

EXAMINING THE RELIABILITY AND VALIDITY OF A MEASURE OF  
CHILD CARE PROVIDER MOTIVATION

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EXAMINING THE RELIABILITY AND VALIDITY OF A MEASURE OF  
CHILD CARE PROVIDER MOTIVATION

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THESIS ABSTRACT

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The concept of motivation in the child care area has not been based in theory and no standard measure has been used to assess it. The limited work examining the influence of providers' motivation on care giving quality has shown mixed results. The current study proposed to examine providers' motivation from the perspectives of functional theory and self-determination theory (SDT) using a 20-item motivation measure developed to assess the motivation of family child care providers enrolled in a quality enhancement program in the state of Alabama. One hundred ninety providers completed the measure. Principal component analyses, alpha analyses, and correlation analyses were conducted to test the reliability and construct validity for the motivation measure in the current study. The results showed that there was just one underlying construct and no construct validity for the current motivation measure. This reinforces the need to develop

theoretically derived measures of motivation and to clearly define the questions about motivation being asked (e.g., motivation to enter child care profession, motivation to provide child care, motivation for involving with children). Limitations and directions for future research were also discussed.

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## I .INTRODUCTION

Increasing numbers of pre-school children are cared for by non-related adults. Although many children receive center-based child-care, a substantial number of them are cared for by family child care providers. Family child care, which is paid care provided to a small group of unrelated children by an adult in the providers' own home, is different from child care centers (Elicker, Fronter-Wood & Noppe, 1999). Based on the data from the 2001 panel of the Survey of Income and Program Participation, Boushey and Wright (2004) reported family child care was the primary child care arrangement for 13.7% of working mothers in the United States for their children under age 6 and the percentage increased to 18.0% if the mothers need to work 30-39 hours every week (Boushey, & Wright, 2004; Doherty, Forer, Lero, Goelman & LaGrange, 2006).

Child care quality can make a significant difference in children's social, emotional, linguistic, and cognitive development. For instance, according to the results of several large national studies (Howes, & Norris, 1997, Peisner-Geinberg, & Burchinal, 1997) and numerous localized studies, there is a relationship between the quality of child care and child development outcomes, even after controlling for socioeconomic factors (Burchinal, Howes, & Kontos, 2002).

Previous research examining the predictors of child care quality have reported that provider characteristics (e.g., education, years of experience, group size, training, and motivation) are associated with quality caregiving (Burchinal et al., 2002; Galinsky, Howes, Kontos, & Shinn, 1994). Among these factors, the

relationship between child care quality and providers' motivation is rarely examined, This is curious, since motivation is assumed to be related to quality for several reasons. For example, a large part of quality caregiving involves the relationship between the provider and the child. Possible motivations to care for children should therefore influence quality because different motivations might result in different behaviors of the provider in relation to the child. Further, different motivations to provide child care might lead to different provider behaviors regarding taking part in professional networks and training, and connecting with other providers. Research suggests that participating in professional networks and training is related to higher quality (Putnam, 2006).

The Family Child Care Partnerships (FCCP) program is a statewide in-home child care training program created to improve child care quality. Its primary goals are to improve family child care in the state of Alabama and to encourage family child care providers to reach national accreditation standards (Miller, 2005). Licensed family child care providers in the state of Alabama who provide child care in home for a fee and are enrolled in FCCP were selected as participants. Participants receive weekly in-home training and technical assistance from mentors trained to help family child care providers to increase the quality of their child care giving practice. Providers also receive instructional information and are connected with other providers by attending group-based meetings on various topics related to child care practices. Based on the results of a study examining predictors of the progress of FCCP providers in achieving higher levels of quality, the recommendation was made to examine additional provider-specific variables, such as personality and motivation (Miller, 2005). Consequently, the FCCP

program collected information about providers' motivation to provide child care in their homes.

The primary purpose of this study was to examine the concept of motivation in previous studies in the child care field and related disciplines and to analyze the usefulness of the set of questions FCCP designed in an attempt to assess provider motivation. The results of previous studies are inconsistent with regard to the link between motivation and quality, and there is no standard motivation measure used in the child care area. Thus, there is a need for a closer examination of the concept and construction of motivation.

Two theoretical perspectives identified from the literature will be applied to the construction of motivation scales from the 20-item FCCP motivation measure. The resulting scales and/or subscales will be examined for construct validity, and a preliminary examination of the association between self-reported motivation to be a family child care provider and the quality of care giving practices will be conducted.

Increasing the quality of child care in the United States is a current priority and a vital element for children's development. The benefit of this study is to help the FCCP program decide on how motivation may be measured and related to the change in quality among family child care providers. The findings from this study may also provide useful information for program administrators about the effectiveness of their efforts, and add to the sparse literature about providers' motivation in the child care area.

## II. LITERATURE REVIEW

The purposes of this literature review are to (1) examine the research that has used the concept of professional motivation both inside and outside the child care area, (2) examine the 20 items of the family child care motivation scales based on functional theory and self-determination theory (SDT), and (3) assess the way that conceptualization of motivation can predict changes of quality among providers. First, the literature examining child care providers' motivation will be reviewed. Because research on family child care providers' motivation is scarce, this section reviews studies assessing professional motivation in center-based child care settings and includes studies linking child care providers' motivation with child care quality. Second, this paper will review research about how professional motivation has been conceptualized in related areas, such as volunteerism and the teaching profession. Finally, this review will describe the development and use of a measure adapted to assess family child care providers' motivation for the purposes of an applied family child care mentoring program.

### *Research on Motivation in the Child Care Field*

One of the first large-scale studies ever conducted on family child care providers examined multiple research questions having to do with the links between observed quality in family child care, provider characteristics, parent perceptions of care, and child developmental outcomes (Galinsky et al., 1994). The sample included 112 regulated family child care providers, 54 non-regulated family child care providers and 60 non-

regulated relatives who provided care. Due to the oversampling of minority and low-income areas of the three urban communities, this sample was not nationally representative.

Among the provider background variables assessed, in addition to demographics, were providers' motivations for providing care and perceptions of their work. Motivation was measured by asking providers for their primary reason for becoming a provider from a limited list of reasons. Response options included: to stay at home with my own children or grandchildren; to help the mothers of the children I care for; to work with children; to work at home; the mothers asked me; or it is the only job I can do. Providers' perceptions of their work were measured by having them select one of the following four options in response to being asked to characterize their job: it is my chosen occupation; it is a stepping stone to related work; it is a good job while my children are young; or it is temporary employment. The measures researchers used to assess process quality included the Arnett Scale of Caregiver Sensitivity (CIS; Arnett, 1989) and the Adult Involvement Scale (AIS; Howes & Stewart, 1987). Global quality was assessed with the Family Day Care Rating Scale (FDCR; Harms & Clifford, 1989).

The authors conducted chi-square tests to determine the relationship between providers' motivation and their global quality. The reasons ranked highest for being a provider were to stay home with their own children and to help out the mothers of the children in their care. There were significant differences on child care global quality for the two above reasons and for providers' perception of their work. Specifically, providers demonstrating inadequate quality care tended to report that they want to help mothers, while providers offering adequate quality or good quality care were more

likely to report that staying home with their own children was their primary motivation. Around two-thirds of the providers offering good or adequate quality care reported that child care was their chosen job; none of them treated it as temporary job. Providers who offered inadequate quality care reported that child care was their chose job (39%) or wanted to stay with their own children (37%).

In sum, Galinsky et al. (1994) reported that providers whose motivations were child-focused (e.g., want to take care of children or to be at home with their own children/grandchildren) and who chose family child care and relative-care as a profession were more likely to offer good and adequate/custodial quality care, whereas providers whose motivations were adult-focused (e.g., want to help mothers) were more likely to offer inadequate quality care. The combination of child-focused motivation and the choice of family child care as an occupation were subsequently discussed by the authors in conjunction with other findings as indicative of providers' "intentionality," a term that has been adopted in subsequent research.

Several articles have been published based on the Galinsky et al. (1994) study. Doherty et al. (2006) proposed a theoretical model to explore the effect of multiple predictors (intentionality, education, training, experience, support service and work environment) on family child care quality by using a sample of 231 regulated family child care providers, who are licensed in the state where they live. Study participants were selected from among 7 Canadian jurisdictional areas. Sixty-one percent of these providers agreed to participate and returned a consent form and self-reported questionnaire. A 3-hour observation was then scheduled.

The authors used the results of the Galinsky et al. (1994) study to identify six manifestations of intentionality (including motivation). They classified these six indicators into the following three categories: (1) commitment to the occupation; (2) a professional approach to the work; and (3) a child-related motivation for engaging in the work. Commitment to the occupation was measured by asking whether providers would choose family child care as a career and if so, why. Responses indicating that providers enjoy working with children or they think of family child care as their chosen occupation were considered as indicators of job commitment. Professional approach was measured by giving a list of seven possible reasons (with an opportunity to write in a reason not provided) about why the providers had decided to become regulated. Responses indicating providers want to demonstrate that they meet standards of quality or that they are more professional were treated as indications of professional approach. Motivation was measured by using an open-ended item that required providers to identify what they regarded as the three most positive aspects of providing family child care. Responses stating that providers want to work with children or contribute to their development were considered as indicators of child-related motivation. The three intentionality categories were used as separate variables when analyzing data. Family child care quality was measured with Family Day Care Rating Scale. Commitment to the profession and taking a professional approach showed positive relationships with family child care quality, whereas, surprisingly, child-centered motivation was associated with lower global quality scores. The results also supported the proposed association between indicators of intentionality and the use of support services, specifically, becoming regulated to meet standards was related to using library story

hours ( $r=.14, p<.05$ ), and providers' child-related motivation was related to the number of child care organizations that providers belonged to ( $r=.15, p<.05$ ). The results did not show direct associations between any of the three indicators of intentionality and education or training.

