informed the need for cognition priming as a way to increase participants' receptiveness to training by making it more applicable to their direct practice. The theory of implementation science was used to inform how organizational supports impede or enhance the likelihood of child welfare workers using Motivational Interviewing in their practice.

A cross-sectional quasi-experimental mixed modal nonequivalent group design was used with a convenience sample of 41 front line child welfare workers from one Midwest urban county social services agency. A modified version of the Application Potential of Professional Learning Inventory (APPLI 31) (Curry, 2011) was used to measure applicability of training in a control group that received Motivational Interviewing training-as-usual compared to the intervention group that received the training along with a cognition primer.

This study explored participant's perception of the applicability of Motivational Interviewing, willingness to use Motivational Interviewing, and the personal and organizational factors that contribute to the adoption of Motivational Interviewing. Pre and post-intervention surveys were administered, and results were analyzed utilizing independent samples t-tests, multiple linear regression, and thematic analysis of the qualitative responses.

The results of this study demonstrated that organizational supports and participants' prior experiences with training increased the likelihood of adopting Motivational Interviewing. No differences were found between the control group that received training-as-usual and the intervention group that received the training with cognition priming. Quantitative and qualitative analysis revealed that child welfare workers see Motivational Interviewing applicability for their practice, but they do not feel equipped due to time constraints and a lack of system support to use this approach. Analysis from this research adds to the literature that organizational and supervisor supports are a key factor in the adoption of practice behaviors in child welfare agencies. Additionally, this research found that worker's views related their perceived lack of time to use and implement Motivational Interviewing must be addressed as part of priming to overcome child welfare workers' reluctance to implement Motivational Interviewing in their practice.

CHAPTER I

INTRODUCTION

New child welfare practitioners have a range of educational backgrounds which provide varied preparation for the challenging role of assessing and supporting families in which children are identified at risk of abuse or neglect. New workers receive a variety of federally mandated pre-service and early service training to prepare for this role (Thomas, 2012). Training includes coverage of state and federal child welfare rules and regulations, safety assessment, family maintenance case management expectations, and a multi-disciplinary framework for supporting families (Thomas, 2012). States differ in their minimum required educational attainment for child welfare practitioners; many states only require a bachelor's degree and minimum number of credits in social sciences as the criteria for employment, which means that child welfare workers may have a background that ranges from a Bachelor Degree in Sociology to a Masters in Social Work. A comprehensive national study of child welfare workers found that only 33% of workers had a social work degree, and 21.3% of those were at the bachelor's level (Barth, Lloyd, Christ, Chapman, & Dickinson, 2008). Therefore, any standardized knowledge that is expected to be held by all workers is typically delivered by the child welfare agency or a partner agency that provides pre-service training (Collins, Amodeo, & Clay, 2007). There is no widely-accepted singular theory of practice for how child welfare practitioners should interview families (Walsh & Slettebø, 2017). New workers may

never receive any evidence-based training for how to talk to families who are experiencing difficult situations.

Successful outcomes in child welfare reunification efforts are supported when child welfare workers utilize a person-centered strength-based approach (Dawson & Berry, 2002). Case outcomes improve when parents report positive relationships with their child welfare caseworkers (Maiter, Palmer, & Manji, 2006). Motivational Interviewing (MI) is one strategy that is supported for improving relationships between child welfare workers and their clients. Motivational Interviewing is "...a directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence. It is most centrally defined not by technique but by its spirit as a facilitative style for an interpersonal relationship" (Rollnick & Miller, 1995, pp. 325-334). Motivational Interviewing offers several facilitative techniques for relationship building, which can be used in brief interventions or sustained work (Arkowitz, Miller, & Rollnick, 2015).

Given the wide differences in worker background and education and a vast array of state policies and practices, no standard education for strengths-based family engagement exists. This dissertation explored a training for Motivational Interviewing that includes cognition priming to enhance the extent to which child welfare workers believe that Motivational Interviewing applies to their work, and assesses worker perception of applicability for practice compared to a standard Motivational Interviewing training curriculum in one large Midwestern county social services organization.

Background of the Study

Despite appearing to meet child welfare goals more readily than other models, Motivational Interviewing is not part of standard child welfare training. Little research exists related to the use of Motivational Interviewing techniques by child welfare workers with child welfare clients. Most research on the utility of Motivational Interviewing is centered around working with clients who are receiving treatment for substance abuse in formal drug treatment programs; however, up to sixty percent of families become involved in the child welfare system due to substance abuse (Semidei, Radel, & Nolan, 2001), which offers additional support for this to be a good intervention for child welfare settings. Nevertheless, most Motivational Interviewing training is offered for general social services practice settings through one to two day training, (Snyder, Lawrence, Weatherholt, & Nagy, 2012), instead of focusing on environment-specific criteria (eg., as the types of clients or populations one works with), and does not address the unique nuances of the child welfare work environment.

This researcher's own ten years prior work experience as a child welfare worker in three states and conversations with others who work in or around child welfare informed the framework for this study. A subsequent review of the literature related to child welfare training and practice expectations demonstrated a disconnect between what is known about adult learning theory and how the training of workers in a child welfare setting in the use of evidence-based practices is adopted by those doing the work. Literature specific to the training of child welfare workers was sparse, and no literature focused on the cognition-priming of training for child welfare to increase the potential

uptake of knowledge and integration of evidence-based practice into their work, which is the gap in the literature this study seeks to address.

Prior to formulating an intervention, it is essential to address barriers to the perceived applicability and uptake, or use in practice, of evidence-based practices in the child welfare practitioner population which are made up of adult learners. Knowledge uptake is operationalized as the adoption of formal and informal learning that enhances learners' competence, understanding, views, and motivations in the implementation of new skills (Richter, Kunter, Klusmann, Lüdtke, & Baumert, 2011). In adult learning, andragogy refers to the science and practices of teaching adults (Knowles, 1980). According to Knowles (1980), adult learners are self-directed, draw on their previous experiences to contextualize their learning, and are ready to learn what they need to know. They learn what they need to know now and what has utility in their lives, are more internally than externally motivated, and need to see the value of the instructional content and how it will be useful to them. Child welfare workers are taught to be safety-focused, and this work is often conflictual, time-limited, addresses immediate protection issues, and requires many mandatory timelines. Therefore, training models may be quickly dismissed if they do not clearly fit with the workers' practice realities, offer skills that will be immediately useful to them in their work, or ignores the fast pace, high caseloads, or high-conflict situations workers often experience. Child welfare training is noted to suffer from problems of transfer of learning to practice, or the degree to which workers utilize their training on the job (Curry, McCarragher, & Dellmann-Jenkins, 2005). Child welfare workers who report that their training was useful, and also

supported their ability to help clients make progress, have reported higher rates of retention within their agencies (Curry et al., 2005). Retention of workers is critical, given that child welfare worker turnover, has significant fiscal and emotional costs (Kim & Kao, 2014; Strolin-Goltzman, Kollar, & Trinkle, 2010). Training that is well-matched to the role workers perform not only leads to more effective service delivery, but also workforce retention (Barbee et al., 2009; Feldman, Ryvicker, Evans, & Barron, 2019)

Providing child welfare workers with ongoing training is imperative to the development of a competent workforce (Pösö & Forsman, 2013). Grounding this training in a way that makes training “...specific and relevant to child welfare practice is the most effective way to ensure change” (Gregoire, 1994, p. 72). In addition, given the high rate of turnover in the child welfare workforce, the literature on training in child welfare shows that newer workers need increased support from their peers and supervisors for successful adoption of new skills (Curry et al., 2005). This evidence supports the use of training based on adult learning theory to support social interactions during and after training takes place (Freeman, Wright, & Lindqvist, 2010).

A learner’s mood-state during learning has implications on the encoding and storage of new information and engagement with the learning process (Rholes, Riskind, & Lane, 1987). Learner mood-state is derived from prior experiences with learning, failure of understanding or implementing new skills, and perceptions related to the value of the information in their life (Lamb & Annetta, 2013). Cognition priming addresses this by providing learners with an external stimulus prior to and throughout the teaching process of new knowledge, intending to activate the desire to learn by addressing

preconceived values related to the learning (Lamb, Akmal, & Petrie, 2015).

Motivational Interviewing, with its focus on engagement and non-directive relationship building, may initially seem to take too much time in the emergent nature of work that child welfare workers typically encounter. The very nature of child welfare work places workers in the role of correcting parents' behavior, and it is counter-intuitive to imagine how one might go about that work using a non-directive relational interviewing style. However, managing negative or emotional client reactions and simultaneously developing a supportive relationship is central to engaged case planning, and is also a primary goal of Motivational Interviewing (Wahab, 2016). Using child welfare examples for Motivational Interviewing prior to and throughout the training provides learners with cognition priming to address resistance to the use of using Motivational Interviewing in child welfare work.

Motivational Interviewing and Child Welfare Practices

In the few studies that have attempted to ascertain whether Motivational Interviewing is a helpful approach in child welfare client populations, published research was primarily carried out in treatment centers which received referrals from child welfare workers instead of directly within the public child welfare agency (Chaffin, Funderburk, Bard, Valle, & Gurwitch, 2011; Chaffin et al., 2004). However, research regarding agencies that treat child welfare clients and used Motivational Interviewing as a practice framework found that client engagement improved, especially amongst clients with the lowest initial motivation for services.

Research by Forrester, Westlake, and Glynn (2012), offers a conceptual model for understanding and working with child welfare client resistance, which provides more understanding about the applicability for Motivational Interviewing in child welfare practice. They suggest resistance stems from the social context of involvement in oppressive environments, and the unequal power relationship of being involved in a child welfare assessment, as well as the child welfare worker's unsupportive approach. They also suggest that client personal factors such as defensiveness, shame, ambivalence about making a change, and confidence in one's ability to change further impact resistance (Forrester et al., 2012). They conclude that child welfare workers who want to promote positive relationship outcomes must be ready to manage client resistance. Responding to resistance is a primary skill utilized in Motivational Interviewing.

Despite the existing evidence that Motivational Interviewing is a promising practice for improving engagement between child welfare workers and the clients they serve, it is not systematically used in the child welfare setting, and it is helpful to consider factors that would lead to ideal worker acceptance and uptake if the training were offered. New interventions within the child welfare workforce should first address how and if a new approach will work with their client population (Caringi et al., 2008). A worker's motivation to learn and implement a new skill can be intrinsic if they see it adding value to their work, or it can be extrinsic if the organization promotes the new model using either positive or negative reinforcements (Fehrler & Kosfeld, 2014). Government-run child welfare agencies typically offer limited promotion potential, have limited ability to provide financial incentives for learning, and often mandate new practice model as an

expectation of a workers employment (Griffiths, Royse, Culver, Piescher, & Zhang, 2017), and these factors may de-incentivize workers to adopt new models when no apparent intrinsic or extrinsic motivational factors exist.

Additionally, the characteristics of the worker and workplace may influence the ability of workers to accept Motivational Interviewing. Organizational supports, including support from one's supervisor, may influence the degree to which child welfare workers effectively engage with clients and use evidence-based practices (Curry et al., 2005; Hatton-Bowers, Pecora, Johnson, Brooks, & Schindell, 2015; Mandell, Stalker, de Zeeuw Wright, Frensch, & Harvey, 2013; Travis, Lizano, & Barak, 2015). Transfer of learning from training to practice is enhanced when individual qualities, training, and organizational supports come together to strengthen the use of training in the field (Curry, Donnenwirth, Michael, & Lawler, 2010).

Andragogy offers a framework for how child welfare workers might become internally motivated to adopt Motivational Interviewing in the absence of agency incentives. Andragogy places the adult learner at the center of the learning process, with six key concepts being known to facilitate the transfer of knowledge. These key concepts are the concept of the learner, the role of the learner, readiness to learn, orientation to learning, motivation, and the need to know (Knowles, 1980; Knowles, Holton, & Swanson, 1998). A critique of this approach is that while it provides a frame of reference for the motivation to learn, it does not fully embrace the context in which learning occurs and the social factors involved.

Implementation science informs the ways in which training centers or child welfare agencies could offer external motivation for the use of Motivational Interviewing as a practice framework in child welfare. Implementation science suggests that preparation for a practice model informs whether it takes hold in an agency (Hanson, Self-Brown, Rostad, & Jackson, 2016). One element of implementation science includes presenting training in a way that prepares workers to adopt it (Beidas et al., 2013).

Implementation science practices include preparing administrators, the organizational context, and the workers for the new training model, scaling down ineffective practices, and assuring the right people are in the right roles. However, most of these activities are out of the purview of this intervention. This study explored whether using cognition priming before and throughout training increased participants' views on the applicability of Motivational Interviewing in child welfare, participants' intent to implement Motivational Interviewing in their work, and the organizational factors that inhibit or improve participants' support for using Motivational Interviewing as part of adoption into their practice repertoire.

Statement of the Problem

Engagement between the child welfare worker and the family system is key to successful outcomes (Forrester, Kershaw, Moss, & Hughes, 2008), but child welfare workers and clients often view their relationships as contentious (Altman, 2008). Adult learners must find meaning and value in the acquisition of new knowledge and practice methods that help them engage families, and when that does not happen, child welfare training is not transferred to practice (Schuler, Lee, Kolivoski, Attman, & Lindsey, 2016).

Child welfare practitioners need to be trained in ways that are meaningful to them and support family engagement in order to support good outcomes for families (Arbeiter & Toros, 2017).

Purpose of the Study

The purpose of this study was to explore whether cognition priming before and during Motivational Interviewing training enhanced child welfare workers' opinion of the applicability of Motivational Interviewing as a practice protocol for work with their child welfare clients. This quasi-experimental study compared workers' opinions of the applicability and willingness to implement Motivational Interviewing for two groups: (1) the control group participants who received information about Motivational Interviewing without linkage to the child welfare environment, and (2) intervention group participants who received training that described the ways in which Motivational Interviewing was applicable to child welfare work and addressed adult learning needs. The child welfare practitioners' opinion of the applicability of Motivational Interviewing practice protocol were assessed using the Application Potential of Professional Learning Inventory (APPLI 31), a survey that measures factors that influence whether participants are likely to implement training such as Motivational Interviewing in their work roles. The study also assessed participants' perceptions of personal and organizational factors which contribute to their likelihood of implementing Motivational Interviewing into their practice.

Rationale for Study

While there is literature related to adult learning and volumes of manuals on how to conduct organizational training, there is no research that focuses on the unique learning

barriers present in training child welfare workers in methods of family engagement. Given the life-changing impact these workers have over the families with whom they work and evidence that engagement plays such a critical role in family outcomes, it is essential to find an intervention that would provide a framework for future studies that promote and enhance educators' and trainers' ability to frame learning in a way that child welfare practitioners find meaningful and valuable.

Understanding how adults learn is important to ensure that training is informed by evidence. Knowles' (1984) principles of andragogy informed the development and delivery of instruction in a way that might increase the use of Motivational Interviewing by child welfare practitioners. Using a cognition primer that addressed Knowles' (1984) principles of andragogy may encourage learners to: (1) leverage their practice experience to provide a basis for the content, (2) see the immediate relevance and impact to their job the learning provides, (3) see Motivational Interviewing as a problem-centered (addressing needs) approach rather than content-oriented (addressing knowledge), and (4) integrate the training in their practice.

This study assessed how learners' prior training experiences and perceptions, as well as the organizational supports for training, influenced views related to the perceived applicability of Motivational Interviewing for their jobs. The findings of this study are useful for the development of future exploration of priming for adult learners within a child welfare organization.

Research Questions

The research questions that guided this study are as follows:

1. Does the use of cognition priming during Motivational Interviewing training with child welfare workers increase their perception of the applicability of the method to child welfare work?
2. Does the use of cognition priming during Motivational Interviewing training with child welfare workers increase the likelihood of their willingness to use the technique in their own practice?
3. What personal and organizational factors contribute to the child welfare workers' likelihood of using the technique in their own practice?

This study hypothesized that once child welfare workers have a context for how Motivational Interviewing applies to their practice setting, they would find it to be applicable for their work and be more inclined to use this approach with clients, compared to those who learn the strategy without that context (Leathers, Melka-Kaffer, Spielfogel, & Atkins, 2016). It was expected that respondents' personal perceptions and organizational supports might also impact their attitudes about utilizing Motivational Interviewing. The rationale for the hypothesis is supported by previous work that suggests that when learning is valuable in helping workers perform their duties, they are more likely to use it in practice (Buckley, Tonmyr, Lewig, & Jack, 2014; Curry et al., 2005; Larsen-Freeman, 2013), but that personal perception (Curry et al., 2005; Lieberman et al., 1988) and organizational environment (Bhattacharyya, Reeves, & Zwarenstein, 2009; Chaudoir, Dugan, & Barr, 2013; Luongo, 2007) may limit a workers' willingness to use a new approach in practice.

Definitions

Child Welfare Worker: For the purposes of this study, a child welfare worker is an employed county social worker who works directly with involuntary clients referred to the child welfare system for concerns related to child safety

Cognition Priming: Stimulating learning or curiosity in a subject matter by providing information that promotes learner engagement and addresses learners' negative attitudes and orientation towards the learning topic or goals (Lamb et al., 2015).

Engagement: Involvement, collaboration, compliance, and participation, as well as client attitudes, about positive relationships with their workers (Gladstone et al., 2012)

Evidence-based Practice: Empirically supported interventions (Leathers, Melka-Kaffer, Spielfogel, & Atkins, 2016)

Implementation Science: The study of methods to promote the integration of research findings and evidence into organizational policy and practice (Cabassa, 2016)

Motivational Interviewing: A goal-oriented, client-centered counseling style for eliciting behavior change by helping clients explore and resolve ambivalence (Ahl, 2006; Alexander, VanBenschoten, & Walters, 2008; Arkowitz et al., 2015; Clark, 2006; Miller & Rose, 2009; Miller & Rollnick, 2013; Rollnick & Miller, 1995)

Personal Perceptions about Training: Individual behaviors, attitudes, and perceptions about training (Machin & Fogarty, 2004)

Organizational Factors: organizational contexts such as supervisor and agency supports and resources, peer supports, caseload size, and organizational attitudes (Kim & Kao, 2014)

Resistance: Passive non-cooperation, active disagreement, or threatening behavior (Forrester, McCambridge, Waissbein, Emllyn-Jones, & Rollnick, 2008)

Transfer of Learning: The influence of learning in the teaching environment to behavior on the job (Curry et al., 2005)

Training Uptake: Adoption of formal and informal learning that enhance learners competence, understanding, views, and motivations in the implementation of new skills (Richter et al., 2011)

Assumptions

Assumptions for this research include that respondents to the survey met the study qualifications and answered the questions honestly and to the best of their ability and that respondents' perceptions about the value of Motivational Interviewing are a good indicator of their actual willingness to incorporate Motivational Interviewing in their practice. It assumes that Motivational Interviewing might be a successful engagement technique for child welfare workers and that worker perception of the acceptability of the technique could interfere with its adoption.

Finally, this study assumes that, as pilot research, results will inform the child welfare training field about the applicability of Motivational Interviewing, but is not representative of all workers given the limited sample size.

Delimitations

The study was limited to participants from one large Midwestern county social services agency.

Organization of the Study

The study materials have been organized into five chapters. Information presented in Chapter I provided the introduction and background, a statement of the problem, purpose for the study, research questions, operational definitions, assumptions, and delimitations. Chapter II will provide a review of the literature for the child welfare

workforce, Motivational Interviewing, and adult learning theory. Found in Chapter III are the methodology for this study, including the research design, survey instruments, participants, and the procedure for data collection and analysis is delineated. Chapter IV presents the findings of the study and the analysis of the data collected. In Chapter V's discussion of the study findings, limitations, implications for practice, and recommendations for future research can be found.

CHAPTER II

LITERATURE REVIEW

The purpose of this study was to explore the changes in perception of applicability of Motivational Interviewing training by front-line child welfare workers subsequent to utilizing a cognition primer prior to and throughout the training. The theoretical foundation for this study was based on Malcolm Knowles (1968) interpretation of Alexander Knapp's (1833) adult learning theory of andragogy. To understand how this theory could be applied to the child welfare setting, one must also look at the work child welfare workers perform, mandates of the system on the workers, the organizational context that work occurs in, and current and historical methods used to train the child welfare workforce. Implementation science provides a further framework for how to address the organizational context in which learning takes place (Montini & Graham, 2015).

Conceptual Framework

The study's conceptual framework was based on the adult learning theory of Andragogy. Andragogy was first coined in 1833 by Alexander Kapp and was later adopted and built upon by Malcolm Knowles in his 1968 article "Andragogy, Not Pedagogy," which became a popular theory in North America among adult educators (Merriam & Bierema, 2014). Knowles' initial work (1980) led to the development of the

first four assumptions of adult learners, and in 1984, Knowles added a fifth and sixth assumption to his theory of Andragogy (Table 1).

Table 1.

Knowles' Six Assumptions of Adult Learners

Assumption	Defining Characteristics
Self- Concept	As people mature, they move to be a dependent personality toward being more self-directed
Experience	As people mature, they amass a growing set of experiences that provide a fertile resource for learning
Readiness to Learn	As people mature, they are more interested in learning subjects that have immediate relevance to their jobs or personal lives
Orientation to Learning	As people mature, their time perspective changes from gathering knowledge for future use to the immediate application of knowledge. As such, adult learners become more problem-centered rather than subject-centered
Motivation to Learn	As people mature, they become more motivated by various internal incentives, such as the need for self-esteem, curiosity, desire to achieve, and satisfaction of accomplishment
Relevance	As people mature, they need to know why they need to learn something (Knowles, 1984). Furthermore, because adults manage other aspects of their lives, they are capable of directing or, at least, assisting in the planning and implementation of their own learning.