Another article published based on the Galinsky et al. (1994) research that concerned child care providers' professional motivation was by Torquati, Raikes, and Huddleston-Casas (2007). The purpose of this study was to test models that included factors affecting selection into and out of the early childhood area. The relationship between child care providers' motivation and child care quality was included in the model as well as the relationship between child care providers' motivation and their intention to stay in the area.

A stratified sample was randomly selected by telephone from child care licensing and subsidy files in the states of Iowa, Nebraska, Kansas, and Missouri. Among the 964 providers contacted who work in full-day year-round centers, a subset of 122 infant/toddler providers and 101 preschool providers were used for this study. Ninety-nine percent of providers were female. Center-based providers' motivation was assessed by creating a latent variable from provider ratings of each of three separate statements describing their motivation for child care work: (1) My career or profession ( $M=4.4, SD=1.1$ ), (2) A stepping stone to a related career or profession ( $M=3.5, SD=1.5$ ), and (3) A personal calling ( $M=4.5, SD=.8$ ). The rating scale for the above questions ranged from 1 (definitely does not represent) to 5 (definitely represents). The measures for global quality were the Infant/Toddler Environment Rating Scale (Harms & Cryer, 1990) and the Early Childhood Environment Rating Scale-Revised (Harms, Clifford, & Cryer,

1998). The measurement for process quality was the Arnett Caregiver Interaction Scale (Arnett, 1989). The providers' intent to stay in the field of early childhood care was measured by the following two questions: "How much longer do you plan to be a child care provider?" and "If you could do so now, would you choose work other than child care?"

Structural equation methods were used to test the models and it was hypothesized that providers' career-related motivations would directly affect child care quality and intention to stay. The results showed that providers' career-related motivation for child care work directly and positively predicted their intention to stay in the field, but it did not directly influence process or global child care quality.

The research reviewed above shows that the conceptualization and measurement of child care providers' motivation has differed, and that findings regarding its salience for understanding providers' quality have been mixed. In the Galinsky et al. (1994) study, providers' motivation was assessed by asking providers for their primary reason for becoming a provider of family child care from a limited list of reasons and reported that there were significant differences on child care global quality for the two major reasons: stay at home with their own children or help mothers. Doherty et al. (2006) measured providers' motivation by asking providers to identify what they regarded as the three most positive aspects of providing family child care. Providers' child-related motivation for providing child care was negatively associated with global quality scores. Torquati et al. (2007) asked providers to rate the three separate statements: my career or profession, a stepping stone to a related career or profession, and a personal calling. They reported that higher career-related motivation did not directly influence process or global quality. Table

1 describes the purpose, sample, motivation measure, and results for each of the above three study.

Explanations for these inconsistent results may be due to sample and measurement issues. First, it may be due to different sample characteristics. Participants in Galinsky et al.(1994) included both regulated and non-regulated family child care providers. Doherty et al. (2006) just recruited regulated family child care providers. Providers in Torquati et al. (2007) studies were center-based child care workers. Second, measuring motivation requires a stable, well-designed assessment. However, reviewing the research suggests that conceptualizations of the term “motivation” vary across studies, and sometimes seem to overlap with other terms, such as “job commitment.” The unclear definition of providers’ motivation results in the difficulty for measuring providers’ motivation in child care area.

#### *Conceptualizations of Motivation in Related Fields*

*Self-determination theory (SDT).* SDT is a theory of human motivation and the functioning of personality in social contexts. It makes the assumption that an understanding of behavior regulation must include an examination of the diverse origins of regulatory procedure, making a distinction between origins that are associated to the self and those that are associated to pressures from outside environments (Bouchard, Lee, Asgary, & Pelletier, 2007). Deci and Ryan (1991), who developed SDT, proposed two types of motivation, intrinsic motivation and extrinsic motivation. They also stated that intrinsic motivation could be understood as one’s innate tendency to look for challenge, seek novel things, and to master the environment without material rewards or external control (Deci & Ryan, 1991; Bouchard et al., 2007). Deci and Ryan (1985) proposed that

extrinsic motivation refers to behaviors conducted by people as means to an end instead of for their own sake, and there are three different kinds of regulation for extrinsic motivation: external regulation, introjected regulation, and identified regulation (Deci & Ryan, 1985; Bouchard et al., 2007). External regulation, which is the typical extrinsic motivation, corresponds to behaviors ruled by external control deriving from outside environments (Bouchard, 2007). Ryan and Connell (1989) stated that introjected regulation style means the formerly external control has been internalized into one's self-imposed pressure (such as guilt or anxiety) and identified regulation style means that it has been internalized into one's sense of self (Ryan & Connell, 1989; Bouchard, 2007).

Based on an SDT perspective, Bouchard et al. (2007) used a sample of 205 randomly selected fathers to examine the relationships between fathers' motivation and (1) fathers' perceptions of support from partners, (2) fathers' sense of competence in parenting, (3) fathers' involvement in parenting, and (4) fathers' satisfaction in their performance of the parental role. The authors examined fathers' motivation for involvement with their children by using the Fathers Involvement Scale (Bouchard, 2000), which was designed to measure the four forms of motivations. These included external motivation (because I have no choice); introjections motivation (because I feel obliged to please my family or to avoid conflict); identification motivation (I choose to do it for my own good and the good of my family); and intrinsic motivation (because I enjoy it). Fathers were asked to rate each item from 1 (do not agree at all) to 7 (agree strongly). Bouchard et al. (2007) stated that in their study scores from each subscale were weighted differently according to their corresponding motivation types based on the self-determination theory. That is, from the most self-determined motivation (+2) to the least

self-determined motivation (-2). Please note that although the behavior is performed according to extrinsic reasons, identified regulation is still regarded as self-determined because it is internally regulated (Bouchard, 2007). Specifically, self-determined motivations were weighted positively (+2 for intrinsic motivation, +1 for identified regulation) and non self-determined motivations were weighted negatively (-2 for external regulation, -1 for introjected regulation) by the authors. The global self-determination index of the Fathers Involvement Scale was constructed from the combination of the six subscales which had showed good internal consistency by summing up all the items. Because each item score were multiplied by its corresponding weight, the global self determination score had a range from -90 to +90. High scores indicated high self-determined motivation (intrinsic motivation and extrinsic motivation by identified regulation), while low scores indicated low self-determined motivation (extrinsic motivation by introjected regulation and external regulation). Structural equation modeling revealed a father's perceptions that his partner has confidence in his parenting ability were related to both feelings of competence in parenting and to his motivation, which in turn was related to his involvement and to his satisfaction in his performance of the parent role.

Another study using SDT was Pelletier, Levesque, and Legault (2002), and they gathered a sample of 254 teachers who taught classes, for students in Grades 1 to 12, from three different schools in Quebec to examine social contextual conditions that led teachers to be more autonomy-granting and supportive versus controlling with their students. The authors measured the teacher's level of motivation toward work by using the Work Motivation Inventory (Blais, Lachance, Valerand, Briere, & Riddle, 1993),

which had 16 items and four subscales. From the least self-determined to the most self-determined forms of motivation, the measurement included extrinsic motivation by external regulation (in order to make money), extrinsic motivation by introjected regulation (because I absolutely must be good at this kind of work, otherwise I would be disappointed with myself), extrinsic motivation by identified regulations (because this is the kind of work I have chosen to accomplish my career goals), and intrinsic motivation (for the satisfaction I feel while I master interesting challenges at work). The teachers were asked to rate each item from 1 (does not correspond at all) to 7 (corresponds exactly). The four indices of teacher's self-determination toward work were computed from items from each subscale of the Work Motivation Inventory by using similar process used in Bouchard et al. (2007) article. High scores for the indices indicated high self-determined motivation (intrinsic motivation and extrinsic motivation by identified regulation), while low scores for the indices indicated low self-determined motivation (extrinsic motivation by introjected regulation and external regulation). They reported that the four indices were able to evaluate the latent construct of teacher's self-determined motivation by testing an initial measurement model. Further, the authors expected that there would be negative relationships between teachers' self-determined motivation toward teaching and (1) teachers' perception of constraints at work; (2) teachers' perception that their students weren't self-determined; (3) and teachers' controlling behaviors with students. Structural equation models revealed that the more teachers perceived pressure from above (constraints at work) and pressure from below (they perceived their students to be non-self-determined), the less they were self-determined

toward teaching. In sum, the less they are self-determined toward teaching, the more they become controlling with students.

Based on the conceptualization of motivation from SDT, Ntoumanis (2003) used a sample of 424 British students, aged 14-16, from Northwest England to examine a sequence of motivation process proposed by Vallerand (1997): (1) social factors (cooperative learning, emphasis on improvement, and perceived choice) can predict psychological mediators (relatedness, competence, and autonomy), (2) psychological mediators can influence motivation (intrinsic motivation, extrinsic motivation of identified regulation, extrinsic motivation of introjected regulation, extrinsic motivation of external regulation and amotivation), (3) different types of motivation can influence students' outcomes of motivated behavior in physical education class (effort, boredom, and intention to be physically active). The authors measured the students' different types of motivations by using a questionnaire developed by Goudas, Biddle, and Fox (1994), which included 20 items and five subscales: intrinsic motivation (e.g., I take part in this PE class for fun); extrinsic motivation by identified regulation (e.g., It is important for me to do well in PE class); extrinsic motivation by introjected regulation (e.g., I want the teacher to think I am a good student); extrinsic motivation by external regulation e.g., I will get into trouble if I do not), and amotivations (e.g., I do not know why). The students were asked to rate each item from 1 (does not represent at all) to 7 (represent exactly). The results of SEM analysis were largely supportive of the proposed pattern of sequences and showed that perceived competence was the major psychological mediator. Intrinsic motivation was positively related to effort and intention, and negatively related to

boredom. Whereas extrinsic motivation of external regulation and amotivation were predictors of boredom.