Adult learners seek out and find the information they will find useful in their current situation (Knowles, 1978). The umbrella of theories that fall under the term adult learning theory are many; this study takes a cognitive constructivism (Hmelo-Silver & Barrows, 2008; Piaget, Inhelder, & Weaver, 1969) approach to cognition priming of the Motivational Interviewing training. Under this theoretical approach, the learners are at the forefront, and the experiences they bring to the training frame the value they place on the information given (Boghossian, 2006). Constructivism, as a theory, guides curriculum design, and thus one's method of teaching (Baviskar, Hartle, & Whitney, 2009), and acknowledges that all experiences frame one's reality and how those experiences interact with any point in time. When information presented in training differs from what is thought or known to be true to the learner, they experience a cognitive conflict; when this conflict occurs, learners will resist or even try to flee (Knowles et al., 1998). Therefore, training should be responsive to the match between the learners' lived reality at the point the training occurs, with the realization the context of the work environment, learner attributes, or other factors may change the perceived applicability of the training to the worker.

Assessing Needs and Interest

Too often, adult learners in a setting such as a state or a county child welfare system are given training based on the needs of the organization and not that of the worker. Most individuals are aware of deficits in their knowledge or practice skills, but this does not mean that the individual perceives these knowledge gaps as a knowledge need (Knowles, 1980). The potential dissonance between what a learner knows and needs

to know can be used to increase learner motivation. Constructivist theory suggests this learner motivation can be achieved by providing a discussion with the learner around what they know and do, whether what they currently do works, or if there are difficulties they face, and what would be different if they had a way to overcome those difficulties. This data gathering process can increase dissonance, and also informs the educator on the needs of learners and how best to increase the learner's motivation for learning related to the topic.

Resistance to learning is well known in the field of education, with Babicka-Wirkus (2018) providing a three-dimensional model that includes resistance as an outcome of a learner's social world, motivation as a dimension of resistance, and resistance based on space (organizational environment). Thus, it is important for educators to assume that learners may not be ready to learn or implement new knowledge, based on a variety of factors, when developing and implementing training. Therefore, preparing the learner with information prior to training can enhance an adult's readiness to learn.

Cognition Priming Model of Learning

Cognition priming is a social-cognitive process that allows learners to develop a schema in which to prepare for the learning that will take place (Doyen, Klein, Simons, & Cleeremans, 2014). The learning environment can be a formal environment such as a classroom, or an informal setting, such as observing how others respond to a situation. Cognition priming seeks to change the schema or perception learners have in order to increase their receptiveness to new knowledge (Lamb & Annetta, 2013). A learner's

schema, or thought pattern, is developed based on their reactions to previous training, the current level of knowledge, current skills, preparation for forthcoming training, ability to implement new skills, sense of control regarding choice in the selection of training application, meaningfulness to their work, organizational values, and organizational support for the training (Smith-Jentsch, Salas, & Brannick, 2001). Consequently, the workers' schemas are often influenced by the agency expectations and policy, such as those associated with the engagement of clients by workers.

Child welfare workers also bring their existing schemas to their work, shaped by their lived experiences, along with the training they receive from the agency. These may include negative beliefs about the kind of people involved in the child welfare system, their own personal hopes about keeping children safe, and belief (or lack thereof) about their own ability to influence change. Because of the variety of experiences child welfare workers bring that influence how they engage with clients, cognition priming can help establish some similar starting points of reference when introducing new engagement skills training.

Child Welfare Engagement With Clients

Engagement between child welfare workers and clients is not only best practice; it is a federally supported and mandated obligation for the child welfare agency (Kemp, Marcenko, Hoagwood, & Vesneski, 2009). Best practices in child welfare are practice models that emphasize a family-centered approach utilizing evidence-based interventions that have been shown to be successful in addressing the complexity of the needs present in child welfare cases (Child Welfare Information Gateway (CWIG), 2016). For instance,

the Child Welfare Information Gateway (CWIG), a dissemination outlet of the federal Children's Bureau, produces educational materials for child welfare professionals, and describes an engaged child welfare worker as one who can "...actively collaborate and partner with family members throughout their involvement with the child welfare system, recognizing them as the experts on their respective situation and empowering them in the process" (Child Welfare Information Gateway, 2016, p. 1). The Fostering Connections to Success and Increasing Adoptions Act of 2008 affirmed the use of family engagement and mandated that child welfare workers seek to engage extended family members to assist in the reunification of children (McDermott, 2008; The Annie E. Casey Foundation, 2013, p. 2). Despite these mandated obligations and recognition of improved family outcomes related to family engagement, families continue to experience discord with their child welfare workers, which prevents active engagement with the system, case plan, and interferes with reunification (Toros, DiNitto, & Tiko, 2018).

Successful outcomes in child welfare are broadly conceptualized as children living in a safe family environment where their developmental and emotional needs are met, ideally with their own families, so that they may grow up and function as productive members of society (Poertner, McDonald, & Murray, 2000). Most of the time, the only way for child-welfare involved parents to have successful outcomes is if they cooperate in services mandated by the child welfare agency and courts. Parental engagement is typically measured via participation in services, child visits, and case planning processes (Dawson & Berry, 2002; Huebner, Durbin, Cordell, & James, 2016; Kemp, Marcenko, Hoagwood, & Vesneski, 2009; Wells, Vanyukevych, & Levesque, 2015).

Even though this definition of engagement assess compliance rather than the relationship between the worker and client, compliance is seen as a good proxy for engagement. It may be that the attitudinal and behavioral contributions of the child welfare worker lead to client compliance, and early interactions between child welfare workers and their clients have a negative or positive impact on whether clients continue in services (Kemp et al., 2009). A positive relationship between the child welfare worker and families is thought to enhance participation in services, which improves reunification outcomes, including the rate at which children return home from foster care in the child welfare system (Antley, Barbee, Christensen, & Martin, 2008). Service engagement also decreases future contact with the child welfare system (Chaffin et al., 2004). The relationship between the child welfare worker and client has been linked to positive outcomes in the same manner as the therapeutic relationship between therapist and patient serves a therapeutic process. A positive relationship between client and worker also supports positive parenting, collaboration, and improved case outcomes (Melchiorre & Vis, 2013). Parents who are cooperative with system expectations, and with their child welfare workers, are more likely to have their children returned or avoid court-mandated response (Dawson & Berry, 2002).

A systematic review of 60 research studies across the fields of child welfare, mental health, and substance abuse found that client-worker relationships were the consistent predictor of outcomes (Marsh, Angell, Andrews, & Curry, 2012), and thus a worthy target for intervention. Engagement between workers and clients, also sometimes referred to as rapport (Leach, 2005) or positive relationships (De Boer & Coady, 2007),

is seen as a function of the characteristics of the client, worker, and agency culture (Littell & Tajima, 2000). Skills that the worker brings to engagement include their previous education, perceptions, values, and agency factors (including working climate, which is defined as employees shared attitudes about their work), whereas client predictors of engagement include family functioning, and stressors, such as mental health problems, substance abuse, and demographics (Littell & Tajima, 2000). The paths to engagement are multifaceted, and client predictors of engagement are beyond the scope of this study.

Rooney (1992) suggests that it is the behaviors of the child welfare worker that most affect engagement outcomes, including providing positive reinforcement, ensuring client participation in the design of the plan, and making specific rather than vague requests. A qualitative study in which child welfare worker/client dyads were interviewed found that the factors that contributed to positive relational outcome included thoughtful use of power and a friendly approach informed by a humanistic outlook (De Boer & Coady, 2007).

Despite the variety of findings that suggest the importance of the worker's approach in engaging clients, and how this is connected to positive outcomes, there is no nationally-supported model for teaching child welfare workers how to engage families in child welfare. A study conducted in 2008 by Forrester, Kershaw, Moss and Hughes, simulated child welfare interviews with clients and found that the sample interviews primarily used an interrogative tone and closed, rather than open, questions. Furthermore, these interviews employed few empathetic reflections, and the workers infrequently

identified client strengths. Further, research suggests that fathers, in particular, are often left out of the caseworker engagement efforts. For instance, Coady, Hoy, and Cameron (2013) found that fathers who were involved in the child welfare system experienced workers as cold, uncaring, judgmental, and not straightforward or honest.

The reasons for contentious relationships between workers and clients are also multifaceted. Petras, Massat, and Essex (2002) note that there are natural barriers to worker/parent engagement in child welfare, in that the relationship often begins with an allegation of abuse or neglect, leading to the parents being naturally defensive, guarded, and afraid to reveal any real need for help for fear of consequences from the child welfare system. Meanwhile, workers are placed in the challenging role of engaging the family, while also continuously watching for risks, potentially testifying against the parents in court or addressing ongoing concerns. Similarly, child welfare workers are faced with a long list of court requirements, legal mandates, and child welfare policies that guide their work, and warned that they could violate the rights of the family if they do not follow each procedural step. In some cases, child welfare workers have even been criminally and civilly prosecuted for not following child welfare mandates (Alexander & Alexander, 1995; Cooper, 2005; Regehr, Chau, Leslie, & Howe, 2002). Given the complexity of these relationships, it is no wonder that child welfare workers de-emphasize relational skills under the pressure of doing the mandated work that receives the most scrutiny, especially in the absence of a clear model that emphasizes the importance of engagement. Engagement skill-building ideally addresses this gap between theory and practice within the confines of their agency mandates.

Child Welfare Mandates

Child welfare mandates are grouped around three primary roles of child welfare agencies: to assure safety, permanency (toward the most family-like situation possible, so children do not become orphans in care), and well-being. Federal laws such as the federal Adoption and Safe Families Act (ASFA) of 1997 have been put in place to establish practice and policy criteria and expectations in child welfare (McDermott, 2008).

The ASFA mandates specific case management timelines, for instance, any child who is in foster care for 15 out of the past 22 months is to be placed for adoption with the termination of parental rights (Smith & Donovan, 2003). This mandate means that child welfare workers are under pressure to connect parents to services quickly and to monitor their progress closely to determine whether children can be safely reunited with their families, if they are in foster care. The AFSA also offers monetary incentives to states that move children from foster care to adoptive homes, mandates that families are participants in their case plan development, and offers funds for family preservation to keep children in their own homes.

Other mandates come from local oversight committees, community organizations, citizen review panels, and court litigation (Ryan & Gomez, 2016). Some litigation has focused on the preparedness and ability of the child welfare workforce to work successfully with parents. For instance, twelve jurisdictions across many states have experienced class-action lawsuits related to caseload sizes so high that they are found to prevent workers from effectively serving families (Farber & Munson, 2010). The result

of enhanced oversight by federal policy and local litigation has established requirements that child welfare workers directly address any ambivalence by families in order to enhance engagement in services and address safety concerns (Petras et al., 2002).

All of these requirements are centered on child and family well-being, yet they also affect caseloads of child welfare workers, who feel like they are constantly required to complete more documentation and tasks to meet the growing list of federal, state, and local mandates (Yamatani, Engel, & Spjeldnes, 2009). These tasks disrupt the time they might spend building relationships with families and favor administrative assessment, rather than the day-to-day reality of meeting needs of families (Smith & Eaton, 2014; Yang & Ortega, 2016). The workers become focused on the tasks that are directly measured and result in evaluative feedback, such as managing timelines related to initial and ongoing family contact, rather than meaningful family engagement. For some workers, this emotional exhaustion and role strain leads to burnout, which further increases disengagement with clients, and often corresponds to a high workforce turnover rate (Gladstone et al., 2012; Mandell et al., 2013; Travis et al., 2015). Given these mandates and workload demands, child welfare workers require tools for engagement that apply to the types of work they do, are easy to employ, and reduce burden. Furthermore, these should be evidence-based, with research supporting their efficacy in addressing the needs of the family.

Evidence-Based Practice in Child Welfare

Most services that are currently provided in child welfare settings lack research that demonstrates positive outcomes (Leathers et al., 2016). Even so, evidence-based

practice is increasingly an expectation of community stakeholders and federal funders. The federal AFSA policy requires that child welfare programs identify outcome measures and are accountable for their performance. More recently, the Family First Prevention Services Act of 2018 was signed into law with the aim of preventing children from entering the foster care system by funding preventative services and improving the well-being of children already in foster care by reducing the number of children placed in stranger (non-relative caregiver) foster care homes (Buchanan, 2017). All states also participate in a federal review process known as Child and Family Services Review (CFSR), in which they identify their practice model or explicit conceptual techniques that workers use to engage with clients to meet specific outcomes (Whitaker, 2011). In order for evidence-based practices to take hold in child welfare, workers must believe that they will work better than their practice-as-usual and that they have skills for implementing the new practice (Akin, Brook, Byers, & Lloyd, 2016).

The California Evidence-Based Clearinghouse for Child Welfare (cebc4cw.org) provides a database of programs used in child welfare settings that are evidence-based. Of those listed, only two are noted to be highly relevant to child welfare and are also well-supported by research evidence. However, several programs are listed as having promising research evidence to support them. The two evidence-based practices that contain an aspect of family engagement include: Family Group Decision Making, in which families and friends are engaged in a meeting with agency personnel to support the case plan (Morris & Connolly, 2012). Family Group Decision Making uses techniques from a therapeutic style called Solution-Focused Therapy, in which the caseworker

focuses on family strengths in full partnership with the family to meet case planning goals and reunification (Antle, Christensen, van Zyl, & Barbee, 2012).

The other program listed as highly relevant is an approach called Family Connections (Collins et al., 2011), which includes the essential components of outreach, engagement, focus on strengths, standardized assessments, and other support structures. These complex programs require agency buy-in and support, financial investment, and other time investments that are implemented at the agency level. Also, they are typically not available to workers who are independently seeking to improve their practices related to engagement with families.

Workers may be resistant to adopting a new evidence-based practice and have concerns about changing how they do things for many reasons. Cawsey, Deszca, and Ingols (2015) name some of these reasons: risks that outweigh benefits, poor communication about expectations, concerns that the change was not well thought-out or may have negative consequences, lack of previous positive experiences with change initiatives, observed negative reactions of colleagues, and the perception that the change approach is not just. Buckley et al., (2014) note that child welfare workers may be resistant to the use of evidence, if it is seen as overly-complex, not culturally appropriate to their population, or takes away from the time required to carry out their mandated work. Evidence-based practices often also use prescriptive approaches that remove clinical decision-making, which child welfare workers perceive as a loss of decision-making autonomy that dismisses their prior practice wisdom (Luongo, 2007). On the other hand, child welfare research has identified facilitators to the adoption of new

evidence-based practices (Akin et al., 2016), including training that engages workers, coaching supports, organizational supports, adequate resources, and stakeholder buy-in. Cognition priming may be one way to increase worker engagement by addressing the known causes for resistance, including complexity, as well as the facilitator in engaging workers.

Fidelity, or the degree to which a program is carried out in a way that matches the goals and values of the program, is an important component of using evidence in child welfare (Berzin, Thomas, & Cohen, 2007). However, child welfare interventions are often not carried out with fidelity, and major components of the intervention may be left out, even after workers have been well-trained in a model (Sabalauskas, Ortolani, & McCall, 2014). In order for evidence-based models to be carried out with fidelity, agencies should provide ongoing training, consultation, and organizational supports, or mandates for the practice (Leathers et al., 2016). In other words, in spite of the intervention being effective, it may not take hold without an effective implementation process that includes fidelity assessment. Fidelity assessment in child welfare can be approached by reviewing several primary or secondary sources, including: administrative data, observation, through the use of interviews with clients or colleagues, or the use of structured checklists (Kaye & Osteen, 2011). Implementation of an evidence-based practice must be seen as an ongoing process, rather than a one-time introduction to how to work with families in order to assure that workers are knowledgeable in how to use the tools, see them as applicable and useful to their work, and are using them as intended. For these reasons, preparing workers to use an evidence-based practice should be

approached through the use of Implementation Science processes to address barriers to successful adoption of a new practice.

Implementation Science and Transfer of Learning

Implementation science is concerned with the adoption of research into practice, including the drivers and barriers to the use of research in practice (Eccles & Mittman, 2006). Implementation science is not specific to a certain kind of practice implementation, but rather describes the strategies employed in order to introduce a change within an organizational setting (Proctor et al., 2009). Many problems exist in the translation of research from scientist to the practitioner, including barriers in the understanding of practice implications of the research, understanding of the reasons for changing current practice behaviors, and shared use of terminology between scientist and practitioner (Montini & Graham, 2015). Consideration of the practitioner reality and environment are vital during the introduction of a new evidence-based practice.

The adoption of evidence is a complex and understudied issue, which, beginning in 2004, led to a focus on research related to the implementation of evidence in healthcare settings (Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou, 2004). With the realization related to the gap between effective evidence-based practices and real-world adoption of these practices in agencies, researchers began focusing on the factors that lead to successful agency adoption of research (Proctor et al., 2009). Important factors demonstrated to facilitate implementation include: the applicability between the intervention and the agency, the applicability of the intervention to the needs of the community, training and ongoing support for the intervention, understanding of the

intervention by agency leadership, and sustainability of the intervention (Hanson et al., 2016). New practices should provide a clear advantage over current practice, if the implementation of the evidence-based practice is to be successful (Bhattacharyya et al., 2009).

While implementation science is frequently concerned with the agency-wide use of evidence-based practice (Fixsen, Blase, Naoom, & Wallace, 2009), it is informative even when thinking about how an individual practitioner adopts evidence-based practices (Metz et al., 2014). According to Metz and colleagues (2014), implementation of an intervention is dependent upon the clear definition of core intervention components, a clear description of essential practices, capacity to use the intervention with high fidelity, and the use of data to improve the delivery of the intervention. Montini and Graham (2015) argue that implementation science must also be used to scale down unhelpful practices through addressing biases that workers might hold that support the current practice. Some maladaptive practices become so entrenched that they must be extinguished, before a new practice can take hold.

In order for child welfare training to be transferred to the workers' practice, learning participants must see it as relevant to their work. A qualitative study of child welfare workers educated in Motivational Interviewing (Maxwell, Scourfield, Holland, Featherstone, & Lee, 2012) noted that Motivational Interviewing educators might be seen as out-of-touch with practice realities, when the learning is not specifically situated to the type of job, and learning participants are unable to see the benefit of being taught by educators who are not knowledgeable in child welfare practice. Research about the

transfer of learning in child welfare, or how well learning from classroom training transfers to the field, suggests that several factors impact transfer-of-learning, including: individual factors, teaching quality, and organizational supports (Futris, Schramm, Richardson, & Lee, 2015). Several steps help with the transfer of learning, including post-teaching mentorship and coaching (Curry et al., 2005).

In sum, for the ideal training uptake of an evidence-based practice such as Motivational Interviewing, individual and organizational factors must be considered, and training should be ongoing to assure that workers continue to practice what they learned with fidelity to the model. Teaching that does not transfer to practice is time-consuming and not a good use of financial resources. Given the cross-sectional time-limited design of this study, the organizational interventions, ongoing training, and exploration of fidelity, are outside the purview of the current study.

Motivational Interviewing

Motivational Interviewing was first developed by William Miller (1983), based on the work of Carol Rodgers' client-centered therapy, Leon Festinger's (1957) work on cognitive dissonance, and Daryl Bem's (1967) self-perception theory. Motivational Interviewing takes the approach that clients are ambivalent about change; there are possible benefits and possible drawbacks to making any change, and this ambivalence keeps people from moving toward change. Therefore, the main purpose of Motivational Interviewing is to deal with the ambivalence and help clients see the ways that not changing may be harmful and that change may be helpful by evoking their own values-based motivations (Miller & Rollnick, 2013). Miller and Rollnick (2002) coined the

phrase “Spirit of Motivational Interviewing,” which describes the style in which the helper should engage families: collaborative, compassionate, accepting, and evoking the client’s own solutions. Motivational Interviewing further offers specific practice tools that support active listening, such as the use of open-ended questions, affirmations, reflections, and summaries, which are taught using the acronym “OARS.” The purpose of the Spirit of Motivational Interviewing, together with OARS, is to support the development of a relationship between helper and client that will lead the client to explore their own reasons for making a change. This relationship is the underpinning to the development of successful engagement. Motivational Interviewing has been researched for more than thirty years and has been shown to be effective in a wide variety of settings and across many different professional disciplines, including social work, counseling, medicine, and nursing (Cryer & Atkinson, 2015).

Motivational Interviewing typically uses a workshop-style approach to training. Training can be conducted at the beginning, intermediate, and advanced levels (Doran, Hohman, & Koutsenok, 2011), and ongoing coaching and feedback after audio review of an interview are seen as a best-practice component of follow-up to assess the degree the practitioner is using Motivational Interviewing. This allows the trainer to offer follow-up coaching that supports fidelity (M. Alexander et al., 2008). If coaching and feedback are not used, skills are found to erode six months post-training (Schwalbe, Oh, & Zweben, 2014). While college education of clinicians predicts stronger Motivational Interviewing skills after training (Doran et al., 2011), Motivational Interviewing can be taught at all adult education levels and has not been shown to have a minimum educational attainment

requirement in the adult practitioner population.