*Functional theory.* Functional theory proposes that people can engage in similar behaviors, but as the result of a diversity of psychological functions. For example, there may be diverse underlying motivational processes for controlling volunteers' behaviors that appear to be quite similar on the surface (Clary, Snyder, Ridge, Copeland, Stukas, Haugen, & Miene, 1998). Based on this functional approach, Clary and colleagues set out to understand and assess the motivations of volunteers. The researchers hypothesized six functions potentially served by volunteerism and designed the Volunteer Functions Inventory (VFI; Clary et al., 1998) to represent and assess these functions: (1) Protective (no matter how bad I have been feeling, volunteering helps me to forget about it; by volunteering I feel less lonely; doing volunteer work relieves me of some of the guilt over being more fortunate than others; volunteering helps me work through my own personal problems; volunteering is a good escape from my own trouble); (2) Values (I am concerned about those less fortunate than myself; I am genuinely concerned about the particular group I am serving; I feel compassion toward people in need; I feel it is important to help others, I can do something for a cause that is important to me); (3) Career (volunteering can help me to get my foot in the door at a place where I would like to work; I can make new contacts that might help my business or career; volunteering allows me to explore different career options; volunteering will help me to succeed in my chosen profession; volunteering experience will look good on my resume); (4) Social (my friends volunteer; people I'm close to want me to volunteer; people I know share an interest in community service; others with whom I am close place a high value on

community service; volunteering is an important activity to the people I know best); (5) Understanding (I can learn more about the cause for which I am working; volunteering allows me to gain a new perspective on things; volunteering lets me learn things through direct, hands-on experience; I can learn how to deal with a variety of people; I can explore my own strengths); and (6) Enhancement (volunteering makes me feel important; volunteering increases my self-esteem; volunteering makes me feel needed; volunteering makes me feel better about myself; volunteering is a way to make new friends). The response scales ranged from 1 (not at all important/accurate) to 7 (extremely important/accurate).

The authors recruited diverse samples in six sub-studies to test the construction of VFI, investigate the factor structure, assess the reliability, and test the six hypothesized functions in the context of each stage of the volunteer process (recruitment of volunteers, satisfactions of volunteers, and commitment of volunteers). Exploratory and confirmatory factor analyses on diverse samples yielded factor solutions that were consistent with functionalist theorizing—each VFI motivation loaded on a separate factor and only modestly correlated with other motivations. The authors found that volunteers' responsiveness to persuasive appeals was greater when the appeals addressed motivational concerns of importance to them. Also, volunteers who received benefits matching personally important functions had greater satisfaction with their volunteer behaviors and indicated stronger intentions to stay in the area in the future.

Inglis and Cleave (2006) developed an instrument for identifying the motivations of board members in nonprofit organizations based on functional theory and the work of Clary and colleagues on the VFI. To construct the instrument, researchers generated items

from relevant literature, solicited a panel of experts to examine the face validity of the scales (which included assessing the conceptualization of the identified items and suggesting additional items), and pilot tested the resulting list of items. The researchers then gathered a sample of 220 governance volunteers in 50 randomly selected, diverse types of nonprofit organizations. All participants were required to evaluate the 34 items as the basis for their board involvement using a five-point Likert-Scale (from not important to very important) questionnaire. Among the 34 items, eight items from the VFI were used directly or revised slightly. These items represented four of the six functions in the VFI, which included enhancement, protective, career, and social functions (Clary et al., 1998).

A principal component analysis reported all 34 items had factor loadings of .30 or higher, and the following component factor analysis identified six factors: (1) Enhancement of Self-Worth, (2) Learning through Community, (3) Helping the Community, (4) Developing Individual Relationships, (5) Unique Contributions to the Board, and (6) Self-Healing. The items in the third factor (helping the community) were ranked most important by the participants, indicating that the members of volunteer boards in this sample were relatively more motivated by a concern for others than a concern for self.

#### *Applying Theory to Motivation in Child Care*

The child care-related studies reviewed indicate that the conceptualization of motivation for working as a family child care provider is unclear and unguided by theory. Literature from related human services fields suggests two theoretical directions to examine—self-determination theory (SDT) and functional theory. SDT proposes four

kinds of motivation: intrinsic motivation (e.g., I enjoy taking care of children), extrinsic motivation by identified regulation (e.g., this is the kind of work I have chosen to fulfill my career goals); extrinsic motivation by introjected regulation (e.g., relatives asked me to do so; I will feel guilty or pressure if I do not); and external motivation (e.g., I need to make money; it is a stepping stone to future employment).

Based on functional theory, child care providers who appear to be quite similar in their background may reflect different underlying motivation processes. Although Clary et al. (1998) hypothesized six functions in the volunteering field, due to the difference between the volunteering and child care areas, we simply hypothesized the following four functions to conceptualize motivation in the child care area: (1) Value (e.g., I am concerned about children having a safe and caring place to be while their parents are at work; I feel compassion toward parents who need care for their young children; I am genuinely interested in the development of young children; I feel it is important to help others; it makes a positive difference in the lives of children and families), (2) Career (it is the work I know how to do best; it allows me to be at home with my own children; it is a stepping stone to future employment; it is my chosen profession; it provides me with a financial means of supporting myself and my family), (3) Understanding (I can explore and use my own strengths; it allows me to gain a new perspective on things; it allows me to deal with a variety of different people; I learn so much that is interesting to me), and (4) Enhancement (it increases my self-esteem; it makes me feel needed; it makes me feel good about myself; it makes me feel important; it is a way to make new friends).

Although in the child care area, several researchers measured child care providers' motivation in their studies (Galinsky et al., 1994, Doherty et al., 2006, & Torquati et al.,

2007), a theoretical perspective was absent. Rooted in functional theory, this study applied two theoretical lenses (functional theory and SDT) to explore the FCCP motivation measure created for family child care providers.

### III. METHODS

#### *Procedures*

Secondary data used for this study were from licensed providers enrolled in the FCCP program before May 2006. In 2006, 200 providers were asked to fill out the Provider Intake Survey, which was designed to collect providers' demographic information and assess their motivations for being a provider. Providers were asked to agree that their information could be used in FCCP research, which includes this study. Finally, we received the intake survey from 190 providers.

#### *Participants*

The sample in this study was composed of 190 licensed family child care providers from the state of Alabama and enrolled in the FCCP, who completed the Provider Intake Survey form at the beginning of the 2006 project year. Table 2 contains the demographic information for participants. The participants ranged in age from 23 to 74, with an average age of 46 ( $SD=11$ ); years of experience being family child care providers ranged from .50 to 40, with an average of 11 years of experience ( $SD=7$ ). All participants were women. The majority (79%) of participants were married at the time of filling out the survey. Fifty percent of participants were white, 47% were black, and the remaining 3% were Hispanic, Latino, Asian, Pacific Islander or other minority. Fifty-seven percent of the participants were licensed to be a family day care home (taking care of up to 6 children) and the remaining 43% were licensed to be a group day care home (taking care of 7-12 children). The education level of the participants varied; 41% had

high school degree or GED, 35% had obtained some college experience but no degree, 15% had completed a two year associate degree, 9% had a college degree, and 1% had a masters or higher degree.

About half (51%) of participants described their total household income to be over \$40,000, while the remaining 49% described their total household income to be less than \$40,000. Half of participants described their total child care income to be over \$20,000, while the remaining 50% of participants described their total child care income to be less than \$20,000.

### *Measurements*

*Motivation measure.* Due to the fact that there is no established measure of providers' motivation in the child care area, the director of FCCP created a 20-item set of questions intended to assess providers' motivation by adapting the questions in the functional theory-based Volunteer Functions Inventory (Clary, Snyder, Ridge, Copeland, Stukas, Haugen, & Miene, 1998) to reflect language more common among family child care providers. See Appendix A, question 21, for the original table of items provided to participants and the instructions for filling it out. Consistent with the theory, each of the 20 items was categorized as belonging to one of four scales: Value, Career, Self and Learning (see Table 3). Items were scored using a five-point Likert-scale: (1) not true of me at all, (2) not really true of me, (3) true of me a little bit, (4) true of me to some extent, (5) and very true of me. The Cronbach's alpha for the 20 items in this scale was .87. Assuming the motivation measure falls into the expected four categories, four subscales will be created from the items identified.

An alternative approach for using these items is guided by self-determination theory, which identifies motivation on the basis of intrinsic versus extrinsic motivations. Based on definitions and examples found in the research literature reviewed previously, the 20 items of the scale were classified into the following two primary categories: intrinsic motivation and extrinsic motivation (see Table 3). Assuming the motivation measure falls into the expected two categories, two subscales will be created from the items identified.

*Measures used to establish construct validity.* Construct validity tests the agreement between a theoretical concept and a specific measurement. Evidence of convergent validity and discriminate validity are both required to establish construct validity, and they could be assessed by examining correlations among conceptually related constructs (Devellis, 2003; Spector, 1992). From the functional theory perspective, providers would seek CDA or professional networks due to the following motivation reasons—they choose family child care as a permanent job (reflects career function), or they are genuinely interested in the development of young children (reflects value function), or they want to gain new perspective on new things about child care (reflects understanding function), or they want to make new friends who can help them in the career (reflects enhancement function). At the same time, based on SDT, the behavior of seeking CDA, building professional networks, and taking part in associations in the child care area could also reflect providers' intrinsic motivation (they enjoy taking care of children). On the contrary, providers' age and marital status would not represent the above motivations. Thus, we would choose CDA, professional networks, number of associations providers belong to, age and marital status as the criterion variables. We

expect that five of the six motivation subscales (except extrinsic motivation) would positively relate to CDA, providers' professional networks, and number of associations providers belong to, whereas we expect that one motivation subscale(extrinsic motivation) would negatively relate to the above three variables. We also expect that motivation would have no relationship with age and marital status.

Since the aim of conducting the FCCP program and assessing providers' motivation is to increase family child care providers' quality, the relationship between providers' motivation and child care quality will be tested, although child care quality should not be considered as the criteria on variable for assessing construct validity for the above 20 items due to the fact that the results for the three studies in the literature section are inconsistent.

*Demographic variables.* Years of experience. Providers reported their years of experience by answering the question, "How many years have you worked for pay by caring for children in your home?" Child Development Associate credential (CDA). Providers answered "yes (code as 0)" or "no (code as 1)" to the question: "Do you have your CDA credential?" Age. Age was measured by asking: "What is your age?" Marital status. Providers were asked to choose "married (code as 1)" or "single, separated, or divorced (code as 0)" for the question: "What is your current marital status?"

*Providers' professional network.* The following five questions were asked to assess the extent of participants' knowledge and use of other providers and networks: (1) How many other family child care providers do you know in your area/community? (2) How many of these providers do you feel you could call if you had a question or concern related to your work? (3) In general, how often do you talk with another provider about

your work? (4) How often would you say you take part in these meetings or activities? (5) Are you currently a member of any kinds of child care provider organization? The answers for the first four questions were coded as 0 through 4, and the answers for the last question were coded as 0 represents no and 4 represents yes. A total providers' professional network score was created by summing up the four item scores. Higher total providers' professional network score represent extensive knowledge and use of professional networks.

*Association number.* It is a single item variable asking for the number of provider associations the provider belongs to. Values are the actual counts of association memberships reported by the provider.

*Child care quality.* Child care quality was measured using the Family Day Care Rating Scale (FDCR), which is usually used to measure global child care quality. It is a 32-item observation scale covering six categories: (1) space and furnishings, (2) basic care, (3) language and reason, (4) learning activities, (5) social development, and (6) adult needs (Harms & Clifford, 1989). Each item is scored on a 7-point likert type scale with 1 indicating inadequate, 3 indicating minimal, 5 indicating adequate and 7 indicating excellent . These data are collected by the FCCP mentors on a quarterly basis as long as the providers are in the FCCP program. Past studies have demonstrated not only theoretically predictable and reliable relations between child outcomes and observed quality using FDCRS (Galinsky et al., 1994), but also good internal consistency (Howes et al., 1987) and validity (Pepper & Stuart, 1985). Due to the reason that each participant in the sample had multiple FDCRS scores in 2006, in order to get acute quality score, instead of taking one score randomly, we decided to create an average quality score in

2006 for each provider by dividing the sum for all the quality scores in 2006 with numbers of the provider was observed and given quality scores. The current study used a single indicator for global quality, which was the average quality scores with the range from 5 to 7 indicating good child care quality, 3 to 4.99 indicating adequate quality, and 1 to 2.99 indicating inadequate quality.

### *Data Analysis Plan*

The first major question to be answered was whether the 20 items of the motivation scale were consistent with the expectations of the functional theory approach. The first step was to conduct univariate analyses for all the items to find the items with low variances. Next, correlations between all the items were examined to determine whether the items measured the same construct. Following the preliminary analyses, in order to examine whether the five items under each of the four subscales loaded well on their corresponding subscale and whether the four subscales loaded well on the overall motivation scale, traditional item analyses and principal component analyses were conducted respectively for the items under each of the four subscales and for the four subscales based on functional theory.

In each item analysis, Cronbach's alpha was estimated, as well as the correlations between each item and the overall motivation measure. Cronbach's alpha was used to determine whether the measure was reliable or not. That is, whether the set of items in that measure was internally consistent or not, how highly correlated each item is with the entire measure, and how Cronbach's alpha would be influenced if one or several certain items were deleted. Researchers tend to use a cutoff of .70 for determining whether Cronbach's coefficient alpha is sufficient or not because the items should be at least

moderately correlated to indicate all items belong to a same construct. Cronbach's alpha could be classified into the following types: raw alpha and standardized alpha. The former would be used if all items were measured by the same scale, and the latter would be used if all items were measured by different scales. In this paper, we use the raw Cronbach's alpha because all items were measured on the same scale.

Eigenvalues and eigenvectors were examined in each principal component analysis. Principal component analysis can be used to compress and classify data by reducing the dimensionality of data (Jolliffe, 2002), that is, to find a new set of variables smaller than the original set of variables on the premise of retaining most of the sample's information (Jolliffe, 2002). The new variables, which are called principal components (PCs) should be uncorrelated and are ordered by the fraction of the total information each retains (Jolliffe, 2002). An eigenvalue tells us the variance contained in each principal component and allows us to determine the dimensionality of the data. In order to determine dimensionality, we would first use the "rule of one," which tells us that any eigenvalue greater than one is an important component. Another strategy for determining how many components to include is to use a scree plot, which plots eigenvalues against the number of the principal component. Eigenvectors indicates the weights of each item in the principal component, that is, whether the items load well on the principal component. We can determine whether all of the dimensions in a certain principal component are important or not by using the formula,  $a = r/\sqrt{\text{eigenvalue}}$ .

Note that for the items making up each of the four subscales, item analyses and principal component analyses were conducted more than once in order to determine how many items should be kept finally. The reason was that we would delete the items with

low variances, or low Cronbach's alpha, or low loading on the certain subscales. After deciding how many items in each subscale should be kept based on functional theory, a total motivation score for each subscale (four subscales under functional theory) was calculated by summing up the individual motivation scores under the corresponding subscale. Average motivation scores for each subscale were calculated by dividing total motivation score for each subscale by the number of items in the corresponding subscale.

The second question to be answered is whether the items identified using self-determination theory comprises an alternative approach to measure providers' motivation. In order to examine whether the items making up each of the two subscales load well on their corresponding subscale and whether the two subscales load well on the overall motivation scale, traditional item analyses and principal component analyses were conducted respectively for the items making up each of the two subscales and for the two subscales based on self-determination theory. Note that for the items making up each of the two subscales, item analyses and principal component analyses are conducted more than once in order to determine how many items should be kept finally. The reason for this is that we delete the items with low variances, or low Cronbach's alpha, or low loading on the certain subscales. After deciding how many items should be kept based on self determination theory, the process for creating motivation scores was similar to the procedure used in making motivation scores based on functional theory.

In order to examine the construct validity of the motivation measure, the third step is to (1) examine resulting subscales for internal consistency; (2) examine the correlations of motivation scores with other variables hypothesized to be related to providers' motivation; (3) examine the correlations of motivation scores with other variables

hypothesized not to be related to providers' motivation. In addition, due to the reason that the goal of FCCP is to increase child care quality that family care providers provide, we also examine the correlations of motivation scores with family child care quality although child care quality is not a criterion variable for test construct validity. Due to the fact that we had two theory frameworks to determine how many items should be kept in the motivation measure, each analysis was conducted respectively based on the functional motivation scale and on the scale created according to self determination theory.

## IV. RESULTS

### *Univariate Analyses*

Prior to the item analyses and the principal component analyses, univariate analyses were conducted for each item. Table 3 shows the mean, standard deviation, range, and the Wilkes-Shapiro results for each item. In our sample, participants rated their motivation between 3 and 5 by using the upper-half of the scale across all motivation items except the item “S3. It makes me feel needed” ( $M=2.64$ ,  $SD=1.53$ ). That is, on average they reported medium to high agreement with every statement of motivation for providing child care. The maximum score for each item was five, and the minimum score for each item was one, except for the following items: “V1. I am concerned about children having a safe and caring place to be while their parents are at work” ( $MIN=3.00$ ,  $M=4.93$ ,  $SD=.32$ ), “V2. I feel compassion toward parents who need care for their young children” ( $MIN=3.00$ ,  $M=4.84$ ,  $SD=.42$ ), “S1. It makes me feel important” ( $MIN=3.00$ ,  $M=4.72$ ,  $SD=.59$ ), “S5. It makes me feel good about myself” ( $MIN=2.00$ ,  $M=4.28$ ,  $SD=.89$ ), “L1. I can explore and use my own strengths” ( $MIN=3.00$ ,  $M=4.75$ ,  $SD=.51$ ), and “C5. It is my chosen profession” ( $MIN=2.00$ ,  $M=4.51$ ,  $SD=.75$ ). All of the above items with higher minimum scores also had lower standard deviation, which suggested that there was less variability in the responses to those items.

According to the Wilkes-Shapiro statistic test for normality, we could reject the null hypotheses that all items were normally distributed. In other words, distributions of all item were somewhat skewed. Because the Wilkes-Shapiro test is so stringent, we

also looked at the stem and leaf plots for all the items to see if they were symmetric or not. An eye-ball examination of the stem and leaf plots suggested that all items were not symmetric, with responses for most items concentrated at the high end of the scale. The exception was the item “S3. It makes me feel needed”, which had more responses concentrated at the lower end of the scale.