Strong evidence exists regarding the success of Motivational Interviewing; in part, because several standardized scales have been developed that measure clinician adherence and competence to the Motivational Interviewing model (Moyers, Rowell, Manuel, Ernst, & Houck, 2016), which allows the researcher to know that the tool is being used with fidelity to reach specifically identified outcomes. To date, several meta-analyses have been conducted on Motivational Interviewing with different populations and in different settings. These include in health settings (Rubak, Sandbæk, Lauritzen, & Christensen, 2005), as a brief intervention for alcohol abuse (Vasilaki, Hosier, & Cox, 2006), adherence to medical treatment for chronic pain (Alperstein & Sharpe, 2016), behavioral and mood disorders (Romano & Peters, 2015), and substance abuse (Smedslund et al., 2011). These studies uncovered several benefits to Motivational Interviewing, including enhanced motivation to change, engagement in treatment, engagement with the therapist, patient confidence in the ability to make a change, and reduction of patient resistance to change. Although studies mentioned in the meta-analyses often find treatment with Motivational Interviewing as good as or better than treatment-as-usual, one study (Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010) noted that most research is conducted with clients who are seeking help, who often already have some degree of motivation. Motivational Interviewing techniques may be even more successful with clients who are not seeking treatment, such as those often encountered in the child welfare system, because of Motivational Interviewing's focus on overcoming resistance.

The California Evidence-Based Clearinghouse for Child Welfare (2016), which is a repository for interventions that work with child welfare clients, has assigned Motivational Interviewing its highest score of 1, signifying it as well-supported by research evidence, and states that Motivational Interviewing can be used as either a stand-alone intervention or to enhance a client's motivation to participate in another intervention. This rating is given to interventions that have at least two rigorous randomized controlled trials with sustained effects that last at least a year.

Child Welfare Research in Motivational Interviewing

Limited research exists on the use of Motivational Interviewing, specifically with child-welfare involved clients within the child welfare agency. Of the few research studies that fit into this category, findings are positive. For instance, a study in which researchers interviewed child welfare workers trained in Motivational Interviewing found that workers felt the Motivational Interviewing training improved their interviewing skills (Snyder et al., 2012). The University of Maryland School of Social Work developed a training model for future child welfare workers, and found that the use of live standardized clients or online training were both successful in teaching Motivational Interviewing skills; nonetheless, the live group resulted in longer-lasting Motivational Interviewing skills (Pecukonis et al., 2016). A British study of child welfare workers found that those who participated in a two-day Motivational Interviewing workshop and observed during simulations increased their use of empathy and engagement skills, and were less confrontational with the simulated clients (Forrester et al., 2008).

Several academic papers (Forrester et al., 2012; Hohman, 1998; Kemp et al.,

2009; Maxwell et al., 2012) reported reasons why Motivational Interviewing would be an appropriate technique in the child welfare setting but did not research its use in the child welfare setting. These articles suggested that Motivational Interviewing is a match for child welfare, because of the connections between substance abuse and child abuse, the importance of engagement in child welfare, the high rate of ambivalence experienced by parents involved in the child welfare system, child welfare workers' lack of cohesive training in a theoretical practice model, and child welfare workers' frequent use of confrontational interviewing styles which do not support change. Clark (2006) adds that child welfare workers have to balance an approach that is neither too directive or too directionless, and Motivational Interviewing encourages an approach of guiding without coercing, which works well in settings such as these.

Some child welfare interventions have successfully infused Motivational Interviewing content into a treatment approach; for instance, a program known as SafeCare+ targets rural high-risk families for child maltreatment prevention and trains home visitors on Motivational Interviewing for working with parents, while also offering supportive services and risk assessment. Compared to families who received traditional home visits from mental health practitioners, evaluation of this program found that SafeCare+ recipients were more likely to engage in services, were engaged longer, were more satisfied with services, and were less likely to be referred to child welfare after visits (Abramowitz, Flattery, Franses, & Berry, 2010). Motivational Interviewing appears to be a recognized, promising practice for child welfare, based on its theoretical approach and its fit with existing child welfare services.

Several studies report on the use of Motivational Interviewing with clients who typically receive child welfare services. For instance, 50% to 80% of child-welfare involved parents struggle with substance dependence (Hohman, 1998), which is demonstrated to be effectively treated with Motivational Interviewing in a number of meta-analyses. Carroll, Libby, Sheehan, and Hyland (2001) researched sixty parents referred to drug treatment by their child welfare workers, half assigned to a single-session Motivational Interviewing enhanced initial assessment, and half to a standard initial assessment. Those who received the Motivational Interviewing assessment were twice as likely to return for the next treatment session. Motivational Interviewing has also been shown to decrease blame and increase motivation to change in men who batter their partners (Kistenmacher & Weiss, 2008), which is relevant given that 28% of substantiated child welfare cases include interpersonal violence (Casanueva, Smith, Ringeisen, Dolan, & Tueller, 2014). Motivational Interviewing was also shown to increase retention and family engagement in a meta-analysis of child mental health programs (Ingoldsby, 2010).

Motivational Interviewing is designed as a non-coercive intervention, in which the counselor draws out the client's own reasons for wanting to make a change. Nonetheless, in child welfare, the need for change is identified by the agency, as they evaluate child risk factors (Mullins, Suarez, Ondersma, & Page, 2004), which may make some aspects of Motivational Interviewing challenging in the child welfare setting. Other challenges to the use of Motivational Interviewing in child welfare include the timelines parents must meet, as described previously: Motivational Interviewing maintains the

client's pace regarding readiness to attempt the change, which may present difficulties when working with child welfare clients for whom fast change is expected. A Motivational Interviewing trained child welfare worker in a qualitative study conducted in South Wales (Maxwell et al., 2012) noted that initial child welfare work is often fast-paced information collection with no time to use Motivational Interviewing as intended, and she also noted that it might be a better fit for the workers tasked with helping to reunify the families. Forrester et al. (2008) also noted that workers might have a hard time maintaining the empathetic stance that Motivational Interviewing demands when confronted with the sometimes-unacceptable behaviors of parents involved in the child welfare system. Workers may benefit from explorations of their biases and assumptions about whether Motivational Interviewing can be incorporated into their work.

Of all the studies conducted related to the use of Motivational Interviewing with child welfare clients, none report on whether the training was changed for delivery in a child welfare context, whether it helped workers understand the applicability between Motivational Interviewing and their work with child welfare clients, or whether workers were more willing to implement Motivational Interviewing into their personal, professional practice. A gap in the literature exists regarding whether workers understand the benefits of Motivational Interviewing with their client populations or are well-prepared to use Motivational Interviewing in their specific context.

Utility of Motivational Interviewing in Child Welfare

The need for child welfare workers to engage families is documented throughout the literature as a critical component to the successful case outcomes, and ultimately, the

reunification of children (Morris & Connolly, 2012; Scourfield et al., 2012; Smithgall et al., 2012; Snyder et al., 2012). Miller and Rollnick (2013) stated that engagement is the first goal of utilizing Motivational Interviewing, and the purpose of engagement "...is to engage the client in a collaborative working relationship." (p. 37). Although the term engagement in the child welfare setting has taken on many definitions, ranging from the completion of services to the development of a positive working relationship with the child welfare worker (Mirick, 2014), a positive working relationship with the child welfare worker is theorized to lead to deeper engagement in services.

The conceptual, theoretical pathway by which Motivational Interviewing improves engagement is thought to work through enhancing worker empathy, combined with having the client, instead of the worker, express the reasons for needing to make a change. The client talks more than the worker, and the worker reflects with understanding what the client has expressed (Miller & Rose, 2009). Because Motivational Interviewing is a practice theory that has emerged from practice settings, the theoretical underpinnings related to change are not well explored, but have their basis in self-determination theory (Markland, Ryan, Tobin, & Rollnick, 2005) and reactance theory (Harakas, 2013). Self-determination theory is present in the foundations of Motivational Interviewing; the assumption of the role of the counselor is not to persuade or argue for change but to guide clients to make their own decisions related to change (Miller, 1983). Reactance theory provides a framework for understanding the resistance to change of individuals, employees, and organizations (Steindl, Jonas, Sittenthaler, Traut-Mattausch, & Greenberg, 2015). Reactance theory suggests that when a client expresses an opposite

view from the counselor and argues against change, this situation result is that the counselor uses a directive approach with the client, which then further increases resistance to change (Miller & Rollnick, 2013). This psychological reactance manifests as resistance in response to threats toward a person's freedom (Brehm, 1966).

Motivational Interviewing addresses this response by the counselor, exploring where the resistance comes from (emotional response) and exploring clients desired outcomes (regaining control and freedom) (Forrester, McCambridge, Waissbein, & Rollnick, 2008), instead of trying to tell clients why they should change.

Engagement is also supported through the Transtheoretical Model of Stages of Change (DiClemente & Velasquez, 2002), which suggests that workers must understand how ready clients are to make a change, and offer them motivation to progress to the next level of readiness, instead of moving too quickly to take actions for which the client is not yet prepared. This model suggests that clients progress through five steps, from pre-contemplation (not yet thinking about a change) to contemplation (considering the arguments for and against change), to preparation and planning, to action, and finally to maintenance. Relapse may occur at any time, and a client may sometimes move between these non-linear stages of readiness, but the worker is still encouraged to start where the client is and encourage movement to the next level. While many health workers often see clients at the preparation stage of change, who have sought out help on their own, child welfare workers primarily encounter those at the pre-contemplation stage who are not seeking help. This situation means that child welfare workers must help clients move to contemplate the pros and cons of making a change, yet workers often jump directly to

agency mandates and demands for rapid change, which is thought to cause client resistance (Ingoldsby, 2010).

Further, child welfare workers often encounter clients who are defensive, hostile to agency involvement, and mandated to undertake involuntary services to maintain their children in their care or reunify with them once placed out of the home. This client reaction may evoke a worker's own "counter-resistance" or "righting reflex," or desire to correct the parent through persuading them, telling them what to do, and giving them advice about how to do it (Moyers & Rollnick, 2002). A study of child welfare workers' communication styles (Forrester, Kershaw, et al., 2008) found that child welfare workers primarily have confrontational interview styles. This style of interviewing is likely to lead to resistance in worker-client collaboration.

High levels of resistance are associated with negative client outcomes (Miller & Rollnick, 2013). Advice-giving is often unhelpful in such situations. According to reactance theory, resistance is aroused when one's freedoms are threatened (Miron & Brehm, 2006). A person under such pressure is likely to make attempts to regain their freedom by resisting advice and doing the opposite of what is requested, even when it is counter to their preferences (Miller & Quick, 2010). Similarly, self-determination theory (Van Petegem, Soenens, Vansteenkiste, & Beyers, 2015) posits that basic psychological needs include "autonomy, relatedness, and competence" (p. 904). Being told what to do and how to do it can create internal conflict and negatively impact relationships (Van Petegem et al., 2015). The theory further supports that when a worker can evoke a

client's own direction instead of telling them what to do, the working relationship and client outcomes may benefit.

Child welfare clients often also have very little trust in child welfare workers, given their past experiences as consumers of public services (Dawson & Berry, 2002). Kemp et al.(2009) report that "...to build a working alliance, (child welfare) workers must understand, validate, and engage these negative and ambivalent feelings, while at the same time reaching for sources of motivation and hope, such as parents' love for their children and desire to reunify their family" (p. 106). Given these recommendations from child welfare research, Motivational Interviewing may have much to offer child welfare workers, as one of its foci is in helping clients resolve ambivalence to change by moving through conflict alongside the worker. Workers may need help understanding the reasons that Motivational Interviewing would be a useful approach in their practice, and the ways it enhances engagement within the confines and expectations of agency mandates. One way to do this is through cognition priming which helps set the stage for this learning.

Cognition Priming for Training in Child Welfare

Child welfare workers are sometimes seen as synonymous with social workers in title, yet nationally, the majority of child welfare workers do not have degrees in social work (Barth et al., 2008). This reality means that their backgrounds are varied, and they may not have had education in a strengths-based approach to working with families, and may have very limited backgrounds in counseling principles. Basic human respect, avoiding judgment, and not imposing one's own values are seen as basic competencies required of child welfare workers by both workers and clients (Drake, 1996), and all

social workers engage in foundational training that attempts to reinforce these values (National Association of Social Workers, n.d.), but not all child welfare workers receive evidence-based training in these concepts.

Knowles' (1984) principles of andragogy describe the reasons that cognition priming works, in that it can help to (1) leverage child welfare workers' practice experience to provide a basis for the content, (2) see the immediate relevance and impact to their job the learning provides, (3) see Motivational Interviewing as an approach that addresses their specific needs, and (4) prepare them to integrate the training in their practice. Generally, the concept of cognition priming refers to the provision of education that offers the support in preparation for training to meet the needs of the learner so that they have better uptake of training content (Lamb et al., 2015). Together, these theories of change informed the intervention used in this study.

In a cross-sectional study, it is not possible to assess the degree to which training uptake occurs directly because of the single point of assessment, but attitudes and intent about change are often used as proxies for actual change in child welfare studies (Boyas & Wind, 2010; Farmer et al., 2010; Knudsen, Ducharme, & Roman, 2009). A worker's perception of fit and applicability is hypothesized to be a good indicator of a worker's plans for uptake in the case of child welfare training (Curry et al., 2005). Cognition priming is thought to address attitudes, readiness, and knowledge for learning. Readiness for learning has been shown to impact the transfer of learning in child welfare (Antle, Barbee, & van Zyl, 2008). Inversely, if child welfare workers are not yet primed for the training material offered, they may reject it or not be able to integrate it into their

practices successfully. As previously discussed, child welfare agencies are increasingly expected to use evidence-based practices (e.g., Motivational Interviewing), yet this expectation alone is an unsatisfactory motivator in supporting information uptake.

Additionally, organizational factors may limit the degree to which evidence-based practices are adopted, and may inhibit the impact of cognition priming. Figure 1 represents the hypothesized explanatory framework, which is based on the complementary interactions of andragogy, implementation science, and cognition priming. As noted previously, this study's design limits the ability to impact implementation drivers as is ideally practiced with the use of implementation science, but takes into account the impact of organizational factors on this study's outcomes.

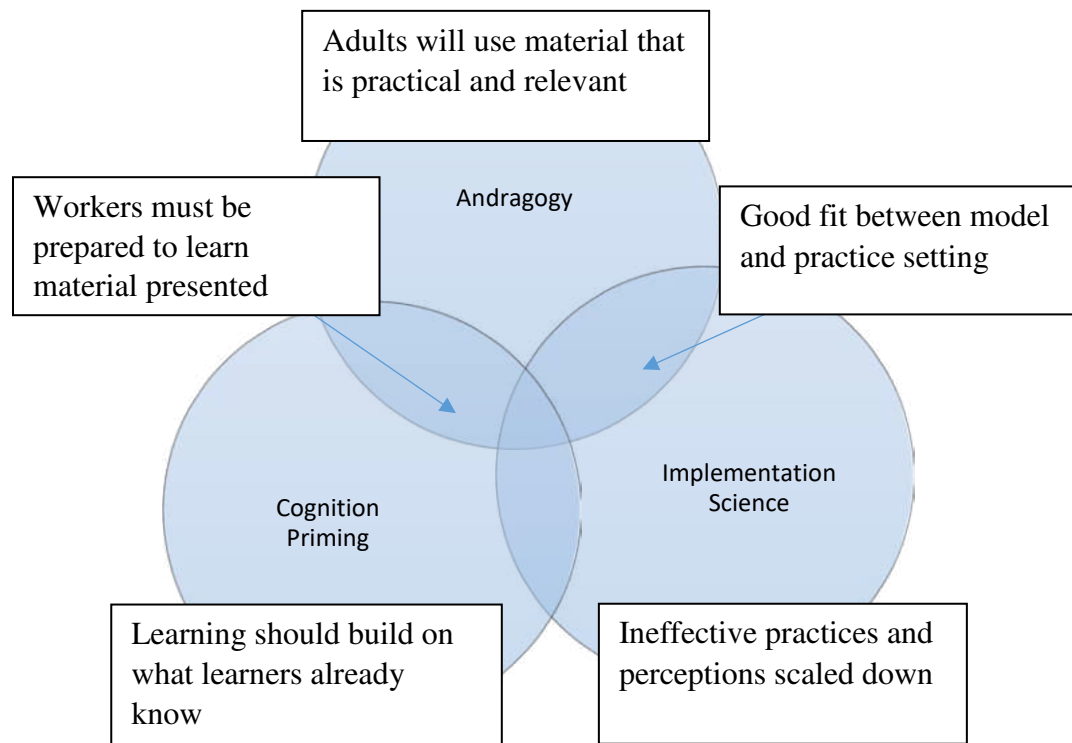


Figure 1. Implementation considerations in adult learning

To date, no known research has been conducted specifically related to using a cognition primer to increase the degree to which workers see Motivational Interviewing as applicable to their practice. Given the potential for improved practice outcomes and importance of the work performed by child welfare workers, this study adds to the relevant literature in understanding how cognition priming may serve as an initial step in training to improve learners' outcomes.

Summary of the Research

In summary, a child welfare worker's engagement with the families they serve appears critical to shaping outcomes for families who are served in the child welfare system. Although child welfare workers appear to understand their roles in supporting and reunifying families, they may not understand the role of engagement in reaching those outcomes. Complex child welfare mandates shape much of the actual training workers receive, and it does not appear that child welfare workers are systematically trained in family engagement strategies. Given the significant impact of child welfare interventions in the lives of vulnerable families, states now often mandate that agencies use evidence-based approaches in their child welfare agencies.

Motivational Interviewing is one evidence-based approach that holds promise for teaching child welfare workers how to engage with families. Andragogy says that learners learn what they need to know, and that new knowledge should build on what they already know. Through the use of cognition priming, trainers can better prepare learners by introducing the science of Motivational Interviewing and how it will help them meet their goals. Implementation science informs this work by contributing the best ways that

evidence-based practices are adopted in agencies; for instance, if new learning replaces old ways of doing things, those practices must be scaled down. Agencies must also create an environment that supports the new practices through techniques such as coaching, supervisory support, and agency policies and procedures that provide space for the new practices.

Existing research in child welfare training does not yet set out the ways that cognition priming might support learning in child welfare agencies. However, emerging research does suggest the importance of supporting training through numerous strategies beyond a single training session for ideal implementation. Whether this training support is partially accomplished through the use of cognition priming is one question relevant to this area of literature.

CHAPTER III

METHODS AND PROCEDURES

Research in adult learning theory is well established, yet is mainly focused on application in higher education and workforce training. This study aimed to specifically address a gap in the literature related to child welfare training best practices for teaching child welfare workers to successfully engage with parents involved in the child welfare system. Presented in this chapter are a description of the research design, study participants, survey tool, and applied procedures for the collection of data and subsequent statistical analyses.

Purpose

The purpose of this study was to explore whether child welfare workers' opinion of the applicability of Motivational Interviewing as a practice protocol for work with their child welfare clients was enhanced by training that used cognition priming. The cognition priming intervention was designed to teach child welfare workers how they would use Motivational Interviewing in specific situations commonly experienced in child welfare settings. This study compared workers' opinions of the applicability and willingness to implement Motivational Interviewing for two groups: (1) the control group participants who received information about Motivational Interviewing as it is typically delivered without linkage to the child welfare environment, and (2) intervention group participants who received training that was designed with adult learning needs in mind,

and described the ways in which Motivational Interviewing was specifically applicable to child welfare work. The child welfare practitioners' opinion of the applicability of Motivational Interviewing practice protocol were assessed using the Application Potential of Professional Learning Inventory (APPLI 31), a survey that measures factors that influence whether participants are likely to implement training such as Motivational Interviewing in their work roles. Additionally, this study assessed how learners' prior training experiences and perceptions, as well as the organizational supports for training, influenced views related to the perceived applicability of Motivational Interviewing for their jobs. The following research questions informed this study:

1. Does the use of cognition priming during Motivational Interviewing training with child welfare workers increase their perception of the applicability of the method to child welfare work?
2. Does the use of cognition priming during Motivational Interviewing training with child welfare workers increase the likelihood of their willingness to use the technique in their own practice?
3. What personal and organizational factors contribute to the child welfare workers' likelihood of using Motivational Interviewing in their own practice?

Research Design

This research was conducted utilizing a mixed modal, cross-sectional, quasi-experimental nonequivalent group design to study the effects of cognition priming and measure participant perceptions about the applicability of Motivational Interviewing; willingness to implement Motivational Interviewing into their professional practice and their perceptions of Motivational Interviewing for child welfare work; and to identify what, if any, personal and organizational variables may hinder or enhance child welfare workers' view of Motivational Interviewing in their practice. These questions are not

fully addressed in the current literature and present a gap in understanding, as well as a barrier to the implementation of an intervention to address family engagement. Mixed modal research allows the researcher to link elements of quantitative and qualitative research methodologies for the purposes of expanding the strength and understanding of the meaning of the research data used to answer research questions (Creswell & Plano Clark, 2018).

Cross-sectional nonequivalent group design was used in this study, given that the collection of data occurred at a fixed point in time using a convenience sample. Cross-sectional design studies have been well established in the social science literature as providing a relevant way to study the effects of intervention without the barriers associated with longitudinal studies (Mills, Durepos, & Wiebe, 2010). Random assignment was not possible due to the needs of the host organization and the availability of participants, so a convenience sample was used. This approach still allowed for the inclusion of a control group and an intervention group (Rubin & Babbie, 2017). Limitations of this study due to design are discussed further in the limitations section of the paper.

Participants

Participants for this study were comprised of a convenience sample that met the inclusion criteria of the target population for this study. The sample was comprised of child welfare workers in a large Midwestern county social services organization. A large county is defined as having a population of more than 100,000 residents (US Census Bureau, 2019). County social services organizations provide public programs, including

child welfare services, within the geographic boundaries of the county in which they are located.