### *Correlations among Items*

According to the estimated correlations among items (See Table 4), most of the correlations were highly significant. The fact that some items were not correlated while others were highly correlated suggested that there may be more than one underlying construct that was being measured by the 20 items. Thus principal component analyses were needed to determine how many constructs underlie the overall motivation measure and each subscale (there were four subscales based on functional theory and two subscales based on self-determination theory). Note several items were not correlated with around half of the remaining nineteen items, which suggested that those items may not hang together with other items well and item analyses would be helpful to confirm it. Specifically speaking, those items were the following: item “L5.I learn so much that is interesting to me” (had no correlations with sixteen of the remaining nineteen items); item “V1.I am concerned about children having a safe and caring place to be while their parents are at work” (had no correlations with nine of the remaining nineteen items); and item “C3.It allows me to be at home with my own children” (had no correlation with seven of the remaining nineteen items).

### *Analyses of the Alphas and Principal Component Analyses*

Alphas were estimated and principal component analyses were conducted to test whether the items under each of the subscales belonged to that subscale and loaded well on their corresponding subscale. In addition, we examined whether the subscales loaded well on the overall motivation measure based on functional theory and self-determination theory respectively.

*Value subscale items.* For the items making up the value subscale, we conducted the Cronbach's alpha and principal component analysis three times. Table 5 shows the raw Cronbach's alpha for all the items together, the correlations of each item with the total, the alpha if the variable was deleted, and the loading of each item on the principal component for each analysis.

In the first analysis of alpha the Cronbach's alpha was .67, which was a little bit lower than the cutoff of .70. Second, when looking at the correlation of each of the items with all the others, we found that the item V1 (I am concerned about children having a safe and caring place to be while their parents are at work) and item V2 (I feel compassion toward parents who need care for their young children) had low correlations of .20 and .30 with the rest of the items respectively. Next, we noted that the alphas, if deleted for the two items, were both greater than the Cronbach's alpha. That is, after deleting item V1 and item V2, the three remaining items under value subscale hang together better.

A principal component for the five items was conducted to confirm whether we should delete item V1 and item V2. First we looked at the eigenvalues, which allowed us

to examine the dimensionality of the value subscale. Based on the “rule of one”, there was only one component with an eigenvalue greater than one (2.27) and the component accounted 45% of the variance. Based on the formula of  $a=r/\sqrt{\text{eigenvalue}}$ , which was .33 if  $r=.50$ , we determined that item V1 and item V2 were not important for the component. We decided to delete the two items one by one in order to examine the influence of one specific item on the value subscale.

We decided to delete the item V1 in the second analysis of alpha because item V1 had the lower variance ( $MIN=3.00$ ,  $M=4.93$ ,  $SD=.32$ ) than item V2 ( $MIN=3.00$ ,  $M=4.84$ ,  $SD=.42$ ) and lower loading on the first important principal component under value subscale (.24) than item V2 (.35). The Cronbach’s alpha in the second analysis of alpha was .69, which was almost the cutoff of .70. When the item V2 was removed, the alpha for the other items increased slightly to .74. The item V2 also had a low correlation with the other three items (.29), suggesting that it may be measuring a different underlying construct.

A principal component for the remaining four items under value subscale was conducted after deleting item V1 in order to test whether we should delete item V2. Based on the “rule of one”, there was only one component with an eigenvalue greater than one (2.19) and the component accounted 55% of the variance. Using the formula of  $a=r/\sqrt{\text{eigenvalue}}$ , which was .34 if  $r=.50$ , we determined that item V2 was not very important for the component.

In the third analysis of analysis of alpha, we decided to delete not only item V1, but also item V2 based on the above results. First, we noted that the Cronbach’s was increased to .74, which was greater than the cutoff of .70 and suggested the composite

was internally consistent. Second, the correlations of each item with all the others were all high (range: .55 to .64) and they were not so high as to be redundant. Next, we examined the alphas if deleted for any of the three items, and we saw that none of them were greater than the Cronbach's alpha. This told us that by deleting any of the three items, the other items did not hang together any better. That is, each of the three items appeared to be measuring a piece of the same underlying construct. Based on these findings, we kept all of the three items in value subscale.

A principal component for the remaining three items under value subscale was conducted after deleting item V1 and item V2. Based on the "rule of one", there was only one component with an eigenvalue greater than one (2.03) and the component accounted 68% of the variance. Using the formula of  $a=r/\sqrt{\text{eigenvalue}}$ , which was .35 if  $r=.50$ , we determined all the three items were important for the component. The value items retained finally were item V3 (I am genuinely interested in the development of young children), item V4 (I feel it is important to help others) and item V5 (It makes a positive difference in the lives of children and families).

*Self subscale items.* For the items making up the self subscale, we conducted Cronbach's alpha and principal component analyses two times. The first set of analyses included all five items on the self subscale. The process for determining which items should be kept was the same as that described for testing the value subscale items. Table 6 shows the raw Cronbach's alpha for all the items together, the correlations of each item with the total, the alpha if the variable was deleted, and the loading of each item on the principal component. The second alpha and principal component analysis indicated that we should delete item S3 (It makes me feel needed). Finally we decided to keep the

following Four items: item S1 (It makes me feel important), item S2 (It increases my self esteem), itemS4 (It is a way to make new friends), and item S5 (It makes me feel good about myself).

*Career subscale items.* For the items making up the career subscale, we conducted the Cronbach's alphas and principal component analysis three times. The first analysis of alpha and principal component analyses included all five items. The process for determining which items should be kept was similar to the procedures used in testing the items on the value subscale. Table 7 shows the raw Cronbach's alpha for all the items together, the correlations of each item with the total, the alpha if the variable was deleted, and the loading of each item on the principal component. The second analysis of alpha and principal component analyses indicated that we should delete the item "C3. It allows me to be at home with my own children." And the third analysis of alpha and principal component analyses indicated we should delete item "C2. It is the work I know best how to do." Finally we decided to keep the following three items: item "C1. It provides me with a financial means of supporting myself and my family", item "C4. It is a stepping stone to future employment", and item "C5. It is my chosen profession."

*Learning subscale items.* For the items under the Learning subscale, we conducted the Cronbach's alpha and principal component analysis two times. The first analysis of alpha and principal component analyses included all five items on the learning subscale. The process for determining which items should be kept was similar to the procedures used in testing the items on the value subscale. Table 8 shows the raw Cronbach's alpha for all the items together, the correlations of each item with the total, the alpha if the variable was deleted, and the loading of each item on the principal

component. The second analysis of alpha and principal component analyses indicated we should delete the item “L5. I learn so much that is interesting to me.” Finally we decided to keep the following four items: item “L1. I can explore and use my own strengths”, item “L2. It allows me to gain a new perspective on things”, item “L3. I learn how to deal with a variety of different people”, and item “L4. It allows me to learn things through direct, hands on experience.” Table 9 contains the 14 items that we decided to keep finally based on the Functional Theory.

*Extrinsic subscale items.* For the items making up the extrinsic subscale, we conducted the Cronbach’s alpha and principal component analysis three times. The first set of analyses included all nine items. The process for determining which items should be kept was similar to the procedures used in testing the items on the value subscale. Table 10 shows the raw Cronbach’s alpha for all the items together, the correlations of each item with the total, the alpha if the variable was deleted, and the loading of each item on the principal component. The second analysis of alpha and principal component analysis indicated we should delete the item “C3. It allows me to be at home with my own children”, and the third analysis of alpha and principal component analysis indicated deletion of item “S3. It makes me feel needed”. Finally we decided to keep the following seven items: item S1(It makes me feel important), item C1(It provides me with a financial means of supporting myself and my family), item C2(It is the work I know best how to do), item S2( It increases my self esteem), item C4( It is a stepping stone to future employment), item S4( It is a way to make new friends) and item S5( It makes me feel good about myself).

*Intrinsic subscale items.* For the items under the intrinsic subscale, we conducted the Cronbach's alpha and principal component analysis three times. The first set of analyses included all eleven items. The process for determining which items should be kept was similar to the procedures used in testing the items on the value subscale. Table 11 shows the raw Cronbach's alpha for all the items together, the correlations of each item with the total, the alpha if the variable was deleted, and the loading of each item on the principal component. The second analysis of alpha and principal component analyses indicated we should delete the item "V1. I am concerned about children having a safe and caring place to be while their parents are at work."; and the third analysis of alpha and principal component analysis indicated the deletion of item "L5. I learn so much that is interesting to me".

Finally we decided to keep the following nine items: item L1( I can explore and use my own strengths), item V2 (I feel compassion toward parents who need care for their young children), item L2 (It allows me to gain a new perspective on things), item L3 ( I learn how to deal with a variety of different people), item V3 (I am genuinely interested in the development of young children), item L4 (It allows me to learn things through direct, hands on experience), item V4 (I feel it is important to help others), item V5 (It makes a positive difference in the lives of children and families) and item C5 (It is my chosen profession). Table 12 contains the 16 items that we decided to keep finally based on the self determination theory.

#### *Internally Consistency of the Subscales*

*Functional theory subscales.* For the four subscales representing the functional theory, we conducted the correlation analysis firstly. Based on the estimated correlations

among subscales (Table 13), all of the subscales were significantly correlated and the magnitudes of the correlations were big (range: .58 to .62). Thus, there may be just one underlying construct that was being measured by the four subscales. Next, we conducted Cronbach's alpha and principal component analyses. Table 14 shows the raw Cronbach's alpha for all four subscales together, the correlation of each subscale with total, the alpha if the subscale were deleted, and the loading of each subscale on the principal component for each analysis.

Based on the results of analysis of alpha (Table 14), the Cronbach's alpha was .85, which was higher than the cutoff of .70 and suggested the composite was internally consistent. Second, all subscales had high correlations (rang: .68 to .74) with the rest of subscales, which was a little high to be redundant. Next, when looking at the alphas if any of the four subscales were deleted, we saw that none of them were greater than the Cronbach's alpha. This tells us that if any of the four subscales were deleted, the other subscales do not hang together any better. That is, each of the four subscales appeared to be measuring the same underlying construct.

When looking at the results of the principal component analysis, based on the "rule of one", there was only one component with an eigenvalue greater than one (2.86) and the component accounted 72% of the variance. Using the formula of  $a=r/\sqrt{\text{eigenvalue}}$ , which was .30 if  $r=.50$ , we determined all the four subscales were important for the component. In sum, based on functional theory, the internal consistency of the four subscales were good enough and there was just one underlying construct.

*Self determination theory subscales.* For the two subscales representing SDT, the estimated correlation was highly significant and the value was high (.79), which meant

there was may be just one underlying construct that was being measured by the two subscales. Next, in order to confirm the correlation results, we conducted analyses of alpha and principal component analyses. The Cronbach's alpha was .88, which was higher than the cutoff of .70 and suggested the composite was internally consistent. Last, the two subscales had high correlations (.78) with each other.

When looking at the results of principal component analysis, based on the "rule of one", there was only one component with an eigenvalue greater than one (1.79) and the component accounted 90% of the variance. Using the formula of  $a=r/\sqrt{\text{eigenvalue}}$ , which was .38 if  $r=.50$ , we determined the two subscales were important for the component. In sum, based on SDT Theory, the internal consistency of the two subscales were good enough and there was just one underlying construct.

#### *Correlations among Motivation and Criterion Variables/Motivation and Quality*

On one hand, in order to test the convergent validity of the motivation measure, we hypothesized that there would be positive relationships among five of the six of the motivation subscales (except extrinsic motivation) and CDA, providers' professional network, and the number of associations the providers belong to. There would be negative relationship between one of the motivation subscales (extrinsic motivation) and CDA, providers' professional network, and the number of associations the providers belong to. On the other hand, in order to test the discriminate validity of the motivation measure, we expected that there would be no relationship between the motivation subscale and age or marital status. Because the aim of FCCP is to increase the quality provided by family child care providers, we also expected that there would be a positive relationship between motivation scores and quality score, although quality was not a

criterion variables for testing construct validity. Table 15 shows the descriptive statistics for criterion variables and quality. Table 16 shows the estimated correlations among motivation and criterion variables, and the estimated correlations among motivation and quality.

According to Table 16, different from our expectation, there was no relationship between any of motivation subscale scores and any of the three criterion variables for testing convergent validity (CDA, providers' professional network, and the number of association the provider belongs to). It is worth noting that although the relationship between learning motivation score and provider's professional network was not significant, the  $p$  value was just slightly greater than .10. Next, age had positive relationship with all the motivation subscale scores. Further, marital status had a significant relationship with learning motivation score and intrinsic motivation score. Marital status also had marginal significant relationship with value motivation score. In sum, there was no construct validity for the motivation measure.

Finally, none of the relationships between the motivation subscales and quality were significant. Please note that the relationship between self motivation and quality was marginally significant and although the relationship between extrinsic motivation and quality was not significant, the  $p$  value was just slightly greater than .10.

## V. DISCUSSION

Research in the child care area has indicated that there is no standard measure for child care providers' motivation, which has made it difficult to compare the limited studies about the relationship between motivation and child care quality. The major goals of the current study were to examine a measure of motivation developed for use by the Family Child Care Partnerships (FCCP) program and to determine its construct validity. The aims of this discussion are to (1) summarize the implications of the findings for FCCP for measuring motivation, (2) discuss the implications of the findings for understanding family child care providers' motivation, and (3) outline the limitations of the current study and directions for future research.

### *Implications for Measuring Motivation*

Study findings indicate that, as currently constituted, the measure examined does not offer a valid, theoretically meaningful measure for assessing providers' motivation. The measure was originally created based on the functional theory perspective, specifically using the Volunteer Functions Inventory (VFI; Clary et al., 1998) as a template. The 20 items created for the FCCP motivation measure were adapted from related items found on the VFI and revised to reflect reasons for providing family child care. It was expected that four functions, or factors, would be found underlying the motivation measure in the current study, representing motives having to do with self-enhancement, career path, the desire to learn and grow, and values about helping others. The three items making up the value subscale seem to be an indicator of providers' belief

about the importance of providing child care; the four items making up the self subscale seem to be an indicator of providers' self enhancement through providing child care; the three items making up the career subscale seem to be an indicator of providers' opinion about their employment in the child care profession; and the four items making up the learning subscale seem to be an indicator of providers' desire to learn new things through providing child care. However, only one underlying construct, rather than four, was found among the items kept finally. The current study also examined the FCCP motivation measure from the perspective of self-determination theory (SDT), but results did not offer further insight into constructing a meaningful measure from the existing items. Thus, one of the most important implications for FCCP is to revise the current motivation measure.

The literature on motivation among child care providers indicated that the conceptualization of motivation was not grounded theoretically. In the literature outside the child care area, functional theory and self determination theory (SDT) were the primary theoretical perspectives used to construct measures of motivation. As mentioned previously, the FCCP motivation measure was constructed using functional theory as a guide to devise the statements for assessing providers' motivation. Since it was not designed with SDT in mind, the current study did not offer a fair examination of SDT as an organizing framework for assessing providers' motivation. In previous studies (Bouchard et al., 2007; Pelletier et al., 2002) that used SDT as the theoretical basis for constructing motivation measures, researchers created a "self-determined index" with high scores representing high self-determined motivation and low scores representing low self-determined motivation. This index was created by weighting each motivation subscale differently based on its type and summing up all the subscale scores after

weighting. That is, scores on the intrinsic motivation items were multiplied by +2, extrinsic motivation by identification scores were multiplied by +1, extrinsic motivation by regulation scores were multiplied by -1, and extrinsic motivation by external regulation scores were multiplied by -2. Bouchard (2007) reported good internal consistency for the subscales, and Ryan and Connell (1989) reported good construct validity for the self-determined index.

In the current study, the intention was to assign different weights for the items and create a total self-determined motivation score consistent with procedures outlined in previous literature. However, it was only possible to classify items into the intrinsic motivation category and a general extrinsic motivation category, as it was impossible to reliably classify the three types of extrinsic motivations. Thus, it is recommended that FCCP create new statements that can be clearly categorized according to the original conceptualization of how to measure the four types of motivations.

One challenge for developing a motivation measure based on SDT is to devise statements for measuring family child care providers' motivation that accurately represent the four types of self-determined motivation. A second look at several studies which used SDT to develop a motivation measure may be helpful in meeting this challenge. Prior studies focused on teachers' motivation toward work with students, fathers' motivation toward involvement with their children, and students' motivation to participate in class.

Examples of statements used to represent intrinsic motivation include, for teachers: "For the satisfaction I feel while I master interesting challenges at work." (Pelletier et al., 2002); for fathers, "I enjoy it." (Bouchard et al., 2007); and for students, "It is exciting." (Ntoumanis, 2001). Examples of statements used to represent the next

most self-determined motive, i.e., extrinsic motivation by identified regulation, include, for teachers: “It is the work I have chosen to accomplish my career goals.” (Pelletier et al., 2002); for fathers, “I choose to do it for my own good.” (Bouchard et al., 2007); and for students, “It is important for me to do well in physical education class.” (Ntoumanis, 2001). Examples of statements used to represent extrinsic motivation by introjected regulation, include, for teachers: “I do not want others to be disappointed in me.” (Pelletier et al., 2002); for fathers, “I feel obligated to please my family.” (Bouchard et al., 2007); and for students, “I would feel bad about myself if I did not.” (Ntoumanis, 2001). Finally, examples of statements used to represent the least self-determined of possible motivations, i.e., extrinsic motivation by external regulation, include, for teachers: “To make money.” (Pelletier et al., 2002); for fathers, “I have no choice.” (Bouchard et al., 2007); and for students, “I will get into trouble if I do not.” (Ntoumanis, 2001).

Thus, when asking providers about their motivation toward working in the family child care field, and using these questions as models, suggested statements to be included in a revision of the FCCP motivation measure are as follows. For intrinsic motivation, “I enjoy working as a family child care provider.” “I feel satisfaction when I excel in my work as a family child care provider.” For extrinsic motivation by identified regulation, “It is the work I have chosen to accomplish my career goals.” “For extrinsic motivation by introjected regulation, “I feel guilty if I am not taking care of children.” “Others would be disappointed if I were not a good family child care provider.” For extrinsic motivation by external regulation, “I work as a family child care provider in order to make money.” “Working as a family child care provider is my only choice.”

Pilot testing these and other possible statements created based on self determination theory would be recommended in order to ensure that the items accurately reflected possible provider motivations and were stated using language they would recognize and be able to assess. In their study for developing an instrument for measuring nonprofit organization members' motivation, Inglis and Cleave (2006) applied a pilot test before finally collecting data. They used a panel of ten experts from academic and professional areas to test whether the description of the items was accurate, whether additional items were necessary, whether unnecessary items should be deleted, and whether, on average, the items would represent the measure (Inglis & Cleave, 2006). FCCP could conduct a similar procedure by choosing as panel members several mentors from FCCP, family child care providers from FCCP, and several professors who had experiences in constructing or analyzing measurement instruments.