Recruitment

Participants for this study were employed by the large Midwestern urban county social services organization, which formally agreed to the training and associated research activities. Supervisors were encouraged to support staff time to attend the training, and the training was promoted internally by email. Some participants shared that they had been asked to attend the training, while others volunteered to attend. Participants in the training were invited to participate in the research surveys, and time was given before the start of the training and immediately after the training for the completion of the surveys. Participants were not paid, yet a recruitment incentive of two drawings (one from each group) for a \$50 Amazon gift card was offered to all participants who participated in the training and completed the questionnaires. The target sample size for the control and intervention groups were 18 participants each. Participants were assigned to either the control or intervention group randomly, based on which training they elected to attend.

Inclusion Criteria

This training included only front-line child welfare services workers. "Front-line" refers to workers who work directly with clients in the field in assessment, investigation, family reunification roles for alleged child abuse and neglect. The purpose of limiting to this population was to increase the homogeneity of the study sample, and because the techniques would be most applicable to those who work directly with clients. Likewise,

the sample was limited to one office to decrease the number of spurious factors, such as organizational culture or hiring requirements that might impact the training experiences of the group.

Exclusionary Criteria

Workers who were not front-line child welfare personnel, or who did not have direct client contact, were not included because the training is specific to client intervention work. Participants who missed more than 15 minutes of the training could return for the remainder of the training, but were excluded from the analysis.

Unequal Allocation

Participants for this research were drawn from three training sessions, with subjects being randomly assigned to either the control group or the intervention group (based on which training they self-selected to attend). The first training was the control group, which was comprised of 17 participants, and the second and third training made up the intervention group with 11 and 13 participants, respectively. This unequal allocation was due to the organizational barriers which prevented the equal allocation of participants between the control and interventions groups. Based on the literature documenting barriers to child welfare workforce training, it was determined that an oversampling of the interventions group would provide greater statistical meaning without having a large effect on the study's power (Scherbaum & Ferreter, 2009). Unequal allocation of interventions is common in exploratory research when there are constraints to equally-distributed control and intervention groups (Jan & Shieh, 2011).

Characteristics. Each participant in this study completed a pre-intervention demographic questionnaire at the beginning of the training, which asked for the information pertaining to their gender, age, race, years of current child welfare experience at their current organization, years of child welfare experience prior to current organization, highest degree obtained, and if they held a degree in social work. Table 2 shows the demographic characteristics of the sample. Age was calculated as a categorical variable with the modal age range being 25-29 years of age and with 78.1% of the sample being 39 years of age or younger. There was a higher percentage of females who participated in the study than males, (73% as compared to 27%). Race for the participants in this study was comprised of 68.3% white, 7.3% Hispanic or Latino, 19.5% Black, and 4.9% Asian or Pacific Islander. The majority of the participants (82.9%) reported their highest level of education at the bachelor's level, compared to 17.1% who had achieved a master's degree. Two participants reported having a degree specific to social work, with both participants reported having earned a Bachelor in Social Work degree. Participants indicated that 65.9% had been employed for less than a year, 14.6% one to two years, 9.8% five to six years, and 9.8% seven or more years. Years of child welfare work experience prior to the current agency indicated that 68.3% had less than one-year prior experience, 7.3% one to two years, 12.2% three to four years, and 12.2% having seven or more years' prior work experience.

Table 2.

Demographics Characteristics for Study Participants.

Characteristic	Response Categories	N
Gender	Male	10
	Female	27
	Missing	4
Age	19-24	7
	25-29	10
	30-34	9
	35-39	6
	40-44	2
	45-49	0
	50-54	5
	54-59	2
Race	60+	0
	White	28
	Hispanic/Latino	3
	Black	8
	Native American	0
	Asian/Pacific Islander	2
Years of Current Child Welfare Experience	Other	0
	Less than 1 year	27
	1-2 years	6
	3-4 years	0
	5-6 years	4
	7+ years	4

Characteristic	Response Categories	N
Years of Prior Child Welfare Experience	Less than 1 year	28
	1-2 years	3
	3-4 years	5
	5-6 years	0
	7+ years	5
Highest Level of Education Completed	Bachelor's Degree	34
	Master's Degree	7
	Associate's Degree	0
Social Work Degree	BSW	2
	MSW	0
	None	39

Survey Instruments

Original Survey Instrument

The APPLI 31 survey is based on the Transfer Potential Questionnaire (TPQ), which was developed by Curry (1997) as a 68 question survey comprised of 11 factors, and later modified into the APPLI 33, a 33 question survey by Curry and Lawler (2010). This scale was further modified by the authors emphasizing the items in the scale with the highest factor loading (three items for the top nine factors and two items for the remaining two factors) using Stanton et al. (2002) strategies to reduce the length of self-report scales. This reduced 31-item scale maintained reliability ($\alpha=0.95$) and validity when compared to two large studies which used the full-scale TPQ (Curry, Lawler, Donnenwirth, & Bergeron, 2011). This scale is traditionally used only as a post-intervention survey, and no equivalent pre-intervention survey exists in the literature. For

the purposes of the study, a pre-intervention scale was created by this author, and is described later in this section. Appendix C provides the questions to the subscale for the pre-intervention survey, and Appendix D provides the post-intervention survey.

The APPLI 31 is typically administered at the end of training to the participants, and on average, takes ten minutes to complete (Curry et al., 2011). The instrument explores factors (Table 3) related to the individual learner, organization, and training design to identify barriers to the transfer of learning. This survey was slightly modified for this study to focus the questions on the target population of front line child welfare workers, but did not change question meanings.

Table 3.

APPLI 31 Subscales.

Subscales	
1.	Trainer Adult Learning and Transfer Strategies
2.	Relevance and Applicability
3.	Supervisor Support for Training/Transfer
4.	Organizational/Top Management Support
5.	Application Planning
6.	Perceived Learning
7.	Pre-Training Motivation
8.	Prior Experience with Training/Application
9.	Co-worker Support
10.	Training/Organization Congruence
11.	Pre-training Preparation

Reliability of Instrument

Cronbach's alpha is a statistical measure used to ascertain the internal consistency of constructs within an instrument (Tavakol & Dennick, 2011). Cronbach's alpha scores for Likert scale questions that are correlated above 0.70 are assessed as related, but values

of 0.90 to 0.95 demonstrate higher correlation within a construct than desired (Cortina, 1993). Scores that are too highly correlated indicate redundancy in that the items are measuring the same thing (Silverstein, 1989), and are therefore removed from the instrument.

Curry et al. (2010) created the instrument called Application Potential of Professional Learning Inventory (APPLI 33) from the Transfer Potential Questionnaire (TPQ), which was previously validated in two large training studies with child welfare workers. A California study (n=459) using the TPQ found high internal validity (Cronbach's alpha=.96) and the Ohio study (n=441) also found high internal reliability (Cronbach's alpha=.90) (Curry et al., 2010). The APPLI 33 was created using the items with the highest factor loading to reduce the 68-question-TPQ to the 33 questions in the APPLI 33. Each of the APPLI 33 subscales was correlated to the TPQ scales used in California and Ohio, and found that all but subscale 7 (pre-training motivation) were significantly correlated at the $p < .05$ level. The Cronbach's alpha for the APPLI 33 is .95 (Curry et al., 2010). Curry et al. (2010) demonstrated the validity and reliability of the APPLI 33, by testing it against the TPQ; the Cronbach's alpha level reported was above 0.70 for the APPLI 31. To avoid survey burden in which respondents lose focus or desire to complete an instrument due to high numbers of questions (Rolstad, Adler, & Rydén, 2011), shorter instruments are often seen as superior to longer ones.

Dissertation Study Survey Instruments

Permission for the use and modification of the Application Potential of Professional Learning Inventory (APPLI 31) was obtained from Dr. Dale Curry in

November 2017 (see Appendix E). The full instruments, as deployed, are in Appendix F (pre-intervention survey, created by this researcher) and Appendix A (post-intervention APPLI31 survey, as modified by this researcher).

Pre-intervention survey instrument. A pre-intervention survey instrument was developed, based on the APPLI 31, to investigate participants' perceived experiences and attitudes with prior training within their organization, implementation of those skills, application of prior training to their clients, and experiences related to prior trainers (Appendix F). The purpose of this pre-intervention survey was two-fold. First, it offered a way to compare the current training experience with previous training experiences to assess for differences, which allowed for analysis of whether the intervention group contributed to more training satisfaction than the control group. Second, it offered a baseline measure to help detect differences between groups, and an opportunity to use change scores, from pre-to-post training responses, instead of the scaled means to control for pre-test differences between groups. The pre-intervention survey questions' verb tense were reworded to reflect past experiences, whereas the APPLI-31 survey refers to training experiences for the training received that day.

Demographic questions that were added to the pre-intervention survey to obtain insight into the study participants included:

- age
- years of practice at the current agency
- years of prior child welfare practice
- highest college degree obtained
- possession of a social work degree
- race/ethnicity
- gender

Demographic information allowed for between-group comparisons of homogeneity. This between-group homogeneity supports the validity of the research and the reported findings in Chapter IV, and the results discussed in Chapter V.

Post-intervention survey instrument. A modified version of the Application Potential of Professional Learning Inventory (APPLI 31) (Curry, 2011) was used for this study, with the addition of a Likert-type scale question in the post-intervention survey related to the participants' perception regarding the applicability of Motivational Interviewing in child welfare, and four qualitative questions to provide insight into the perceived benefits and barriers to using Motivational Interviewing in child welfare (Appendix A).

Modification to the original survey included changing question 26 from "Most training provided by UC Davis is of the highest quality" to "Most training provided by my organization is of the highest quality." Additionally, questions 32 to 36 were added to provide information about workers' perceptions related to clients' motivation for change (Table 4) in order to assess the degree to which participants believed that motivation was a product of their interactions with families as is taught by Motivational Interviewing curriculum, as opposed to motivation being a quality possessed by the client (Hohman, 2012). Appendix B is provided to reflect the entirety of the changes made to the post-survey.

Two questions were added to the post-intervention survey to allow for qualitative responses specifically related to participants' perceptions of Motivational Interviewing (MI) applicability to child welfare practice. Question 37 was a three-part question, which

used a Likert scale to inquire about the goodness of fit of Motivational Interviewing in child welfare work. This was followed by two open-ended questions which asked: “in which ways is MI a good fit for child welfare work?” and “in which ways is MI not such a good fit for child welfare work?” Question 38 was a two-part question which asked “in what area of your direct work with clients will MI be most helpful? and “in what areas of your direct work with clients will MI be least helpful?”

Table 4.

Post-intervention survey Questions 32 to 36.

Number	Question
32	My client’s lack of motivation interferes with achieving child welfare goals.
33	If a client isn’t motivated, there’s not much I can do about it.
34	Some clients need to be coerced or pressured in to change.
35	The client’s lack of motivation is a significant stressor for me.
36	Some clients will never change no matter what I do.

Research Procedures

Institutional Review Board (IRB) approval was obtained at the University of North Dakota prior to conducting the study (see Appendix G). All study participants were recruited from the participating child welfare organization by way of an internal training announcement by the agency training supervisor. Participation in the training was voluntary for some and mandated for others by their supervisors. While participation in the training was mandated for some participants, the option to participate in the study was voluntary, and it was made clear by the researcher during the informed consent process.

Before each training, participants in each of the groups were provided with two paper copies of informed consent to participate in the study. The informed consent form

was read verbatim to each group, with time being given to answer any questions participant might have. Participants were then asked to initial and date each page of the consent form and to sign and date the last page. Each study participant was given an informational copy of the consent form to keep (see Appendix H for participant informed consent).

Survey Process

After a brief welcome and presentation of the consent form, participants were provided verbal instructions on filling out the Application Potential of Professional Learning Inventory (APPLI 31) pre-intervention survey which included the demographic questions outlined above, and were provided 10 minutes to complete the survey. All participants were able to complete the survey in the allotted time. Other than providing the groups my name and inviting them to participate in the research associated with the training, no other information about the training or the trainer's background was given. This procedure was followed to control for social factors that might influence how participants answered the pre-intervention survey based on perceived expertise or likeability of the researcher conducting the training.

Training Process

The training process for Motivational Interviewing (MI) followed guidelines promoted in the Motivational Interviewing Network of Trainers (MINT) training manual (The Motivational Interviewing Network of Trainers (MINT), 2014). This outline is suggested for use by those who become Motivational Interviewing trainers, and suggests using a training process that includes introductions, training objectives, an icebreaker

activity, an overview of MI, science supporting MI as an evidence-based practice, Spirit of MI, introductory MI skills, and several exercise activities to allow for practice of MI skills.

Three training sessions were provided (one control group, two intervention groups), over two days, at the child welfare agency. Each group was provided with handouts at the beginning of the training, and the handouts were referenced throughout the training to support the information presented in training. Each of the training sessions lasted three hours with identical information about the concepts of Motivational Interviewing provided. Table 5 provides the training outline for this research, along with the priming modifications added to the training for the intervention group.

The control group for this study received Motivational Interviewing training as usual, with no cognition priming-related to the material. The control and intervention groups received the same learning materials and the same quantity of learning exposure. The intervention group received a training modified by principles of andragogy, implementation science, and priming, learning transfer, as demonstrated in Table 5.

Table 5.

Motivational Interviewing Training Differences between Control and Interventions Groups.

Training	Control	Intervention
3-hour training	Both	Both
Introductions	Researcher’s prior child welfare work history not provided.	Participants were provided with the researcher’s prior child welfare work history.

Training	Control	Intervention
APPLI 31 Pre-intervention and demographic survey	Both	Both
Agenda and Objectives for Training	Both	Both
Icebreaker Activity MI Primer for child welfare	Three in a row activity	What do you want Primer given to group: <ol style="list-style-type: none"> 1. What would MI need to do to make your job easier? 2. What do you hope your clients get from working with you? 3. What do you know already about MI and what do you want to know more about it?
Why MI	Examples used from substance use treatment work with clients.	Specific examples form child welfare used and discussed with the group
Child welfare Primer	None	Other reasons to use MI in child welfare presented and discussed
What is MI	Both	Both
Tasks of MI	Examples from substance use treatment provided	Child welfare case examples used.
The science of MI to elicit change talk	Substance use client example used	Child welfare case examples used
Sustain vs. Change Talk	Substance use client example used	Child welfare case examples used

Training	Control	Intervention
Ambivalence	Smoking cessation example used	Child welfare case examples used
Readiness Ruler	Substance use client example used	Child welfare client example used
Spirit of MI	Both	Both
4 Minute Exercise (not MI)	Substance use client example used	Child welfare client example used
12 Roadblocks to MI	Substance use examples used	Child Welfare examples used
4 Minute exercise with MI	Substance use examples used	Child Welfare examples used
MI Process	Substance use examples used	Child Welfare examples used
Prochaska's stages of change model	Substance use examples used	Child Welfare examples used
Self-determination theory	Substance use examples used	Child Welfare examples used
Debrief: <ol style="list-style-type: none"> 1. What has surprised you or helped you so far? 2. What questions do you have so far? 	Questions related to child welfare work were addressed using examples from substance use treatment	Questions related to child welfare work addressed
MI Skills: OARS	Substance use examples used	Child Welfare examples used
MI Skills: DARN CATS	Substance use examples used	Child Welfare examples used
Role play as a group with a trainer	Substance use example used	Child Welfare example used

Training	Control	Intervention
Wrap-up	Key MI skills reviewed but not linked to child welfare practice	Key MI skills reviewed and linked to child welfare practice.
APPLI 31 Post-intervention survey	Both	Both

Control Group

The control group consisted of 17 participants, all of whom agreed to take part in the study. Questions were encouraged and asked by the group participants throughout the training. When providing examples or answering questions related to Motivational Interviewing, generalized information was given, which is typical at Motivational Interviewing training. Primary case examples provided during the training related to Motivational Interviewing in a substance use treatment setting. The control group training was designed for and took place as a three hour introductory Motivational Interviewing training.

Participants of this group were provided a general introduction of the researcher's background, although the researcher's prior child welfare experience was excluded from the introduction. Group participants were asked to share their name, role within the agency, and years of child welfare experience. Participants completed the modified APPLI 31 pre-intervention survey. PowerPoint slides were used for visual aid throughout the presentation.

Participants were introduced to the training agenda and objectives. An icebreaker activity entitled *Three in a Row* was completed with no cognitive priming provided that would be related to Motivational Interviewing in child welfare practice. Participants were provided with the rationale for Motivational Interviewing using case examples from the substance use treatment setting. An overview of Motivational Interviewing principles and skills were provided. Motivational Interviewing skills were linked to specific tasks they were designed to achieve with clients. Participants were provided information related to the science supporting Motivational Interviewing as an evidence-based practice, and examples from substance use treatment were used. Definition of sustain and change talk was provided as well as the concept of ambivalence to change using examples from smoking cessation. The readiness ruler was presented, and a group exercise using an example from substance use treatment setting was demonstrated.

The Spirit of Motivational Interviewing was defined and followed by a four-minute group exercise using examples from a substance use treatment setting. Examples of common barriers to implementing Motivational Interviewing were presented and discussed with the 12 Roadblocks to MI presentation followed by a 4-minute group exercise demonstrating these barriers using substance use treatment setting examples. MI Process and the integration of the Stages of Change model were provided with an explanation of self-determination theory utilizing substance use treatment setting examples. Participants were encouraged to ask specific questions related to Motivational Interviewing by asking, “what has surprised you or helped you so far?” and “what questions do you have so far?”. Questions specific to Motivational Interviewing in child

welfare work were addressed again using examples from substance use treatment setting. The acronym OARS (open-ended questions, affirmations, reflections, and summary) and DARN CAT (desire, ability, readiness, need, commitment, actuation, taking steps) were presented and followed up by a group role play using a case example from the substance use treatment setting. A review of the key skills of Motivational Interviewing was provided, and time was given for participants to ask questions. Questions were addressed without child welfare specific examples.

Intervention Group

In order for the child welfare agency to maintain coverage, not all participants could attend training at once. Therefore, two separate intervention group sessions were offered, and their results combined. The first interventions group consisted of 11 participants, and the second group consisted of 13, for a total of 24 participants in the intervention group. The control group was offered in one session at a time where 17 people were able to attend at once.

In the control group, the trainer's background as a MINT trainer was offered. The intervention group also provided with the researcher's child welfare work experience as a cognition priming for the use of Motivational Interviewing by a child welfare worker and to demonstrate to the participants that the trainer had knowledge and expertise in the field of child welfare that informed the credibility of the training. Following this, a group discussion took place after the icebreaker exercise to facilitate priming of the training. The intervention group sessions were asked the following questions in order to incorporate the theory of andragogy in training:

1. What would Motivational Interviewing need to do to make your child welfare job easier?
2. What do you hope your clients get from working with you?
3. What do you know already about Motivational Interviewing and what do you want to know more about?

In each intervention session, a ten-minute group discussion took place, and a list of additional learning outcomes was developed, based on the group sessions stated needs for the training. Next, participants in the intervention groups were provided a six-page packet from the Child Welfare Information Gateway (2017), titled *Motivational Interviewing: A Primer for Child Welfare Professionals*. Key elements on how Motivational Interviewing and child welfare practice work well together were outlined and discussed. Questions for each of the intervention sessions were directly linked to child welfare practice throughout the training. Group skill exercises were also grounded in child welfare practice.

Data Analysis

Survey data for each group was entered in Statistical Package for the Social Sciences (SPSS®) 25 predictive analytics software. Survey instrument code sheets were developed for the Application Potential of Professional Learning Inventory (APPLI 31) questionnaire. Pre and post-intervention survey independent sample t-tests for each question were run and are provided in Appendix I (pre-intervention survey) and Appendix J (post-intervention survey).

Missing Data

Missing data on the survey occurred from participants leaving blank or writing N/A on the survey questionnaire. There was no missing data on the Application Potential of Professional Learning Inventory (APPLI 31) questions, but several participants did not list a gender or did not answer one or more of the qualitative questions on the post-intervention survey. Missing identification related to gender was coded as 99, and qualitative questions left blank or with N/A were entered as N/A. Gender was presented as an open-ended question on the pre-intervention survey.

Qualitative Survey Responses

Participant responses to the open-ended questions were used to inform the research about their views of Motivational Interviewing in their current setting. These questions were “In which ways is MI a good fit for child welfare work?”, “In which ways is MI not such a good fit for child welfare work?”, “In what areas of your direct work with clients will MI be most helpful?”, and “ In what areas of your direct work with clients will MI be least helpful?”. They appear in the results section of chapter IV and are listed in full in Appendix K.

Research Question 1: 1. Does the use of cognition priming during Motivational Interviewing training with child welfare workers increase their perception of the applicability of the method to child welfare work?

Two subscales were chosen to answer this question as they measure participants perceptions of applicability of Motivational Interviewing in child welfare work and their practice. This question was analyzed using post-intervention survey comparative data for the control group and intervention group, assessing responses on two subscales from the

Application Potential of Professional Learning Inventory (APPLI 31). The first post-intervention survey subscale used was subscale 2, which measured the relevance and acceptability of Motivational Interviewing of the participant after completing the training. The second subscale used was subscale 5, application planning, which measured the degree to which the participant planned to implement their learning related to the training. See Table 6 for the specific questions included in each of these subscales.

Table 6.

Dependent Variables use to inform Research Question 1.

Subscale	Question
Subscale 2 Relevance & Applicability	
Q-09	The training was relevant to my job duties.
Q-15	The information I received from this training can definitely be used with my clients.
Q-20	I am very confident that I will use the training on the job
Subscale 5 Application Planning	
Q-10	I have already made a plan with a co-worker to use this training.
Q-16	My client(s) will cooperate with my implementation of the new ideas/skills/ techniques.
Q-19	I have a plan to implement this training.

Primary analysis. For the purpose of this analysis, a mean score was developed in SPSS®v. 25 for each subscale.