#### *Implications for Understanding Family Child Care Providers' Motivation*

After reviewing those studies examining motivation within the child care profession, it was clear that none of the three studies were based on a similar definition of what motivation in child care is. All approached the question of motivation from different angles. Galinsky et al. (1994) asked providers to select the most important reason for being family child care providers from a limited listed of reasons for why providers entered the profession. Dothery et al. (2006) asked providers to select from a list of what they regarded as the three most positive aspects of providing family child care. Torquati et al. (2007) assessed providers' motivation by asking them to rate three questions describing career-related motivations for child care work. The current study asked

providers to rate a wide array of items according to their accuracy in describing their own reasons for providing child care.

Another challenge, then, is for researchers to define accurately what kind of motivation they want to know about. Do they want to know about the provider's motivation to enter the child care profession, their motivation to stay in the child care profession, their satisfaction with their career choice, or their motivation toward involvement with children? For example, looking again at the FCCP motivation measure, it is unclear whether the reasons offered for providing child care refer to reasons for entering or staying in the profession or a combination of both.

One provider could have different answers to each motivation. For instance, a provider may choose to enter the child care area and provide child care in her home for a fee because she needs to stay in home so that she is able to take care of her own children (low self-determination according to SDT). But her motivation toward work, that is, the time she spends to conduct activities and be involved with children (both children of her own and others) could be because she really enjoys it (high self-determination). After her children are in school, it is possible that she continues to provide child care because she believes that it is the only job she is able to do (low self-determination) or because she does not want to disappoint others (medium-low self-determination), or because she finds it is exciting to connect and be involved with children in daily life (high self-determination). These examples suggest that one provider may have different answers and degrees of intrinsic and extrinsic motivations depending on whether she has just entered the profession or already has several years of experience.

Participants' in the current study had a range (from less than 1 to 40 years) of experience, but, on average, had been in the field more than a few years ( $M= 11$ ,  $SD=7$ ). Considering this range, providers could have given different answers if our questions had explicitly been designed to measure their motivation for entering the family child care profession, their motivation for staying in it, or their motivation toward involvement with children. Because the major aim of the FCCP program is to improve family child care providers' quality, in which the providers' developmentally-appropriate involvement with children is essential, it is recommended that motivation be measured in the future from a perspective that defines motivation in terms of providers' motivation toward their involvement with children.

#### *Limitations and Conclusions*

The current study did not support the expectation that the FCCP motivation measure would distinguish between four types of motivations for providing child care. It had only one underlying construct, which could neither be meaningfully interpreted nor show construct validity. However, this study made several contributions to the current limited literature in child care area relating to child care providers' motivation. First, it was an initial attempt to apply a theoretical perspective to an area proposed to be significant for understanding the quality of provider caregiving practice (Galinsky et al., 1994). Prior efforts to assess provider motivation have not taken a theoretical approach. While these results seem to suggest limited utility in using functional theory to frame provider motivations, self-determination theory may yet prove to be a promising approach. Second and relatedly, these results point out the fact that further clarity is required in the definition of motivation and what type of motivation is being assessed

(e.g., motivation to enter the field, to stay in it, etc.). Finally, although a valid measure of motivation was not created, four separate scales reflecting provider beliefs and attitudes related to their involvement in family child care were created. Results showed no significant relationships between these subscales and the total global quality measure; however, we recommend that future research examine quality of caregiving practices in specific areas. For example, FDCRS subscales include assessment of provider behaviors that foster children's social development, promote learning, and address language development. It may be that specific provider beliefs and attitudes may be related to quality in these more specific areas.

One of the major limitations of this study is the use of secondary data. If there had been the option to collect original data, then it would have been possible to select and use criterion variables that were more strongly theoretically related (and unrelated) to the construct of motivation. For example, using the Child Development Associate Credential (CDA) as a criterion variable was unsuccessful at least partly due to its limited range (yes, they have their CDA or, no, they do not). It is possible that providers might have been in various stages of working toward obtaining their CDA credential, but progress toward the CDA was not measured in the provider enrollment survey—only CDA status. Thus, the opportunity to assess professional aspirations as a criterion variable was limited by prior decisions made about primary data collection. Potential criterion variables with which motivation would have been more likely to be associated would be job satisfaction or job commitment.

Nevertheless, this first attempt to examine the conceptualization and measurement of provider motivation has offered some suggestions about next steps in developing a

useful assessment. Since the major goal of the FCCP program is to enhance family child care providers' quality and help them to reach national credential standards, it is very important to figure out the relationship between motivation and quality. Thus, the ability to measure providers' motivation is crucial and future research is needed to develop a valid, theoretically based measure of motivation.

Whereas the reasons for the unexpected validity results of the current study may be due to measurement issues, it may also be that motivation is not an important factor having an influence on child care quality. For example, it is possible a provider whose involvement with children is extrinsically motivated (through external regulation, e.g., to make money) could still provide higher level child care quality because the provider is out-going and tends to connect people no matter whether she enjoys it or not. Thus, other factors, such as providers' personality should be considered in future research.

Table 1. Descriptions of the three studies conducted in child care area.

Studies	Galinsky et al., 1994	Doherty, Forer, Lero, Goelman & LaGrange, 2006	Torquati, Raikes, & Huddleston-Casas, 2007
Purpose	Examined the links between observed quality in family child care, provider characteristics, parent perceptions of care, and child development outcomes.	Explored the effect of multiple predictors (intentionality, education, training, experience, support service and work environment) on family child care quality.	Tested models that included factors affecting selection into and out of the early childhood area.
Sample	120 regulated family child care providers, 54 non-regulated family child care providers and 60 non-regulated relatives who provided care.	231 regulated family child care providers	122 infant/toddler center-based providers and 101 preschool providers
Measure of Motivation	Providers selected one of the following reasons for becoming a provider: (1) to stay at home with my own children or grandchildren; (2) to help the mothers of the children I care for; (3) to work with children; (4) to work at home; (5) the mothers asked me; or (6) it is the only job I can do.	Open-ended questions about provider perceptions about their jobs yielded responses categorized by researchers into indicators of (1) child-related motivation, (2) commitment to the profession, and (3) professional approach.	Providers used a five-point Likert scale to rate three questions designed to represent their professional motivation: (1) My career or profession, (2) A stepping stone to a related career or profession, and (3) A personal calling.
Results	Inadequate quality care was associated with the motivation to help mothers. Adequate or good quality care was associated with the motivation to stay home with own children.	Commitment to the profession and taking a professional approach was positively associated with quality. Child-centered motivation was associated with lower quality scores.	Providers' motivation directly and positively predicted their intention to stay in the field, but it did not directly influence process or global child care quality.

Table 2. Demographic characteristics of participants ( $N=190$ )

<i>Characteristic</i>	<i>Participants</i>
Age	$M=46(SD=11)$
Years of experience	$M= 11(SD=7)$
Sex	
Female	100%
Male	0%
Marital Status	
Married	79%
Single, separated, or divorced	21%
Type of child care	
Family day care home	57%
Group day care home	43%
Education	
High school or GED	41%
Some college credits, but no degree	35%
2-year associate degree	15%
Bachelor's degree	9%
Master's degree or higher	1%
Race	
White or Caucasian	50%
Black or African-American	47%
Hispanic, Asian or other minorities	3%
Total household income	
Less than \$10,000	2.%
Between \$10,001 and \$20,000	20%
Between \$20,001 and \$30,000	13%
Between \$30,001 and \$40,000	14%
Between \$40,001 and \$50,000	21%
Between \$50,001 and \$60,000	12%
Between \$60,001 and \$70,000	6%
Between \$70,001 and \$80,000	5%
Over \$80,000	7%
Total child care income	
Less than \$10,000	8%
Between \$10,001 and \$20,000	42%
Between \$20,001 and \$30,000	28%
Between \$30,001 and \$40,000	13%
Between \$40,001 and \$50,000	5%
Between \$50,001 and \$60,000	3%
Over \$60,000	1%

Table 3. Subscale categories and univariate statistics for the 20 motivation statements.

Motivation Statements	FT Subscale	SDT Subscale	<i>N</i>	Mean ( <i>SD</i> )	Range	<i>W-S</i>
V1. I am concerned about children having a safe and caring place to be while their parents are at work.	Values	Intrinsic	188	4.93 (0.32)	3 – 5	0.24***
V2. I feel compassion toward parents who need care for their young children	Values	Intrinsic	187	4.84 (0.42)	3 – 5	0.41***
V3. I am genuinely interested in the development of young children	Values	Intrinsic	176	3.33 (1.48)	1 – 5	0.86***
V4. I feel it is important to help others.	Values	Intrinsic	181	3.99 (1.10)	1 – 5	0.82***
V5. It makes a positive difference in the lives of children and families.	Values	Intrinsic	186	4.32 (0.93)	1 – 5	0.74***
S1. It makes me feel important.	Self	Extrinsic	186	4.72 (0.59)	3 – 5	0.53***
S2. It increases my self esteem.	Self	Extrinsic	166	3.83 (1.30)	1 – 5	0.81***
S3. It makes me feel needed.	Self	Extrinsic	181	2.64 (1.53)	1 – 5	0.84***
S4. It is a way to make new friends.	Self	Extrinsic	178	4.03 (1.15)	1 – 5	0.79***
S5. It makes me feel good about myself.	Self	Extrinsic	185	4.28 (0.89)	2 – 5	0.76***
C1. It provides me with a financial means of supporting myself and my family.	Career	Extrinsic	187	4.66 (0.70)	1 – 5	0.54***
C2. It is the work I know best how to do.	Career	Extrinsic	170	3.52 (1.37)	1 – 5	0.86***
C3. It allows me to be at home with my own children.	Career	Extrinsic	185	4.25 (1.02)	1 – 5	0.73***
C4. It is a stepping stone to future employment.	Career	Extrinsic	188	4.57 (0.83)	1 – 5	0.58***
C5. It is my chosen profession.	Career	Intrinsic	182	4.51 (0.75)	2 – 5	0.67***
L1. I can explore and use my own strengths.	Learning	Intrinsic	187	4.75 (0.51)	3 – 5	0.52***
L2. It allows me to gain a new perspective on things.	Learning	Intrinsic	176	3.70 (1.21)	1 – 5	0.86***
L3. I learn how to deal with a variety of different people.	Learning	Intrinsic	178	4.24 (1.03)	1 – 5	0.74***
L4. It allows me to learn things through direct, hands on experience.	Learning	Intrinsic	187	4.45 (0.81)	1 – 5	0.69***
L5. I learning so much that is interesting to me.	Learning	Intrinsic	184	3.49 (1.70)	1 – 5	0.75***

~*p*<.10, \**p*<.05, \*\**p*<.01, \*\*\**p*<.0001

Table 4. Pearson correlations for the 20 motivation items (N=126).