Change scores. Next, a change score variable was developed for each subscale that measured the change difference between the pre-intervention survey, which asked how relevant and how likely they were to use training typically, and post-intervention survey, which asked how relevant and likely they were to use this training, by subtracting the pre-

intervention survey score from the post-intervention survey score. This helped to control for the pre-intervention survey differences between the control and intervention groups.

An independent samples t-test (two-tailed, 95% confidence interval, equal variance assumed) (Rubin & Babbie, 2017) was used to compare the control versus intervention group on the subscale change score mean. There was no missing data on the scaled questions.

Research Question 2: Does the use of cognition priming during Motivational Interviewing training with child welfare workers increase the likelihood of their willingness to use the technique in their own practice?

Primary analysis. This question was analyzed using the dependent variable scaled question, “On a scale of 1-5, with 1 not being at all good for child welfare work, and 5 being very good for child welfare work, how do you rate Motivational Interviewing?” Control group and intervention group means were compared.

Supplemental analysis. Because there was no mean statistically significant difference between the group means, a boxplot (Appendix L) was run to explore the control group versus intervention group distribution of scores for each subscale.

Research Question 3: What personal and organizational factors contribute to the child welfare workers’ likelihood of using the technique in their own practice?

Primary analysis. This analysis was carried out for all participants to increase the sample size needed for multiple linear regression and because the variables tested were not thought to be differentially influenced by membership in either the control or intervention group. A multiple linear regression was carried out in SPSS ® v. 25 on all participants to investigate the relationship between the dependent variable of Motivational Interviewing Acceptance in child welfare, as measured by average post-

intervention survey subscales 1 (trainer adult learning and transfer strategies), 5 (application planning), and 6 (perceived learning) from the APPLI 31, and the independent variables of Organizational and Support Factors for applying the MI training, made up of average scores for post-intervention survey scales 3 (supervisor support for training/transfer), 4 (organizational/top management support), 9 (co-worker support), and 11 (pre-training preparation; as well as Pre-training Experiences and perceptions about training, made up of the average scores for pre-intervention survey scales 2 (relevance and applicability), 6 (perceived learning) and 8 (prior experience with training/application) these scales and corresponding survey questions are presented in Table 7 below. The rationale for using these subscales was based on the review of the literature about adult learning and the organizational factors that influence workers' perceptions of training they receive.

Table 7.

Variables Used to Create Constructs to Predict Child Welfare Workers Acceptance of Motivational Interviewing.

Variables	Subscale	Questions
<i>Independent Construct 1</i>		
Supervisor Support for Training/Transfer	Post-intervention survey 3	Q-04 My supervisor values staff training. Q-05 My supervisor views this training as a high priority. Q-06 My supervisor expects me to use this training on the job.
Organizational/Top Management Support	Post-intervention survey 4	Q-07 In my organization, top management values staff training.

Variables	Subscale	Questions	
Co-worker Support	Post-intervention survey 9	Q08	In my organization, top management views this training as a high priority.
		Q-14	My organization values training.
		Q-11	There is at least one co-worker who will be supportive of my application attempts.
		Q-12	My co-workers' value training.
		Q-13	My co-workers will support my attempts to use the training on the job.
Pre-training Preparation	Post-intervention survey 11	Q-24	My supervisor helped prepare me for this training by discussing my learning needs and potential applications.
		Q-25	Prior to attending, I heard that this training was “worthwhile”/valuable.
<i>Independent Construct 2</i>			
Relevance and Applicability	Pre-intervention survey 2	Q-09	Training I participate in is generally relevant to my job duties.
		Q-15	Typically, the information I received from training can definitely be used with my clients.
		Q-20	I am usually very confident that I will use training I receive on the job.
Perceived Learning	Pre-intervention survey 6	Q-01	Usually, in training, I substantially increased my knowledge on this topic.

Variables	Subscale	Questions
		Q-02 As a result of the training, I usually developed new skills.
		Q-03 Training typically affects some of my attitudes concerning this topic area.
Prior Experience with Training/Application	Pre-intervention survey 8	Q-17 In the past, I have found training to be useful.
		Q-18 When I think back to other training I have attended, I can say that I have used the training on the job.
		Q-26 Most training provided by my organization is of the highest quality.
<i>Dependent Construct</i>		
Trainer Adult Learning and Transfer Strategies	Post-intervention survey scale 1	Q-27 The trainer provided some practical ideas that can be used on the job.
		Q-28 The trainer helped to provide a climate conducive to adult learning and skill development.
		Q-29 The trainer gave examples of when to use ideas/skills/strategies on the job.
Application Planning	Post-intervention survey Scale 5	Q-10 I have already made a plan with a co-worker to use this training.
		Q-16 My client(s) will cooperate with my implementation of the new ideas/skills/ techniques.
		Q-19 I have a plan to implement this training.

Variables	Subscale	Questions
Perceived Learning	Post-intervention survey Scale 6	Q-01 As a result of the training, I substantially increased my knowledge on this topic.
		Q-02 As a result of the training, I have developed new skills.
		Q-03 The training has affected some of my attitudes concerning this topic area.

Qualitative Responses: Methods

Thematic analysis, using a pragmatic approach as described by Aronson (1995) and Stuckey (2016), was used to explore the qualitative responses by identifying patterns that emerged from the data for each open-ended question. The purpose of the thematic analysis is to reveal trends and patterns, and not specific instances of a particular statement (Krippendorff, 2004); therefore, the analysis focused on themes, and not the number of examples meeting each theme. Although, richer sources of qualitative data, such as focus group or interview transcripts, provide better sources for thematic analysis leading to more rigorous insights (LaDonna, Taylor, & Lingard, 2018), the brief responses to the anonymous open-ended questions in this study were expected to elicit broad themes that could inform this mixed-modal research (Ivankova, Creswell, & Stick, 2006). The open-ended questions were the only source of data used in the coding process; responses were not linked to any other survey data. The thematic coding process was conducted in three stages: in the first stage themes were reviewed within each of the control and intervention groups by question, and the second stage compared the themes

that emerged for each question between the control and intervention groups. In the third stage, overarching themes that emerged across questions and groups were explored.

As a first step, all the responses were printed for each open-ended question, divided by research question, because the open-ended questions shaped the top-level themes (Stuckey, 2015) as the questions were designed to help answer the overarching study questions about whether priming, personal perceptions about training, and organizational barriers influence workers' acceptance of Motivational Interviewing. Because the working hypothesis was that there would be group differences, coding was managed separately for the control and intervention group. The questions chosen assumed that workers would feel two ways about Motivational Interviewing: that it was a good and bad fit for their context, and also helpful or not helpful to their practice. Because of the framing of the questions, which asked for ways that Motivational Interviewing might be good and bad, it was not possible to ascertain whether workers thought it was more good or bad as a practice intervention through analysis of the qualitative data. Therefore, the storyline grouping categories were chosen a-priori (Stuckey, 2015) to equally assess child welfare workers' perceived strengths and weaknesses of Motivational Interviewing, as shown in Table 13 in Chapter 4.

All of the qualitative data was read multiple times, by question and group, to begin understanding the data with the overarching research question and top-level themes in mind, to think about the storyline (Stuckey, 2015). After that, emergent sub-themes, or units that relate to specific topics (Taylor, Bogdan, & DeVault, 2016) were derived for each question and labeled with a word that seemed to capture the sentiment of the

participant's comment. The word was written down next to the comment. In some cases, when the response addressed multiple issues related to the top-level theme, more than one word was used to label a single comment. After each question was reviewed, the sub-themes were reread for similarities, and collapsed when they appeared to express a similar idea. Once themes were developed question by question and for each group, they were compared across the control and intervention groups. Because there were few differences between control and intervention groups, the data were collapsed by question, disregarding the group divisions. The sub-themes were also compared between questions, and collapsed and matched as appropriate. After that, a "story" was created to narrate each question (Stuckey, 2015) based upon the sub-themes assigned to each question, and then a storyline was developed to explain the entire data set. Finally, revisiting the literature (Aronson, 1995) and the quantitative findings (Ivankova et al., 2006) allowed for integration, meaning-making, and verification of the storyline.

Summary

Chapter III outlined the research design, participants of the study, study instrument, data collection, and statistical analysis procedures. Survey data were analyzed using SPSS® 25, and the results are presented in the next chapter.

Chapter IV

ANALYSIS

The purpose of this study was to explore whether child welfare workers' opinion of the applicability of Motivational Interviewing as a practice protocol for work with their child welfare clients was enhanced by training that used cognition priming to help link situations commonly experienced by child welfare workers with Motivational Interviewing interventions. This study compared workers' opinions of the applicability and willingness to implement Motivational Interviewing for two groups: (1) the control group participants who received information about Motivational Interviewing without linkage to the child welfare environment, (2) intervention group participants who received training that described the ways in which Motivational Interviewing was applicable to child welfare work and addressed adult learning needs, and (3) participants' perceptions of personal and organizational factors associated with their likelihood of adopting Motivational Interviewing into their practice . The child welfare practitioners' opinion of the applicability of Motivational Interviewing practice protocol were assessed using the Application Potential of Professional Learning Inventory (APPLI 31), a survey that measures factors that influence whether participants are likely to implement training such as Motivational Interviewing in their work roles. The study also assessed participants' perceptions of personal and organizational factors which contribute to their

likelihood of implementing Motivational Interviewing into their practice. The following research questions informed this study:

1. Does the use of cognition priming during Motivational Interviewing training with child welfare workers increase their perception of the applicability of the method to child welfare work?
2. Does the use of cognition priming during Motivational Interviewing training with child welfare workers increase the likelihood of their willingness to use the technique in their own practice?
3. What personal and organizational factors contribute to the child welfare workers' likelihood of using the technique in their own practice?

Research Question 1: Does the use of cognition priming during Motivational Interviewing training with child welfare workers increase their perception of the applicability of the method to child welfare work?

Statistical analysis demonstrated no statistically significant differences in the mean differences between the control and intervention groups from pre-intervention survey to post-intervention survey for any of the scales, as demonstrated in Table 8. There was not a significant difference in the scores in Subscale 2 (Relevance & Applicability) between the control group ($M=.57$, $SD=.55$) and intervention group ($M=.57$, $SD=.79$) conditions; $t(39)=.00$, $p = 1.00$. There was not a significant difference in the scores in Subscale 5 (Application Planning) for the control group ($M=.33$, $SD=.70$) and intervention group ($M=.50$, $SD=.77$) conditions; $t(39)=.71$, $p = .484$. These results suggest that the priming method used in this study does not increase workers' perceptions of the applicability of Motivational Interviewing of child welfare workers.

Table 8.

Changes in Acceptability between Control and Intervention Groups.

Subscale	N	M	SD	M diff	t	Df	p	d
Relevance and Applicability (subscale 2)								
Control	17	.57	.55	.00	.00	39	1.00	ns
Intervention	24	.57	.79					
Application Planning (subscale 5)								
Control	17	.33	.70	.17	.71	39	.484	ns
Intervention	24	.50	.77					

Research Question 2: Does the use of cognition priming during Motivational Interviewing training with child welfare workers increase the likelihood of their willingness to use the technique in their own practice?

Statistical analysis demonstrated no statistically significant differences in the mean differences between the control and intervention group post-intervention survey question 37 “On a scale of 1-5, with 1 being not at all a good for child welfare work and 5 being very good for child welfare work, how do you rate Motivational Interviewing?” (Table 9). There was not a significant difference in the scores in question 37 for the control group (M=4.3, SD=.59) and intervention group (M=4.5, SD=.51) conditions; $t(39)=1.19, p = .98$. These results suggest that the cognition priming method used in this study does not increase participants’ willingness to use Motivational Interviewing in child welfare practice. Results show a skewness pattern in the intervention group in the

way respondents indicated their agreement with how strongly they agree that they are to use Motivational interviewing on a scale of 1-5, where the upper quartile response range is higher (4.5 to 5.0) than in the control group (4.0-4.5), with a wider lower whisker score on the control group demonstrating lowest scores at 3.0. This demonstrates that more of the intervention group found a willingness to implement the use of Motivational Interviewing in child welfare work even though the difference was not statistically significant. Some participants experienced more change from the pre-intervention survey to a post-intervention survey in the intervention group than in the control group, even though this change was not enough to affect mean or median scores. One person in the intervention group reported a lower score after the intervention. In the control group, the people who scored higher after intervention were outliers. The mean for this question was skewed in the direction of the hypothesized outcome for cognition priming.

Table 9.

Willingness to Implement Motivational Interviewing in Child Welfare.

Variable	N	M	SD	M diff	T	df	p	d
Q 37								
Fit for CW Post				.21	1.19	39	.98	ns
Control	17	4.3	.59					
Intervention	24	4.5	.51					

Question 3: What personal and organizational factors contribute to the child welfare workers' likelihood of using the technique in their own practice?

No statistically significant differences were found between the intervention and control group on the independent sample t-tests (Table 11) for each of the subscales.

Therefore, the control and intervention group data were combined to increase the

statistical power for running analysis in question 3 about the personal and organizational factors that affect workers' perceptions of Motivational Interviewing.

A significant regression equation was found by using workers pre-training beliefs and their perceptions about organizational factors to explain the degree to which they perceived Motivational Interviewing to be useful to their practice. ($F(2,37)=16.796$, $p<.000$), with an R^2 of .476. Participants' predicted for Motivational Interviewing in child welfare is equal to $1.868 + .329$ (pre-training subscale, made up of questions (21) "I usually have input into the selection of training I receive", (22) "I generally voluntarily attend training", (23) "Usually when workshops are offered I am motivated to attend")+ .281 (organizational factors subscale which include questions (7) "In my organization, top management values staff training", (8) "In my organization, top management views this training as a high priority", and (14) "My organization values training"), which indicates Motivational Interviewing Acceptance (MIA) Construct increased one point with each of the increases in each of the two above constructs as noted. The two constructs accounted for approximately 69% ($R=.69$) of the variance in this particular study sample and can be expected to explain about 45% ($R^2=.448$) of the variance in a broader sample of people similar to those who participated in this study (Table 10).

For each one-point increase on the Organizational and Supports Construct, MIA increased by .329 points; for each point increase in agreement in pre-training beliefs Construct, MIA increased by .281 points. Both pre-training subscales and post-training organizational support subscales were significant predictors of Motivational Interviewing acceptance. This finding supports that workers who had positive prior training

experiences and perceived support for implementing the training into their work from the organization were more likely to report higher scores on scales that measured how strongly they believed that Motivational Interviewing was acceptable for their professional practice. The scatterplot of standardized predicted values and standardized residuals (Appendix M) demonstrated that assumptions of homogeneity of variance and linearity were met, which indicates that the groups who report high levels of prior training motivation and who report having support from their organization and supervisor in using new skills are more likely to try to implement motivational interviewing into their work with clients.

Table 10.

t-Test Measuring Relevance to The Application of Motivational Interviewing.

Source	B	SE B	β	T	p
Pre-Training Experiences	.33	.12	.42	2.7	.01
Organizational Factors	.28	.13	.34	.22	.04

$p = .05$

Exploratory Analysis

Control and intervention scale means. An independent sample t-test was run for the pre- and post-intervention survey scores for each subscale in the APPLI-31 for the control group and intervention group. These means are reported in Table 11. There were no significant differences in the scores between groups for scales 1 through 11. There were significant differences in the scores for Scale 12, client motivation, post-intervention survey between intervention group (M=3.41, SD=0.55) and the control

group (M=3.01, SD=0.54) conditions, $t(39)=2.29$, $p = 0.027$. However, when accounting for the differences in the means between pretest and posttest for Scale 12 (posttest minus pretest), there was not a significant difference in the scores of the intervention group (M=0.25, SD=0.43) and the control group (M=0.13, SD= 0.60) conditions, $t(39)=0.75$, $p = 0.459$. This indicates that the control group and intervention group exhibited some baseline differences, but did not experience differences in change from the pre-intervention survey to the post-intervention survey.

Table 11.

Independent sample t-test of pre/post-intervention survey scales

Scale	Intervention Mean	Intervention SD	Control Mean	Control SD	<i>p</i>
Scale 1- Trainer Adult Learning and Transfer Strategies					
Pre-intervention survey	3.84	.629	3.94	.719	0.660
Post-intervention survey	4.59	.572	4.54	.539	0.787
Scale 2- Relevance and Applicability					
Pre-intervention survey	3.86	.856	3.70	.857	0.571
Post-intervention survey	4.43	.455	4.27	.592	0.346
Scale 3- Supervisor Support for Training/Transfer					

Scale	Intervention Mean	Intervention SD	Control Mean	Control SD	<i>p</i>
Pre-intervention survey	4.13	.833	4.04	.964	0.726
Post-intervention survey	4.04	.881	3.88	.849	0.566
Scale 4- Organizational/Top Management Support					
Pre-intervention survey	4.17	.736	4.01	.775	0.653
Post-intervention survey	4.21	.821	4.12	.700	0.713
Scale 5- Application Planning					
Pre-intervention survey	3.06	.810	2.88	.781	0.497
Post-intervention survey	3.56	.713	3.22	.857	0.175
Scale 6- Perceived Learning					
Pre-intervention survey	3.75	.504	3.55	.656	0.274
Post-intervention survey	4.278	.611	4.29	.686	0.937
Scale 7- Pre-training Motivation					

Scale	Intervention Mean	Intervention SD	Control Mean	Control SD	<i>p</i>
Pre-intervention survey	2.88	1.179	2.94	.648	0.835
Post-intervention survey	2.92	1.20	2.49	1.00	0.239
Scale 8- Prior Experience with Training/Application					
Pre-intervention survey	3.67	.755	3.59	.954	0.771
Post-intervention survey	3.68	.795	3.75	.786	0.798
Scale 9- Co-worker support					
Pre-intervention survey	3.40	.780	3.25	.759	0.549
Post-intervention survey	3.89	.650	3.61	.827	0.230
Scale 10- Training/Organization Congruence					
Pre-intervention survey	3.96	.785	3.98	.865	0.321
Post-intervention survey	4.40	.608	4.18	.611	0.263
Scale 11- Pre-training Preparation					

Scale	Intervention Mean	Intervention SD	Control Mean	Control SD	<i>p</i>
Pre-intervention survey	3.02	1.130	2.71	.730	0.319
Post-intervention survey	2.69	1.121	2.34	.870	0.307
Scale 12- Client Motivation					
Pre-intervention survey	3.16	.670	2.88	.580	0.178
Post-intervention survey	3.41	.548	3.01	.541	*0.027

**p*>0.05

Correlation Matrix of subscales. A post-hoc correlation matrix was run, unrelated to the research questions, to explore possible relationships between the scales. It was expected that the relationships would be generally correlated: that is, that an agreement with one item such as supervisor support increased, agreement with other items, such as organizational congruence would also increase. Correlations were computed among the 12 scales of the Application Potential of Professional Learning Inventory (APPLI 31) among the 41 participants (Table 12). The results of a Pearson's *r* analysis suggest that all 12 of the sub-scales were statistically significant and positively associated with at least one other sub-scale.

Relationships were positively correlated, and are indicated with an asterisk, but not all subscale correlations were statistically significant. There was a positive correlation

between subscale 1 (Trainer Adult Learning and Transfer Strategies and subscale 2 (Relevance and Applicability) $r=.347$, $n=41$, $p = .026$, between subscale 1 and subscale 6 (Perceived Learning) $r=.465$, $n=41$, $p = .002$, and between subscale 1 and subscale 10 (Training/Organization Congruence) $r=.349$, $n=41$, $p = .025$. This finding supports that the trainer's teaching method was positively correlated with participants' views of relevance and applicability, perceived usefulness of information, and, the trainer's ability to make training fit the organization.

Table 12

Pearson's r Correlations among Application Potential of Professional Learning Inventory (APPLI 31) Scores N=41.

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Trainer Adult Learning and Transfer Strategies	-											
2. Relevance and Applicability	.026*	-										
3. Supervisor Support for Training/Transfer	-	-	-									
4. Organizational/Top Management Support	-	-	.000**	-								
5. Application Planning	-	.000**	-	-	-							
6. Perceived Learning	.002**	.009**	-	-	-	-						
7. Training Motivation	-	-	-	-	.036*	-	-					
8. Prior Experience with Training/Application	-	-	-	-	-	-	-	-				
9. Co-worker support	-	-	-	-	-	-	-	-	-			
10. Training/Organization Congruence	.025*	.000**	-	.043*	.039*	-	-	.010*	-	-		
11. Training Preparation	-	-	-	-	.042*	-	-	-	-	-	-	
12. Client Motivation	-	-	.046*	-	-	-	-	-	-	-	-	-

** . Correlation is significant at the 0.01 Level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Qualitative Themes

The qualitative stories (Aronson, 1995; Stuckey, 2015), as they emerged from the sub-themes (Table 13) for each open-ended question, are presented below following each open-ended question. Because each participant was asked to answer each of the qualitative questions in regard to good and poor fit for their work and for their own practice, it would not be appropriate to suggest that either negative or positive themes in the responses demonstrated acceptability. Instead, the responses illustrate, broadly and equally, the themes related to both the strengths and the deficits of the Motivational Interviewing model for child welfare and individual practice.

Table 13.

Qualitative Sub-Themes.

Open-ended Research Questions	A-priori Top-level Themes	Emerging Sub-themes
Q1. In which way is MI a good fit for child welfare work?	Fit for child welfare context	Empowering, relational, accountability, aids case management
Q2. In which ways is MI not such a good fit for child welfare work	Not a fit for child welfare context	Client factors, time, org factors
Q3. In what areas of your direct work with clients will MI be most helpful?	Helpful to the participant's practice	Empowering, relational, aids case management
Q4. In what areas of your direct work with clients will MI be least helpful?	Not helpful to the participant's practice	Client factors, time, org factors

The thematic stories below analyze the data as they appear explicitly, also referred to as manifest data (Joffe & Yardley, 2004), and also attempts to assess the latent meanings, or the meanings behind what was said. Each theme was reviewed for what story the theme told and how it fits with the overall story that emerged from the qualitative data (Clarke & Braun, 2013), and the dominant stories (Braun, Clarke, Hayfield & Terry, 2006) are identified below as latent themes, not derived from direct quotes, but instead summarizes the feeling of the responses (Braun & Clarke, 2006). Exact quotes that support the latent themes are presented after each summary.

In which way is MI a good fit for child welfare work? Participants reported that Motivational Interviewing might be a good fit for the child welfare context because it focuses on empowerment and relational client-centered practice, client ownership and accountability for their problems, and the workers' case management goals. Quotations that support this story include, "help parents see why they need services, understand what they did wrong, prevent the case from returning after closure," and "MI puts the decision-making and the planning onto the client."

In which ways is MI not such a good fit for child welfare work? Participants reported that Motivational Interviewing might not be a good fit for the child welfare context because it won't work for some kinds of child welfare clients, workers will not have time to use Motivational Interviewing, and the child welfare system is not designed for a practice that shares power with a client. Quotations that support this story include, "MI may not be a good fit when circumstances (highly inebriated client) make utilizing

the techniques impossible,” “Time- [name deleted] County is very fast paced, and we generally have high caseloads,” and “sometimes the system works against the clients.”

In what areas of your direct work with clients will MI be most helpful?

Participants reported that motivational interviewing has promise for helping in their direct work with clients in three primary ways. First, multiple participants responses suggested that MI can improve the quality of their casework. One example suggested that “it will help encouraging clients to complete their plan for services.” Given that a challenge in good casework is often a gap in the paperwork and plans that the clients must complete, in this instance, MI was a method that was attentive and intuitive and, for the participants, suggested that this approach could assist clients in reaching their long term goals. Second, participants suggested that MI could support and lead to client empowerment. One participant indicated that MI would allow them to engage “with parents to help them make a choice regarding their children’s wellbeing.” The relationship that develops between the client and caseworker could support frank and engaging conversations that help promote client decision-making. Finally, participants saw MI promoting this client-caseworker relationship by “helping (caseworkers) to hear clients and to understand what will help them change.” This is a fundamental element to effective and quality casework that MI has the potential to help improve.

In what areas of your direct work with clients will MI be least helpful?

Here some participants reported specific situations in which they perceived that Motivational Interviewing might not be helpful due to either characteristic of clients or the workplace. First, participants provided statements that Motivational Interviewing

would not work for all clients and some clients are too difficult for a collaborative approach. One participant suggested that the issue with client characteristics was developmental, saying that “working with young children... they might not be able to reflect as well on their emotions and actions,” but another suggested that the client might not be motivated to change; however, another suggested that the problem was related to client personalities, suggesting that, “some clients are defensive and resistant no matter what approach we use. Then we need to take a more authoritative approach to ensure children are safe.” Additionally, some participants suggested that the child welfare organization, and especially the court system, do not allow the for client choice promoted in the Motivational Interviewing model, reporting that “when the court is involved, and services/plans are court ordered.”

Overall, child welfare workers see that Motivational Interviewing is a good fit for their context and personal practice in most situations, and would improve client-centered practice and client accountability, which they value. However, they are disempowered to use a practice that they believe works due to the organizational factors such as the rigid court system and case management timelines constrict their ability to use these kinds of practices.

Mixed Modal Analysis

When assessed together, the quantitative and qualitative findings are consistent. Motivational Interviewing is seen as a good fit for child welfare practice, as seen by average scores of 4 or higher (“agree” and “strongly agree”) in scaled questions that address fit presented in Research Question One, and as found in the single question

(question 37) that asked participants specifically to report their perception that MI was a good fit, as used for analysis in Research Question Two. Contrary to expectations, cognition priming did not increase participant perception that Motivational Interviewing would work for them; they believed that to be true even without the priming. They also agreed that Motivational Interviewing was congruent with expectations of their organization, as reflected in the mean scores on Scale 10 (Training/Organization Congruence). The qualitative stories reinforced this; workers saw the strengths of Motivational Interviewing in that it is client-centered and would help them meet their mandated case goals.

Despite the perception that Motivational Interviewing was a good fit, and worker agreement that they learned from the training (Scale 6), they were only “neutral” in their plans to use the skills in practice (Scale 5). One might posit that their plans to integrate the training in their work were thwarted by lack of organizational supports as reported in the thematic analysis; however, the participants agreed that their supervisor (Scale 3) and organization (Scale 4) support the concepts taught in the training. The only scale in which participants, on average, disagreed, was to the questions that they had input in attending the training, attended voluntarily, and were motivated to attend (Scale 7). Allowing learners to have input in the development of trainings can increase the value of the training and increase motivation to learn (Boghossian, 2006). Paradoxically, Motivational Interviewing draws partly on ideas of readiness for change and client choice in services (Hohman, 2012), and the theory of Motivational Interviewing might suggest that the training was at a disadvantage from the start because it was compulsory.

The results of the multiple linear regression analysis in Research Question Three (What personal and organizational factors contribute to the child welfare workers' likelihood of using the technique in their own practice) indicates that a combination of individual perceptions about training efficacy and organizational supports explains part of the story about which workers are most likely to believe that Motivational Interviewing is a good fit for them and their work. Workers who identified that training offered by their organization was typically helpful in the pre-intervention survey, and those who thought their supervisor, organization, and peers supported the training as reported in the post-intervention survey, were most likely to agree that MI was an acceptable approach for their practice. The converse was also true. Since the model explained 62% of the variance, it was a very good fit for explaining the outcome (Rubin & Babbie, 2017). However, the fit of the model may be inflated given the collinearity of the predictor variables (Mason & Perreault, 1991). Implementation science supports this model, in that it suggests that workers who are supported by the agency are most likely to integrate evidence-based practices (Greenhalgh et al., 2004). Additionally, the theory of andragogy claims that workers who believe training meets their needs are most likely implement it into their practice (Babicka-Wirkus, 2018). The thematic analysis in this study takes these findings a step further to explain that even though the participants thought that their supervisors and organizations supported Motivational Interviewing as a model, application of the techniques was not practical given their time limitations and the real-world expectations of the court system and legal process. Literature backs up this

analysis; child welfare workers often report a double-bind in which system mandates prevent them from providing the best services to those they serve (Caringi et al., 2008).

Chapter V

Discussion

Though this research attempted to influence child welfare worker support for Motivational Interviewing (MI) through the use of Knowles' (1968) theory of andragogy and the practice of cognition priming, the mixed modal analyses indicated that these efforts alone did not overcome the organizational mandates and time pressures experienced by child welfare workers. However, this research offers four significant findings that can inform future efforts to bring an evidence-based practice like Motivational Interviewing to the child welfare workplace and counter some major assumptions about the reasons that child welfare workers do not use client-centered practices. These findings are related to child welfare worker attitudes about client-centered practice, the role of organizational supports, worker's experiences of time, and the transfer of training to practice.

Child Welfare Worker Attitudes

In this study, participants who were mostly new workers and mostly held bachelor degrees agreed that Motivational Interviewing was highly relevant for their practice. Prior research has suggested that child welfare workers often believe that they need to be confrontational in their practice approach due to the nature of their job role (Forrester et al., 2008). Additionally, previous research often suggests that social workers are more

likely to be supportive of relational and client-centered practice than non-social workers (Akin et al., 2016; Antley et al., 2008; Barth et al., 2008; Wahab, 2016), but this study indicates that participants not trained in social work also agree that a relational practice like Motivational Interviewing is a good fit for their work. Future studies should consider the possibility that child welfare workers' attitudes and perceptions about clients are not the primary barriers to use of family engagement, and therefore won't be affected by new knowledge that tries to influence this attitude, as is a frequent goal of child welfare training (Luongo, 2007). Instead, workers may already experience high cognitive dissonance between the ways that they would ideally like to practice and the ways they are able to practice within their agencies, where timelines and organizational demands prevent them from doing their best work.

Organizational Supports

Many studies in child welfare have linked child welfare worker turnover to the worker's experiences of organizational supports, such as those that come from higher administration or their direct supervisors (Hatton-Bowers et al., 2015; Smith & Donovan, 2003). Similarly, it was hypothesized in this study that organizational supports for Motivational Interviewing would be linked to its acceptance by workers. While these constructs appeared to be related, child welfare workers overwhelmingly agreed that their supervisors and organizations supported the use of tools like Motivational Interviewing. This is not the same as saying that their organization contributed to the facilitation of a skill like Motivational Interviewing, as illuminated by the qualitative responses. Future research should explore the differences between the theoretical organizational supports

for employing an evidence-based practice such as saying that workers should use them, and concrete facilitative processes for making space for the evidence-based practice, such as time, organizational policies, and rigid court processes.

Time Pressures

The thematic analysis used to analyze the qualitative responses affirmed that child welfare workers saw time as a major barrier to using Motivational Interviewing. The training for both groups briefly covered the fact that Motivational Interviewing takes hardly any extra time in the short term, and will likely save time in the future, as it facilitates relationships and cuts down time spent managing relational difficulties. However, workers were not persuaded. It may be that the shared narratives about the impossible time pressures they experience are so pervasive (Berrick, Dickens, Pösö, & Skivenes, 2016) that they were not able to accept the idea that Motivational Interviewing might save time, or it may be that this specific issue is the best target for cognition priming since it was the most salient worker perception uncovered that seemed inconsistent with the training content. Future studies should work to understand the role of worker time in their ability to carry out the skills that training supports and offer more attention to time gains and losses associated with new practice models, as this might be necessary to help workers develop new schemas.

Transfer of Training

Child welfare training is constant (Collins et al., 2007). Despite the frequent use of training, evaluation of training in child welfare is generally unsophisticated, focusing on training satisfaction (Antle et al., 2008) rather than learning transfer and uptake

(Luongo, 2007). This study indicates that even when workers feel like they have learned from the training, agree with the premise of the training, and are satisfied with the trainer; they may be unlikely to use the training in practice because of perceived system barriers. Transfer of learning to practice is seldom measured in child welfare (Luongo, 2007), but training expenses for child welfare workers are very high, and include indirect costs such as the time away from casework and the hourly wage of workers when they spend time in training, and direct costs such as those related to bringing in trainers and paying for training material. Given the stretched resources of our child welfare systems, and the high costs of training, the effective use of training dollars should be a high priority for child welfare agencies. Prior to bringing training to workers, agencies should consider the facilitative environments that support training such as those promoted in implementation science (Cabassa, 2016; Proctor et al., 2009), and should more closely explore ways of assessing and facilitating the use of training in the practice setting once it has been delivered.

Limitations

The primary limitations of this study were related to the sample. The sample size was chosen to detect differences between control and intervention groups, and no difference was found. The convenience sample was then pooled to explore predictors of acceptability of Motivational Interviewing, but the degree to which these findings are generalizable is limited given that the participants in this study all came from one office and offered limited diversity related to age, education, and practice experience.

While mixed-modal approaches strengthen explanations of findings in research, qualitative data is ideally collected in richer environments such as focus groups or interviews (LaDonna et al., 2018), and the short-answer responses in this survey provide only hints about the experiences of workers who are trying to carry out techniques that they report are consistent with their goals but unachievable in their environments. Ideally, qualitative research includes triangulation by way of multiple coders and member checking (Aronson, 1995), but these steps were not possible within the single-authored and time-limited scope of this dissertation study.

While this study used a tool that has been found previously to be a valid and reliable measure, it was modified for the purposes of this study to add a pre-intervention instrument. It was used in a way that it has not been previously used, by developing a change-score between the pre-intervention survey and post-intervention survey. The post-intervention survey has not been previously validated. It is also unknown whether multiple test exposure influenced the findings.

Future Research

As noted in the limitations section, no statistically significant differences were found between workers who received cognitive priming incorporating concepts of adult learning and those who received training as usual. Future research should explore a larger sample with increased diversity drawn from multiple child welfare organizations to see if these results hold, and consider incorporating issues previously noted, such as a focus on finding time, as part of the primer. Given the findings of this study, future research

should explore facilitative environments for supporting the training, such as alignment of policies to the training practices.

In addition, this study used a modified version of the APPLI 31 as a pre-intervention survey instrument, and the pre-test should be explored for validity. Beyond this, qualitative research methods that gather higher-quality information, such as interviews or focus groups, should be included in future research designs to understand better what limits their plans to use training in practice.

Recommendations for Child Welfare Agencies

It is well documented that skills-based practices such as that of Motivational Interviewing must include ongoing learning supports if workers are to adopt and implement new skills fully. This study suggests that child welfare agencies must create a physical environment with aligned policies and practices that also supports the actual practice of new skills. This study supports that fidelity to any evidence-based model must include careful integration using an implementation sciences approach. Failure to fully integrate training in a way that prepares both the worker and the organization will likely result in wasted resources in time and money.

This research also suggests that child welfare workers may have high satisfaction with training and believe that the training is appropriate for their audience, but still not plan to use the training. This is very important given the ways that training is currently evaluated in child welfare and given the expenses of training. Satisfaction surveys for training are likely not sufficient to support that the training will be used. Agencies should

consider more robust ways of measuring training outcomes, such as the APPLI31 instrument used in this survey or other measurements of learning transfer.

Conclusion

The mixed-methods findings demonstrated that organizational barriers, and especially time and inflexible mandates, as previously identified by Leathers et al. (2016), posed too high a barrier for the planned uptake of Motivational Interviewing. The hypothesis that cognition priming might increase the use of MI would have been an easy way to support a new technique to improve training, if found true. Unfortunately, the hypothesis was not supported, and the problems identified by workers related to low training uptake require system interventions to tackle the complex organizational dynamics. Workers in this survey said that they are expected by their supervisors and organizations to use best practice, but are forced to do their work inside a structure that does not allow the flexibility for best practice. This conflict is thought to cause strain that leads to burnout and high turnover (Hatton-Bowers et al., 2015), which has unfortunate impacts on families and workers.

Cognition priming was expected to prepare workers to accept that they did not need to be in conflict with clients in order to support change. However, even workers who did not receive the priming seemed to agree that the Motivational Interviewing model was an acceptable approach for most of their clients. The main conflicts arose in both groups around the time it might take, the mandates of their agencies, or perception that their particular clients were too difficult to change. Given this knowledge, a more

specific cognition priming and organizational intervention might instead focus on these issues.

These findings do not suggest that Motivational Interviewing should be abandoned as a good approach for the child welfare workforce. The literature supports the use of Motivational Interviewing in child welfare work. This study population, though they did not think it was a probable fit in their specific practice due to time and organizational restrictions, thought it was a good fit in theory. If an agency wants to adopt a practice like Motivational Interviewing, they will need to address the organizational barriers and support workers in making good use of training that they receive. It is quite typical for agencies to send workers to receive training, but not make the organizational changes necessary to create a facilitative environment to carry out the implementation of the training. This is a waste of precious time and financial resources, and adds additional strain to an already-overburdened workforce.

On the other hand, this research demonstrated the ways that training matched workers' needs and that the ways that organizational factors could support implementation and contribute to the workers' acceptance of the training. More than receiving cognition priming, beliefs about training broadly, as well as organizational factors, predicted whether workers reported that they planned to use the training. The opposite was also true; workers who reported low scores on their past experiences with training and their organizational supports reported low acceptability of this training. This reinforces the value of integrated models of implementation science, growing in

popularity, which suggests that interventions should start at the organizational level (Eccles & Mittman, 2006).

Child welfare organizations are often critiqued for being overly-bureaucratic and producing outcomes that are unfair to the vulnerable clients served within their systems (Lwin, Fallon, Trocmé, Fluke, & Mishna, 2018). Child welfare workers are not far removed from the detrimental effects of the ineffective bureaucracy: it is an unjust system that offers workers training in carrying out best practices, feigns support for their use by reinforcing the best practices at supervisory and administrative levels, but lacks flexibility and facilitative environments within the system to carry out practices that workers know are client-centered. Often, the child welfare worker suffers the blame for not developing positive relationships or sharing power with the clients, outcomes that the literature review in this study demonstrates are associated with family reunification. If worker-client relationships remain a goal of child welfare practice, child welfare agencies should consider ways of implementing interventions like Motivational Interviewing organizationally, and stop placing the problem of engagement in the hands of the workers who are not given adequate tools to serve the families they are trying to help.

APPENDICES

Appendix A
Application Potential of Professional Learning Inventory- Post-test

Strongly Disagree = 1 Disagree = 2 Uncertain = 3 Agree = 4 Strongly Agree = 5

Item	Criteria	Statement
1	1 2 3 4 5	As a result of the training, I substantially increased my knowledge on this topic.
2	1 2 3 4 5	As a result of the training, I have developed new skills.
3	1 2 3 4 5	The training has affected some of my attitudes concerning this topic area.
4	1 2 3 4 5	My supervisor values staff training.
5	1 2 3 4 5	My supervisor views this training as a high priority.
6	1 2 3 4 5	My supervisor will expect me to use this training on the job.
7	1 2 3 4 5	In my organization, top management values staff training.
8	1 2 3 4 5	In my organization, top management views this training as a high priority.
9	1 2 3 4 5	The training was relevant to my job duties.
10	1 2 3 4 5	I have already made a plan with a co-worker to use this training.
11	1 2 3 4 5	There is at least one co-worker who will be supportive of my application attempts.
12	1 2 3 4 5	My co-workers value training.
13	1 2 3 4 5	My co-workers will support my attempts to use the training on the job.
14	1 2 3 4 5	My organization values training.
15	1 2 3 4 5	The information I received from this training can definitely be used with my clients.
16	1 2 3 4 5	My client(s) will cooperate with my implementation of the new ideas/skills/ techniques.
17	1 2 3 4 5	In the past, I have found training to be useful.
18	1 2 3 4 5	When I think back to other training I have attended, I can say that I have used the training on the job. I can even think of specific application examples.
19	1 2 3 4 5	I have a plan to implement this training.
20	1 2 3 4 5	I am very confident that I will use the training on the job.
21	1 2 3 4 5	I had input into the selection of this training.
22	1 2 3 4 5	I voluntarily attended this training.
23	1 2 3 4 5	Prior to the workshop, I was motivated to attend.
24	1 2 3 4 5	My supervisor helped prepare me for this training by discussing my learning needs and potential applications.

25	1 2 3 4 5	Prior to attending, I heard that Motivational Interviewing training was “worthwhile”/valuable.
26	1 2 3 4 5	Most training provided by my organization is of the highest quality.
27	1 2 3 4 5	The trainer provided some practical ideas that can be used on the job.
28	1 2 3 4 5	The trainer helped to provide a climate conducive to adult learning and skill development.
29	1 2 3 4 5	The trainer gave examples of when to use ideas/skills/strategies on the job.
30	1 2 3 4 5	This training content is consistent with my agency’s mission, philosophy and goals.
31	1 2 3 4 5	This training content is consistent with my agency’s policies and my individual responsibilities.
32	1 2 3 4 5	My client’s lack of motivation interferes with achieving child welfare goals.
33	1 2 3 4 5	If a client isn’t motivated, there’s not much I can do about it.
34	1 2 3 4 5	Some clients need to be coerced or pressured in to change.
35	1 2 3 4 5	The client’s lack of motivation is a significant stressor for me.
36	1 2 3 4 5	Some clients will never change no matter what I do.

These are open-ended questions.

37. On a scale of 1-5, with 1 being not at all good for child welfare work and 5 being very good for child welfare work, how do you rate Motivational Interviewing? 1 2 3 4 5

In which ways is MI a good fit for child welfare work?

In which ways is MI not such a good fit for child welfare work?

38.

In what areas of your direct work with clients will MI be most helpful?

In what areas of your direct work with clients will MI be least helpful?

Appendix B
**Application Potential of Professional Learning Inventory—APPLI 31 (Modified
from Curry et al., 2011) Survey Modification**

Question	Original	Modified words are italicized
1	As a result of the training, I substantially increased my knowledge on this topic.	
2	As a result of the training, I have developed new skills.	
3	The training has affected some of my attitudes concerning this topic area.	
4	My supervisor values staff training	
5	My supervisor views this training as a high priority.	
6	My supervisor expects me to use this training on the job.	
7	In my organization, top management values staff training.	
8	In my organization, top management views this training as a high priority.	
9	The training was relevant to my job duties.	
10	I have already made a plan with a co-worker to use this training.	
11	There is at least one co-worker who will be supportive of my application attempts.	
12	My co-workers value training.	

Question	Original	Modified words are italicized
13	My co-workers will support my attempts to use the training on the job.	
14	My organization values training.	
15	The information I received from this training can definitely be used with my clients.	
16	My client(s) will cooperate with my implementation of the new ideas/skills/techniques.	
17	In the past, I have found training to be useful.	
18	When I think back to other training I have attended, I can say that I have used the training on the job. I can even think of specific application examples.	
19	I have a plan to implement this training.	
20	I am very confident that I will use the training on the job.	
21	I had input into the selection of this training.	
22	I voluntarily attended this training.	
23	Prior to the workshop, I was motivated to attend.	
24	My supervisor helped prepare me for this training by discussing my learning needs and potential applications	
25	Prior to attending, I heard that this training was “worthwhile”/valuable.	

Question	Original	Modified words are italicized
26	Most training provided by UC Davis is of the highest quality.	Most training provided by <i>my organization</i> is of the highest quality.
27	The trainer provided some practical ideas that can be used on the job.	
28	The trainer helped to provide a climate conducive to adult learning and skill development.	
29	The trainer gave examples of when to use ideas/skills/strategies on the job	
30	This training content is consistent with my agency's mission, philosophy and goals.	
31	This training content is consistent with my agency's policies and my individual responsibilities.	
32		<i>My client's lack of motivation interferes with achieving child welfare goals.</i>
33		<i>If a client isn't motivated, there's not much I can do about it.</i>
34		<i>Some clients need to be coerced or pressured in to change.</i>
35		<i>The client's lack of motivation is a significant stressor for me.</i>
36		<i>Some clients will never change no matter what I do.</i>

Appendix C
APPLI 31 Subscales and Associated Questions Pre-Test

Subscale and Survey Questions

1. Trainer Adult Learning and Transfer Strategies

- Q-27 Usually a trainer provides some practical ideas that can be used on the job.
- Q-28 Trainers usually provide a climate conducive to adult learning and skill development.
- Q-29 Trainers usually give examples of when to use ideas/skills/strategies on the job.

2. Relevance and Applicability

- Q-09 Training I participate in is generally relevant to my job duties.
- Q-15 Typically, the information I received from training can definitely be used with my clients.
- Q-20 I am usually very confident that I will use training I receive on the job.

3. Supervisor Support for Training/Transfer

- Q-04 My supervisor generally values staff training.
- Q-05 My supervisor views training as a high priority.
- Q-06 My supervisor generally expects me to use training on the job.

4. Organizational/Top Management Support

- Q-07 In my organization, top management generally values staff training.
- Q-08 In my organization, top management views training as a high priority.
- Q-14 My organization generally values training.

5. Application Planning

- Q-10 I typically make a plan with a co-worker to use training.
- Q-16 Generally my client(s) will cooperate with my implementation of new ideas/skills/techniques from training.
- Q-19 I usually make a plan to implement training.

6. Perceived Learning

- Q-01 Usually in training, I substantially increased my knowledge on this topic.
- Q-02 As a result of the training, I usually developed new skills.
- Q-03 Training typically affects some of my attitudes concerning this topic area.

7. Pre-training Motivation

- Q-21 I usually have input into the selection of training I receive.
- Q-22 I generally voluntarily attend training.
- Q-23 Usually when workshops are offered I am motivated to attend.

8. Prior Experience with Training/Application

- Q-17 In the past, I have found training to be useful.
- Q-18 When I think back to other training I have attended, I can say that I have used the training on the job.
- Q-26 Most training provided by my organization is of the highest quality.

9. Co-worker support

- Q-11 There is at least one co-worker who will be supportive of my application attempts.
- Q-12 Generally my co-workers value training.
- Q-13 Typically, co-workers will support my attempts to use training on the job.

10. Training/Organization Congruence

- Q-30 Training content is usually consistent with my agency's mission, philosophy and goals.
- Q-31 Training content is consistent with my agency's policies and my individual responsibilities.

11. Pre-Training Preparation

- Q-24 Usually my supervisor helps to prepare me for training by discussing my learning needs and potential applications.
- Q-25 Prior to attending, I can usually tell if training will be worthwhile/valuable.

12. Client Motivation

- Q-32 My client's lack of motivation interferes with achieving child welfare goals.
- Q-33 If a client isn't motivated, there's not much I can do about it.
- Q-34 Some clients need to be coerced or pressured in to change.
- Q-35 The client's lack of motivation is a significant stressor for me.
- Q-36 Some clients will never change no matter what I do.

Appendix D
APPLI 31 Subscales and Associated Questions Post-Test

Subscale and Survey Questions

1. Trainer Adult Learning and Transfer Strategies

- Q-27 The trainer provided some practical ideas that can be used on the job.
- Q-28 The trainer helped to provide a climate conducive to adult learning and skill development.
- Q-29 The trainer gave examples of when to use ideas/skills/strategies on the job.

2. Relevance and Applicability

- Q-09 The training was relevant to my job duties.
- Q-15 The information I received from this training can definitely be used with my clients.
- Q-20 I am very confident that I will use the training on the job.

3. Supervisor Support for Training/Transfer

- Q-04 My supervisor values staff training.
- Q-05 My supervisor views this training as a high priority.
- Q-06 My supervisor expects me to use this training on the job.

4. Organizational/Top Management Support

- Q-07 In my organization, top management values staff training.
- Q-08 In my organization, top management views this training as a high priority.
- Q-14 My organization values training.

5. Application Planning

- Q-10 I have already made a plan with a co-worker to use this training.
- Q-16 My client(s) will cooperate with my implementation of the new ideas/skills/ techniques.
- Q-19 I have a plan to implement this training.

6. Perceived Learning

Q-01 As a result of the training, I substantially increased my knowledge on this topic.

Q-02 As a result of the training, I have developed new skills.

Q-03 The training has affected some of my attitudes concerning this topic area.

7. Pre-training Motivation

Q-21 I had input into the selection of this training.

Q-22 I voluntarily attended this training.

Q-23 Prior to the workshop, I was motivated to attend.

8. Prior Experience with Training/Application

Q-17 In the past, I have found training to be useful.

Q-18 When I think back to other training I have attended, I can say that I have used the training on the job.

Q-26 Most training provided by my organization is of the highest quality.

9. Co-Worker Support

Q-11 There is at least one co-worker who will be supportive of my application attempts.

Q-12 My co-workers value training.

Q-13 My co-workers will support my attempts to use the training on the job.

10. Training/Organization Congruence

Q-30 This training content is consistent with my agency's mission, philosophy and goals.

Q-31 This training content is consistent with my agency's policies and my individual responsibilities.

11. Pre-Training Preparation

Q-24 My supervisor helped prepare me for this training by discussing my learning needs and potential applications.

Q-25 Prior to attending, I heard that this training was "worthwhile"/valuable.

12. Client Motivation

- Q-32 My client's lack of motivation interferes with achieving child welfare goals.
- Q-33 If a client isn't motivated, there's not much I can do about it.
- Q-34 Some clients need to be coerced or pressured in to change.
- Q-35 The client's lack of motivation is a significant stressor for me.
- Q-36 Some clients will never change no matter what I do.

Appendix E
Permission to Use Instrument

From: CURRY, DALE [<mailto:dcurry@kent.edu>]
Sent: Monday, November 13, 2017 3:37 PM
To: Sage, Todd <toddsage@buffalo.edu>
Cc: Lawler, Michael J <Michael.Lawler@usd.edu>
Subject: RE: TPQ

Hi Todd, thanks for your interest in the TPQ. Michael Lawler (University of S. Dakota) and I have developed a couple of shorter versions of the TPQ which seems to be a little more usable for programs on a regular basis. The APPLI-33 and APPLI-31 (33 and 31 item versions). The 31 item version is a little easier to interpret since it basically was created by taking the items with the highest factor loadings for each of the 11 factors (3 items for 9 of the factors and 2 items for 2 factors). The 33-item version was created with a different method for shortening scales (Stanton et. al). The 33 item version has a slightly stronger correlation with transfer but both are very highly correlated with the TPQ. Let me attach the instruments along with a couple of articles that help describe them. The Lawler article is a cross-validation study of the TPQ but the subscales used in that study use the same items for the 31 item version. The other article briefly describes the 33 item version.

Michael and I just ask that you keep us informed on how you are using the scale(s) and perhaps be willing to share some of your experiences with using the scales with others from around the country that are using them by perhaps participating in a conference call. Of course, we are also interested in any potential collaborative research that might emerge as well. Best of luck with completing your dissertation research. Always glad to see our work being used.

Dale

Dale Curry, Ph.D., LSW, CYC-P

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(330) 672-2998

From: Sage, Todd [<mailto:toddsage@buffalo.edu>]
Sent: Monday, November 13, 2017 2:52 PM
To: CURRY, DALE <dcurry@kent.edu>
Subject: TPQ

Dr. Curry,

I'm currently working on my dissertation (The use of Motivational Interviewing by Child Protection Workers to Overcome Family Discord) and was interested in using your Transfer of Learning Questionnaire. I'll be creating a training module for MI for front line workers and a training as usual for my control and your questionnaire is perfect for my study. So if this would this be possible please let me know and if so have you updated it since you developed it? I'm finishing up by dissertation at the University of North Dakota but I'm currently at the University at Buffalo in NY as clinical faculty so I'm not too far from you and I'd have to buy you a drink next time we are at a regional conference together .

Thanks for your consideration on this matter.

Todd Sage MSW, LMSW, CADAC1, MAC, CASAC II, MINT
1-716-645-1264
ToddSage@Buffalo.edu

Appendix F
Application Potential of Professional Learning Inventory- Pre-test Survey
(Modified from Curry, Lawler, & Donnenwirth 2010)

Strongly Disagree = 1 Disagree = 2 Uncertain = 3 Agree = 4 Strongly Agree = 5

Item	Criteria	Statement
1	1 2 3 4 5	Usually in training, I substantially increased my knowledge on this topic.
2	1 2 3 4 5	As a result of the training, I usually developed new skills.
3	1 2 3 4 5	Training typically affects some of my attitudes concerning this topic area.
4	1 2 3 4 5	My supervisor generally values staff training.
5	1 2 3 4 5	My supervisor views training as a high priority.
6	1 2 3 4 5	My supervisor generally expects me to use training on the job.
7	1 2 3 4 5	In my organization, top management generally values staff training.
8	1 2 3 4 5	In my organization, top management views training as a high priority.
9	1 2 3 4 5	Training I participate in is generally relevant to my job duties.
10	1 2 3 4 5	I typically make a plan with a co-worker to use training.
11	1 2 3 4 5	There is at least one co-worker who will be supportive of my application attempts.
12	1 2 3 4 5	Generally my co-workers value training.
13	1 2 3 4 5	Typically co-workers will support my attempts to use training on the job.
14	1 2 3 4 5	My organization generally values training.
15	1 2 3 4 5	Typically, the information I received from training can definitely be used with my clients.
16	1 2 3 4 5	Generally my client(s) will cooperate with my implementation of new ideas/skills/techniques from training.
17	1 2 3 4 5	In the past, I have found training to be useful.
18	1 2 3 4 5	When I think back to other training I have attended, I can say that I have used the training on the job.
19	1 2 3 4 5	I usually make a plan to implement training.
20	1 2 3 4 5	I am usually very confident that I will use training I receive on the job.
21	1 2 3 4 5	I usually have input into the selection of training I receive.
22	1 2 3 4 5	I generally voluntarily attend training.
23	1 2 3 4 5	Usually when workshops are offered I am motivated to attend.
24	1 2 3 4 5	Usually my supervisor helps to prepare me for training by discussing my learning needs and potential applications.
25	1 2 3 4 5	Prior to attending, I can usually tell if training will be worthwhile/valuable.
26	1 2 3 4 5	Most training provided by my organization is of the highest quality.
27	1 2 3 4 5	Usually a trainer provides some practical ideas that can be used on the job.
28	1 2 3 4 5	Trainers usually provide a climate conducive to adult learning and skill development.
29	1 2 3 4 5	Trainers usually give examples of when to use ideas/skills/strategies on the job
30	1 2 3 4 5	Training content is usually consistent with my agency's mission, philosophy and goals.

31	1 2 3 4 5	Training content is consistent with my agency's policies and my individual responsibilities.
32	1 2 3 4 5	My client's lack of motivation interferes with achieving child welfare goals.
33	1 2 3 4 5	If a client isn't motivated, there's not much I can do about it.
34	1 2 3 4 5	Some clients need to be coerced or pressured in to change.
35	1 2 3 4 5	The client's lack of motivation is a significant stressor for me.
36	1 2 3 4 5	Some clients will never change no matter what I do.
37	My age is	19-24 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60+
38	My years of protective services experience is	>1 year 1-2 yrs 3-4 yrs 5-6 yrs 7+ yrs
39	My years of social services experience before PS	>1 year 1-2 yrs 3-4 yrs 5-6 yrs 7+ yrs
40	My highest degree is	AA Bachelors Masters
41	Do you have a social work degree?	BSW MSW
42	Primary identified race/ethnicity	White Hispanic/Latino Black Native American Asian/Pacific Islander. Other.
43	Gender	Specify:

Appendix G IRB Approval Letter



DIVISION OF RESEARCH & ECONOMIC DEVELOPMENT

UND.edu

Institutional Review Board
Twamley Hall, Room 108
264 Centennial Dr Stop 7134
Grand Forks, ND 58202-7134
Phone: 701.777.4279
Fax: 701.777.8708
UND.Irb@research.UND.edu

October 11, 2018

Principal Investigator:	Todd Sage
Project Title:	Scaffolding Learning to Improve Uptake of Motivational Interviewing by Child Welfare Workers
IRB Project Number:	IRB-201810-C72
Project Review Level:	Expedited 7
Date of IRB Approval:	10/03/2018
Expiration Date of This Approval:	10/02/2019
Consent Form Approval Date:	10/03/2018

The application form and all included documentation for the above-referenced project have been reviewed and approved via the procedures of the University of North Dakota Institutional Review Board.

Attached is your original consent form that has been stamped with the UND IRB approval and expiration dates. Please maintain this original on file. **You must use this original, stamped consent form to make copies for participant enrollment. No other consent form should be used.** It must be signed by each participant prior to initiation of any research procedures. In addition, each participant must be given a copy of the consent form.

Prior to implementation, submit any changes to or departures from the protocol or consent form to the IRB for approval. No changes to approved research may take place without prior IRB approval.

You have approval for this project through the above-listed expiration date. When this research is completed, please submit a termination form to the IRB. If the research will last longer than one year, an annual review and progress report must be submitted to the IRB prior to the submission deadline to ensure adequate time for IRB review.

The forms to use at you in filing your project termination, annual review and progress report, adverse event/anticipated problem, protocol change, etc. may be accessed on the IRB website: <http://und.edu/research/resources/human-subjects/>

Sincerely,

Michelle L. Bowles, M.P.A., CIP
IRB Manager

M_LB:rb
Enclosures

Cc: Myrna Olson, Ph.D.

Appendix H Participant Consent Form

Study Consent form

You are being asked to take part in a research study related to the use of Motivational Interviewing by Child Protection Services Workers. We are asking you to take part because you signed up by emailing me your interest for this study. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

What the study is about: This study seeks to understand whether child welfare workers believe Motivational Interviewing (MI) is a helpful method for the type of work they do. Two trainings that are slightly different will be provided to see if one seems more helpful to workers than the other.

What we will ask you to do: If you agree to be in this study, we will conduct a pre and posttest survey the day of training with you. The survey will include questions about your perceptions of the training, and likelihood of adopting Motivational Interviewing in your work as a Child Protection Services Worker.

Risks and benefits:

I do not anticipate any risks to you participating in this study other than those encountered in day-to-day life.

For your participation in this research, you will be provided light snacks at the training, and participants in each of the two training sessions will be entered in a random drawing for one \$50 Amazon gift card. No other compensation will be provided.

Your answers will be confidential. The records of this study will be kept private. In any sort of report, we make public we will not include any information that will make it possible to identify you. Research records will be kept in a locked file; only the researcher and his advisor will have access to the records.

All records including this consent form and the data gathered will be destroyed by shredding three years after completing the study.

Taking part is voluntary: Taking part in this study is completely voluntary. You may skip any questions that you do not want to answer. If you decide not to take part or to skip some of the questions, it will not affect your current or future relationship with Erie County Social Services. If you decide to take part, you are free to withdraw at any time.

Approval Date: _____ OCT 3 2018

Expiration Date: OCT 2 2019

University of North Dakota IRB

Participant's Initials _____

Date _____

1

If you have questions: The researcher conducting this study are Todd Sage and his advisor is Prof. Myrna Olson. Please ask any questions you have now. If you have questions later, you may contact Todd Sage at ToddSage@Buffalo.edu or at 1-716-645-1624. You can reach Prof. Olson at myrna.olson@UN_D.edu or 1-701-777-3188. If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Institutional Review Board (IRB) at 701-777-4279 or access their website at <https://www1.und.edu/research/resources/human-subjects/>.

Statement of Consent: I have read the above information, and have received answers to any questions I asked. I consent to take part in the study.

Your Signature _____ Date _____

Your Name (printed) _____

Signature of person obtaining consent _____ Date _____

Printed name of person obtaining consent _____ Date _____

This consent form will be kept by the researcher for at least three years beyond the end of the study.

Approval Date: OCT 3 2018

Expiration Date: OCT 2 2019

University of North Dakota IRB

Participant's Initials _____

Date _____

2

Appendix I
Application Potential of Professional Learning Inventory- Pre-Test: Independent
Samples t-test (2-tailed)

Variable	Participants	N	Mean	SD	SE	<i>t</i>	p
Pre Q1 Learner Knowledge	Intervention	24	3.75	.794	.162	1.107	.275
	Control	17	3.74	.800	.194		
Pre Q2 Learner Skills	Intervention	24	3.92	.584	.119	1.962	.057
	Control	17	3.47	.874	.212		
Pre Q3 Learner Attitudes	Intervention	24	3.58	.830	.169	-.499	.620
	Control	17	3.71	.686	.166		
Pre Q4 Supervisor Values	Intervention	24	4.04	.999	.204	.122	.903
	Control	17	4.00	1.173	.284		
Pre Q5 Supervisor Priority	Intervention	24	4.13	1.035	.211	.734	.467
	Control	17	3.88	1.054	.256		
Pre Q6 Supervisor Expects	Intervention	24	4.25	.794	.162	.057	.955
	Control	17	4.24	.831	.202		
Pre Q7 Organization Management Values	Intervention	24	4.17	.868	.177	.173	.863
	Control	17	4.12	.928	.225		
Pre Q8 Organization Management Priority	Intervention	24	4.17	.917	.187	.168	.868
	Control	17	4.12	.928	.225		
Pre Q9 Learner Relevant	Intervention	24	3.88	1.035	.211	.154	.878
	Control	17	3.82	1.074	.261		
Pre Q10 Learner Plan	Intervention	24	2.46	1.021	.208	.347	.731
	Control	17	2.35	.862	.209		
Pre Q11 Co-Worker Support	Intervention	24	3.38	.970	.198	.255	.800
	Control	17	3.29	1.047	.254		
Pre Q12Co-Worker Value	Intervention	24	3.42	.830	.169	1.362	.181
	Control	17	3.06	.827	.201		

Variable	Participants	N	Mean	SD	SE	<i>t</i>	<i>p</i>
Pre Q13 Co-Worker Attempts	Intervention Control	24 17	3.42 3.41	.881 .712	.180 .173	.019	.985
Pre Q14 Organization Values	Intervention Control	24 17	4.17 3.94	.761 .748	.155 .181	.941	.352
Pre Q15 Clients Use	Intervention Control	24 17	4.13 3.76	.830 .899	.169 .218	1.524	.136
Pre Q16 Clients Cooperate	Intervention Control	24 17	3.42 2.94	.830 .899	.169 .218	1.746	.089
Pre Q17 Learner Past Value	Intervention Control	24 17	3.92 3.71	.776 1.047	.158 .254	.741	.463
Pre Q18 Learner Past use	Intervention Control	24 17	3.88 3.71	.797 1.105	.163 .268	.570	.572
Pre Q19 Learner Past Implement	Intervention Control	24 17	3.29 3.35	1.197 1.057	.244 .256	-.169	.866
Pre Q20 Learner Past Confidence	Intervention Control	24 17	3.58 3.53	1.100 1.125	.225 .273	.153	.879
Pre Q21 Learner Input	Intervention Control	24 17	2.54 2.35	1.285 1.115	.262 .270	.489	.628
Pre Q22 Learner Voluntarily	Intervention Control	24 17	2.88 3.29	1.296 .920	.265 .223	- 1.143	.260
Pre Q23 Learner Motivated	Intervention Control	24 17	3.21 3.18	1.285 1.131	.262 .274	.082	.935
Pre Q24 Supervisor Prepares Learner	Intervention Control	24 17	2.83 2.24	1.465 .970	.299 .235	1.468	.150
Pre Q25 Learner Training Value Prior	Intervention Control	24 17	3.21 3.18	1.062 1.015	.217 .246	.096	.924

Variable	Participants	N	Mean	SD	SE	<i>t</i>	<i>p</i>
Pre Q26 Organization Training Quality	Intervention Control	24 17	3.21 3.35	.977 .931	.199 .226	-.476	.637
Pre Q27 Trainer Practical Ideas	Intervention Control	24 17	3.83 3.82	.637 .951	.130 .231	.040	.969
Pre Q28 Trainers Climate of Learning	Intervention Control	24 17	3.83 4.06	.702 .748	.143 .181	-.987	.330
Pre Q29 Trainers Examples Prior Training	Intervention Control	24 17	3.88 3.94	.680 .827	.139 .201	-.281	.780
Pre Q30 Training Content Consistent Values	Intervention Control	24 17	3.92 3.76	.776 .970	.158 .235	.557	.581
Pre Q31 Training Content Consistent Policies	Intervention Control	24 17	3.96 3.59	.859 .939	.175 .228	1.308	.199
Pre Q32 Clients Motivation Interferes	Intervention Control	24 17	2.54 2.54	1.062 .970	.217 .235	.942	.352
Pre Q33 Clients Motivation Learner Can't Change	Intervention Control	24 17	3.50 3.41	.978 .795	.200 .193	.307	.761
Pre Q34 Clients Coerced	Intervention Control	24 17	2.92 2.65	1.060 1.169	.216 .284	.769	.447
Pre Q35 Clients Motivation Learner Stressor	Intervention Control	24 17	3.50 2.71	1.063 .985	.217 .239	2.428	.020
Pre Q36 Clients Never Change	Intervention Control	24 17	3.33 3.41	1.373 1.326	.280 .322	-.183	.856

**p*<.05 *N*=41

Appendix J
Application Potential of Professional Learning Inventory- Post-Test: Independent
Samples t-test (2-tailed)

Variable	Participants	N	Mean	SD	SE	<i>t</i>	p
Post Q1 Learner Knowledge	Intervention	24	4.33	.637	.130	-.099	.922
	Control	17	4.35	.606	.147		
Post Q2 Learner Skills	Intervention	24	4.17	.761	.155	.179	.859
	Control	17	4.12	.993	.241		
Post Q3 Learner Attitudes	Intervention	24	4.33	.702	.143	-.370	.731
	Control	17	4.41	.618	.150		
Post Q4 Supervisor Values	Intervention	24	4.21	.833	.170	1.178	.246
	Control	17	3.88	.928	.225		
Post Q5 Supervisor Priority	Intervention	24	3.88	.992	.202	.354	.725
	Control	17	3.76	.970	.235		
Post Q6 Supervisor Expects	Intervention	24	4.04	.999	.204	.135	.893
	Control	17	4.00	.935	.227		
Post Q7 Organization Management Values	Intervention	24	4.21	.932	.190	-.102	.919
	Control	17	4.24	.664	.161		
Post Q8 Organization Management Priority	Intervention	24	4.17	.959	.177	.807	.424
	Control	17	3.94	.899	.218		
Post Q9 Learner Relevant	Intervention	24	4.50	.590	.120	.969	.339
	Control	17	4.29	.772	.187		
Post Q10 Learner Plan	Intervention	24	2.79	1.141	.233	.590	.558
	Control	17	2.59	1.004	.243		

Variable	Participants	N	Mean	SD	SE	<i>t</i>	<i>p</i>
Post Q11 Co-Worker Support	Intervention Control	24 17	4.00 3.53	.722 1.007	.147 .244	1.745	.089
Post Q12 Co-Worker Value	Intervention Control	24 17	3.83 3.53	.637 .800	.130 .194	1.353	.184
Post Q13 Co-Worker Attempts	Intervention Control	24 17	3.83 3.76	.868 .831	.177 .202	.254	.801
Post Q14 Organization Values	Intervention Control	24 17	4.25 4.18	.897 .883	.183 .214	.260	.796
Post Q15 Clients Use	Intervention Control	24 17	4.46 4.29	.509 .772	.104 .187	.822	.416
Post Q16 Clients Cooperate	Intervention Control	24 17	3.92 3.47	.717 .800	.146 .194	1.871	.069
Post Q17 Learner Past Value	Intervention Control	24 17	3.88 3.82	.900 .883	.184 .214	.182	.857
Post Q18 Learner Past use	Intervention Control	24 17	3.79 3.82	.932 .951	.190 .231	-.107	.915
Post Q19 Learner Past Implement	Intervention Control	24 17	3.96 3.59	.955 1.064	.195 .258	1.166	.251
Post Q20 Learner Past Confidence	Intervention Control	24 17	4.33 4.24	.565 .562	.115 .136	.549	.586
Post Q21 Learner Input	Intervention Control	24 17	2.38 2.41	1.279 1.417	.261 .344	-.087	.931
Post Q22 Learner Voluntarily	Intervention Control	24 17	3.00 2.35	1.532 1.367	.313 .331	1.392	.172
Post Q23 Learner Motivated	Intervention Control	24 17	3.38 2.71	1.408 1.105	.287 .268	1.633	.111

Variable	Participants	N	Mean	SD	SE	<i>t</i>	<i>p</i>
Post Q24 Supervisor Prepares Learner	Intervention Control	24 17	2.29 2.24	1.160 1.091	.237 .265	.157	.876
Post Q25 Learner Training Value Prior	Intervention Control	24 17	3.08 2.59	1.316 1.176	.269 .285	1.239	.223
Post Q26 Organization Training Quality	Intervention Control	24 17	3.38 3.59	1.096 1.064	.224 .258	-.621	.538
Post Q27 Trainer Practical Ideas	Intervention Control	24 17	4.54 4.53	.658 .514	.134 .125	.064	.949
Post Q28 Trainers Climate of Learning	Intervention Control	24 17	4.58 4.53	.584 .800	.119 .194	.250	.804
Post Q29 Trainers Examples Prior Training	Intervention Control	24 17	4.67 4.59	.565 .507	.115 .123	.457	.650
Post Q30 Training Content Consistent Values	Intervention Control	24 17	4.42 4.18	.654 .636	.133 .124	1.172	.240
Post Q31 Training Content Consistent Policies	Intervention Control	24 17	4.38 4.18	.647 .636	.132 .154	.975	.336
Post Q32 Clients Motivation Interferes	Intervention Control	24 17	2.75 2.24	.944 .903	.193 .219	1.750	.088
Post Q33 Clients Motivation Learner Can't Change	Intervention Control	24 17	3.67 3.47	1.007 .943	.206 .229	.630	.532

Variable	Participants	N	Mean	SD	SE	<i>t</i>	<i>p</i>
Post Q34 Clients Coerced	Intervention Control	24 17	3.33 2.82	1.129 1.015	.231 .246	1.484	.146
Post Q35 Clients Motivation Learner Stressor	Intervention Control	24 17	3.83 3.12	.761 1.054	.155 .256	2.528	.016
Post Q36 Clients Never Change	Intervention Control	24 17	3.46 3.41	1.103 1.417	.225 .344	.118	.906
Post Q37 Fit for CW	Intervention Control	24 17	4.50 4.29	.511 .588	.104 .143	1.194	.239

**p*<.05 N=41

Appendix K

Qualitative Survey Responses

The Following responses are presented how the participants entered them. There were no alterations made to spelling or grammar.

Intervention Group

In which ways is MI a good fit for child welfare work?

By giving the client some choice it gives them some power in a system in which they fill they have no power in

Builds a better relationship with clients

Since Motivational interviewing focuses on future goals it'll be beneficial to know who to get the parents want to achieve their goals on their own

It is essential for interviewing children in order to gain trust, engage, and get useful info. etc.

It helps to get more personal information from clients

Practices effective communication and helps clarify roles

It is in step with foundations training

MI is a good fit because it gives power to people who may need to feel empowered to assist their children

It gives us a better skill set to help out clients

Long term workers have more allotted time with clients to use MI

It focuses on the strengths of an individual and allows them to feel empowered during their time with social services

It is a good way to make parents help themselves

It helps parents be engaged

Seems it would be beneficial in reaching long term goals with clients

Client will have ownership on their plan

Build rapport and better understanding of clients

Clients will feel like you're working together, not on opposite sides. Clients would be able to trust their worker

MI increases the chance for a positive outcome and reunification of a family through the tactics recommended

It places value on the thought and feeling and attitudes of the clients

In helping caregivers to recognize the behaviors that is the catalyst for the problem and helping them realize they need to make a change

I am confident that making this information a policy and a mandated training it would improve a CWS skills in an interview

How to engage with parents

It focuses on helping families and prevents future cases

In which ways is MI not such a good fit for child welfare work?

Some of our clients are not ready to change and may be resistant to these techniques

Some clients may take worker as being too nice and try to walk all over the worker

If the worker isn't trained well enough to implement it they might come off as ingenuine

Sometimes in CPS we assume adults will lie and look for proof they're lying as opposed to using MI to get to the truth

If not used properly, could be ineffective or harmful, misleading

You may be dealing with people who lack insight

Sometimes the system works against the clients

Short term workers seem pressured by "higher ups" to be quick, "get in" and "get out."

It may not work for clients who struggle with mental health or other delays

Some parents are more difficult to motivate. When talking to children

When it is not the appropriate situation for it

Help client engage with agency

Appears time consuming and will unlikely be used by people with higher caseloads

It can take longer to interview people. Co-workers seem to be resistant to it
MI may not be a good fit when circumstances (highly inebriated client) make utilizing the techniques impossible

Time constraints

It seems like it will take longer to work

Could give people excuses for bad behavior but I think if done correctly that wouldn't be a problem

Case workers are overwhelmed and have a get in get out mentality, so it probably wouldn't be too useful

In what areas of your direct work with clients will MI be most helpful?

In those clients that may be ready for change and to help them be motivated to complete their court services

Getting clients to open up

The first few home visits are crucial for helping build a good rapport and a successful case

Interviewing adults to get honest answers

Help with initial interviews and helping client decide what service they may need

Interviews/ motivating on engage

Building rapport with clients

On home visits I can ask questions to glean important information about clients' problems and progress

Helping to hear clients and to understand what will help them change

When change is needed

During my home visits when getting updates

Allowing clients to help themselves and move forward with clients

MI will help with clients who are not sure of what they need/want

Building rapport-getting to the root of the problem

Finding facts

When avoiding court.

During your first meeting, and when you see what their issues are or want to know what the issues are

MI will be helpful when engaging clients with the purpose of having them take ownership of their actions and plans for change

Planning, determining motivation to change. Let's Client to the work

Initial interview to gain understanding of where clients are in the stages of change

24 hour first assessments

Open-ended questions, reflections, concrete

Understanding their stories

In what areas of your direct work with clients will MI be least helpful?

In those clients that may be ready for change and to help them be motivated to complete their court services

Getting clients to open up

The first few home visits are crucial for helping build a good rapport and a successful case

Interviewing adults to get honest answers

Help with initial interviews and helping client decide what service they may need

Interviews/ motivating on engage

Building rapport with clients

On home visits I can ask questions to glean important information about clients' problems and progress

Helping to hear clients and to understand what will help them change

When change is needed

During my home visits when getting updates

Allowing clients to help themselves and move forward with clients

MI will help with clients who are not sure of what they need/want

Building rapport-getting to the root of the problem

Finding facts

When avoiding court

During your first meeting, and when you see what their issues are or want to know what the issues are

MI will be helpful when engaging clients with the purpose of having them take ownership of their actions and plans for change

Planning, determining motivation to change. Let's Client to the work

Initial interview to gain understanding of where clients are in the stages of change

24 hour first assessments

Open-ended questions, reflections, concrete

Understanding their stories

In those clients that have severe mental health the same techniques may not be able to be applied

Working with young children (young to teenage age) they might not be able to reflect as well on their emotions and actions

Interviewing and help choosing services

Expectations/goals vs responsibility

Dealing with much younger clients

It may not always work and we may need to improve our skills

When transferring workers, certain clientele are resistant to any change
not sure

When speaking to children

Promoting change

When clients are not ready for change

With parent that refuse to work with you or is not in a mental state to work with you

I believe MI can only be helpful! This class was highly informative, relevant for me personally, and the tenants professionally relayed.

Initial Interview.

When they are 100% resistant.

If problems persists. Individual might keep thinking they have unlimited chances.

Dealing with relapse and taking time with clients to grow. Child welfare only get so many days to deal with a case.

Control Group

In which ways is MI a good fit for child welfare work?

It will allow clients to take ownership of plan developed for them, not just being told what to do.

Obtain information in a more conversational way- elicit information. Can find root of problems and help guide client.

It involves the client directly in the process. It is focused on change. It can lead to internal motivation.

Giving some power to clients makes worker more aware of why clients are combative.

Help parents see why they need services, understand what they did wrong, prevent the case from returning after closure.

The MI training provided different ways to implement plans and foals to clients.

It breaks down barriers in what we want for the client and what they need from us.

It allows you to work with clients in a strength-based approach. Allows client to feel comfortable with you allowing you to be able to get to the root of their issues.

Getting to know people without going in angry and confrontational. Digging deeper so change is more consistent.

Try and build rapport with clients. Help get to root of the problem not just offer solutions.

MI puts the decision-making and the planning onto the client. With MI you are exploring with the client not telling them what to do.

It can help build rapport with our clients and help us to better understand their viewpoint.

I think MI is a good fit for child welfare work because it can help workers gain a rapport with their clients which can increase trust to obtain information that can be useful to elicit change to promote child safety.

It's good because it's a versatile tool that can be used in any situation with our clients.

It helps our people we work with come to understand their role and agency in making decisions that they would like to make regarding their circumstances.

It's not so demanding, it's more individual to the client.

It allows clients to come up with plans that work for them. It allows client to be in control of their situation.

In which ways is MI not such a good fit for child welfare work?

Time constraints, in CPS we need to determine initial safety for children quickly.

Time constraints- repeating from different family members.

Some parts of child welfare follow strict procedures with specific solutions. There can be areas of specific right/wrong answers and MI may not necessarily incorporate that.

Most clients have a court menu which is legally binding and can be restrictive. Example, some menus list substance abuse while others list substance abuse by a specific provider.

It will be difficult to use it while navigating through a person's trauma.

Personally I feel that no matter what one obtains from this training there is at least one thing you can implement.

Sometimes you are in a rush to close a case and in order to close a case you just focus on the court menu not in what the client asked. So it is about having time

Short term cases. Clients' resistance to change/not seeing what they need to change or its importance, not having the time to work through MI.

If you need to have a child removed immediately due to the child's safety.

Often time with amount of cases and process of investigation we don't have the time to spend to "get there" with people.

MI seems as if it would be time consuming and there is not much time you can spend on one particular case.

In CPS we are so overwhelmed that I don't think we are given enough time to work with our clients long enough to really go through all of that with them. We are short term and there as first responders, not counselors.

The law has strict rules that is black and white that may hinder the process

This would be hard to say.... if the caseworker didn't believe in its value or potential I would say that's when it would fail.

Time- Erie County is very fast paced and we have generally high caseloads.

It might come off as being too much of a pressure to the clients.

In what areas of your direct work with clients will MI be most helpful?

Ongoing casework

Interviewing supervision

It will help in encouraging clients to complete their plan for services.

Talking to clients about difficult subjects.

When initiating services or addressing an issue.

It will assist with reframing from offering forceful advice and to allow the client to choose.

Preventative cases where clients see a need and want to change. Client with trauma-allows them to possibly get to the root of their problems and start to heal.

Digging deeper helps to prevent the same issues to keep coming up therefore small changes may be able to happen.

Getting to root of problem to address it and hopefully give skills/do work so client does not continue to come back.

Having clients talk more, contribute and put the ball into their court.

Building trust and rapport.

Engaging with parent to help them make a choice regarding their children's wellbeing.

Confrontation of problem statements and overcoming obstacles.

MI would be most helpful when trying to illuminate how to effect change with the people we work with.

In more serious cases that might have judicial intervention or have higher needs.

When clients are struggling to figure out what works for them.

In what areas of your direct work with clients will MI be least helpful?

Some clients are defensive and resistant no matter what approach we use. Then we need to take more authoritative approach to ensure children are safe.

When court is involved, and services/plans are court ordered.

Not sure.

Office work, placements, court.

When clients refuse to talk or do anything when work with completely shitty people.

With resolutions to their problems.

Resistant clients who do not find change to be necessary.

Clients who have significant HX and have a set image or angle/resentment towards CPS-because of Hx and past.

Maybe some clients do not want to participate or talk.. So it would be hard to engage with the client to get their input.

We are still there to be confrontational we can't always stick with this approach.

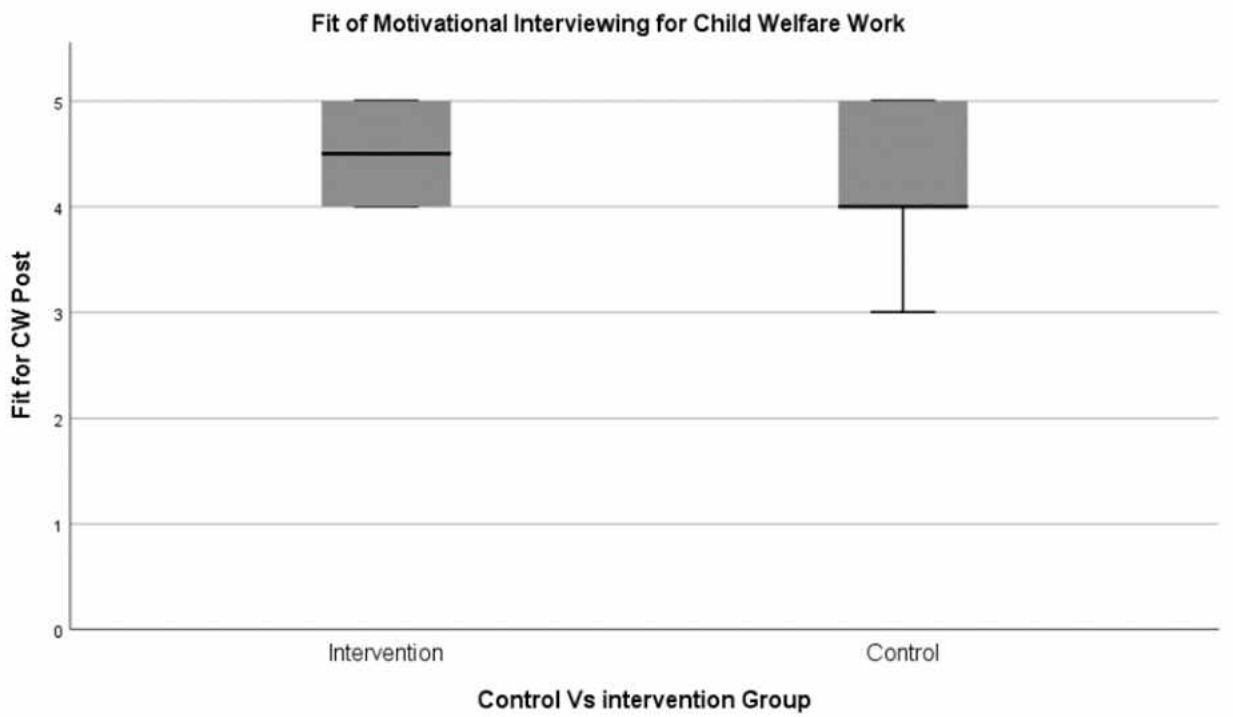
In the court system.

I think this may be irrelevant as MI could only help.

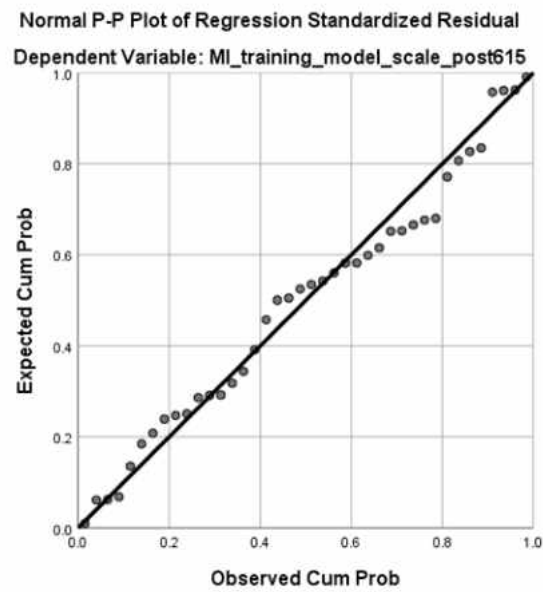
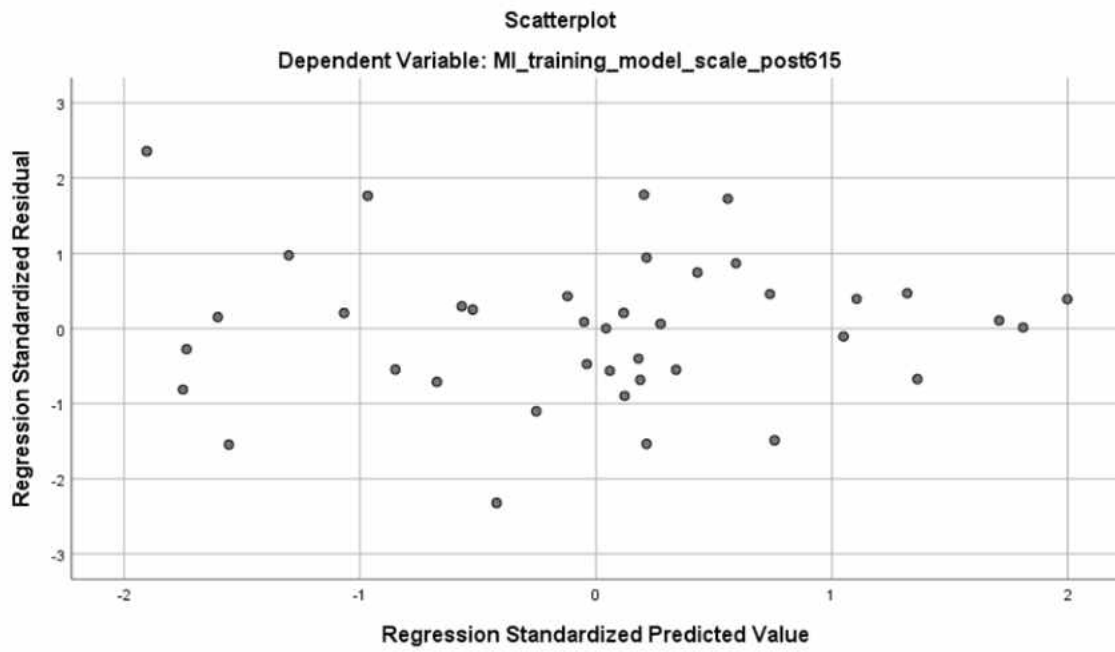
The "nonsense" cases where it might not be necessary to did too deep.

When a client does not have a plan and caseworker does not want to come off as being pushy.

Appendix L
Box Plot for Research Question 2: Fit of Motivational Interviewing for Child Welfare Work.



Appendix M Scatterplot



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