Item	V1	V2	V3	V4	V5	S1	S2	S3	S4	S5	C1	C2	C3	C4	C5	L1	L2	L3	L4	L5
V1	1.00																			
V2	.27**	1.00																		
V3	.20*	.16~	1.00																	
V4	.15~	.26**	.54***	1.00																
V5	.21*	.40***	.43***	.61***	1.00															
S1	.34**	.46***	.32**	.36***	.40***	1.00														
S2	.11	.22*	.35***	.67***	.42***	.32**	1.00													
S3	.10	.09	.48***	.37***	.22*	.12	.14	1.00												
S4	.07	.14	.37***	.42***	.27**	.15~	.24**	.18*	1.00											
S5	.29**	.28**	.40***	.52***	.50***	.39***	.39***	.28**	.36***	1.00										
C1	.16~	.48***	.38***	.43***	.30**	.39***	.37***	.28**	.20*	.17~	1.00									
C2	-.01	.21*	.28**	.49***	.16~	.30**	.43***	.28**	.44***	.36***	.31**	1.00								
C3	-.06	.15~	.12	.21*	.22*	.16~	.20*	.08	.06	.11	.09	.17~	1.00							
C4	.18*	.46***	.22*	.30**	.33**	.32**	.32**	.10	.19*	.38***	.28**	.29**	.14	1.00						
C5	.20*	.35***	.41***	.58***	.54***	.36***	.40***	.29**	.33**	.63***	.35***	.34***	.10	.37***	1.00					
L1	.40***	.45***	.24**	.27**	.39***	.47***	.25**	.09	.19*	.35***	.42***	.16~	-.02	.26**	.46***	1.00				
L2	.14	.32**	.47***	.62***	.43***	.32**	.41***	.33**	.38**	.44***	.15	.48***	.16*	.32**	.43***	.27**	1.00			
L3	.08	.26**	.25**	.38***	.16~	.28**	.26**	.25**	.32**	.24**	.18*	.38***	.30**	.26**	.27**	.17~	.45***	1.00		
L4	.11	.51***	.26**	.28**	.29**	.30**	.26**	.19*	.34**	.36***	.25**	.30**	.10	.63***	.36***	.34***	.43***	.32**	1.00	
L5	-.08	.01	-.01	.16~	-.02	.02	.02	.17~	-.04	.03	-.04	.06	.16~	-.05	.04	-.02	.09	.14	-.12	1.00

~p&lt;.10, \*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.0001

Table 5. Correlations, alphas, and loading coefficients for items on the value subscale ( $N=172$ ).

	1 <sup>st</sup>			2 <sup>nd</sup>			3 <sup>rd</sup>		
	Correlation with total	$\alpha=.67$ Alpha if item deleted	Loading (cutoff=.33)	Correlation with total	$\alpha=.69$ Alpha if item deleted	Loading (cutoff=.34)	Correlation with total	$\alpha=.74$ Alpha if item deleted	Loading (cutoff=.35)
V1*	.20	.69	.24						
V2*	.30	.67	.35	.29	.74	.35			
V3*	.54	.59	.49	.53	.64	.50	.55	.72	.55
V4*	.63	.49	.54	.64	.51	.56	.64	.57	.60
V5*	.60	.53	.54	.60	.56	.56	.57	.67	.57

\*V1: I am concerned about children having a safe and caring place to be while their parents are at work.

\*V2: I feel compassion toward parents who need care for their young children.

\*V3: I am genuinely interested in the development of young children.

\*V4: I feel it is important to help others.

\*V5: It makes a positive difference in the lives of children and families

Table 6. Correlations, alphas, and loading coefficients for items on self subscale ( $N=152$ ).

	1 <sup>st</sup>			2 <sup>nd</sup>		
	Correlation with total	Alpha if item deleted $\alpha=.60$	Loading (cutoff=.35)	Correlation with total	Alpha if item deleted $\alpha=.62$	Loading (cutoff=.35)
S1*	.36	.57	.44	.40	.58	.50
S2*	.39	.52	.47	.44	.54	.51
S3*	.28	.62	.34			
S4*	.36	.53	.42	.34	.60	.41
S5*	.52	.47	.54	.52	.47	.57

\*S1: It makes me feel important.

\*S2: It increases my self esteem.

\*S3: It makes me feel needed.

\*S4: It is a way to make new friends.

\*S5: It makes me feel good about myself.

Table 7. Correlations, alphas, and loading coefficients for items on the career subscale (N=163).

	1 <sup>st</sup>			2 <sup>nd</sup>			2 <sup>nd</sup>		
	Correlation with total	Alpha if item deleted ( $\alpha=.56$ )	Loading (cutoff=.35)	Correlation with total	Alpha if item deleted ( $\alpha=.60$ )	Loading (cutoff=.36)	Correlation With total	Alpha if item deleted ( $\alpha=.64$ )	Loading (cutoff=.38)
C1*	.36	.50	.48	.40	.53	.50	.43	.57	.57
C2*	.36	.50	.45	.36	.61	.45			
C3*	.17	.58	.22						
C4*	.39	.48	.48	.38	.53	.48	.42	.59	.55
C5*	.45	.46	.54	.49	.46	.56	.50	.46	.61

\*C1: It provides me with a financial means of supporting myself and my family.

\*C2: It is the work I know best how to do.

\*C3: It allows me to be at home with my own children.

\*C4: It is a stepping stone to future employment.

\*C5: It is my chosen profession.

Table8. Correlations, alphas, and loading coefficients for items on the learning subscale (N=165).

	1 <sup>st</sup> $\alpha=.45$			2 <sup>nd</sup> $\alpha=.65$		
	Correlation with total	Alpha if item deleted	Loading (cutoff=.35)	Correlation with total	Alpha if item deleted	Loading (cutoff=.35)
L1 *	.24	.43	.42	.35	.65	.43
L2 *	.41	.25	.54	.52	.53	.54
L3 *	.39	.29	.50	.46	.56	.50
L4 *	.33	.36	.53	.49	.55	.53
L5 *	.04	.64	.03			

\*L1: I can explore and use my own strengths.

\*L2: It allows me to gain a new perspective on things.

\*L3: I learn how to deal with a variety of different people.

\*L4: It allows me to learn things through direct, hands on experience.

\*L5: I learn so much that is interesting to me.

Table 9. The 14-item list of motivation statements and the subscales they belong to based on functional Theory.

Motivation Statements	Functional Theory Subscale
V3. I am genuinely interested in the development of young children	Value
V4. I feel it is important to help others.	Value
V5. It makes a positive difference in the lives of children and families.	Value
S1. It makes me feel important.	Self
S2. It increases my self esteem.	Self
S4. It is a way to make new friends.	Self
S5. It makes me feel good about myself.	Self
C1. It provides me with a financial means of supporting myself and my family.	Career
C4. It is a stepping stone to future employment.	Career
C5. It is my chosen profession.	Career
L1. I can explore and use my own strengths.	Learning
L2. It allows me to gain a new perspective on things.	Learning
L3. I learn how to deal with a variety of different people.	Learning
L4. It allows me to learn things through direct, hands on experience.	Learning

Table 10. Correlations, alphas, and loading coefficients for items on the extrinsic subscale (N=141).

	1 <sup>st</sup> $\alpha=.74$			2 <sup>nd</sup> $\alpha=.74$			3 <sup>rd</sup> $\alpha=.75$		
	Correlation with total	Alpha if item deleted	Loading (cutoff=.28)	Correlation with total	Alpha if item deleted	Loading (cutoff=.29)	Correlation with total	Alpha if item deleted	Loading (cutoff=.29)
S1*	.41	.72	.34	.42	.72	.34	.45	.73	.37
C1*	.47	.71	.35	.47	.72	.35	.44	.73	.35
C2*	.58	.68	.40	.59	.68	.41	.58	.70	.41
C3*	.24	.74	.19						
S2*	.53	.69	.39	.51	.70	.39	.55	.70	.41
S3*	.32	.74	.25	.32	.75	.25			
C4*	.39	.72	.31	.38	.72	.31	.40	.74	.33
S4*	.44	.71	.33	.46	.71	.34	.45	.73	.35
S5*	.51	.70	.38	.53	.70	.39	.53	.71	.41

\*S1: It makes me feel important.

\*C1: It provides me with a financial means of supporting myself and my family.

\*C2: It is the work I know best how to do.

\*C3: It allows me to be at home with my own children.

\*S2: It increases my self esteem.

\*S3: It makes me feel needed.

\*C4: It is a stepping stone to future employment.

\*S4: It is a way to make new friends.

\*S5: It makes me feel good about myself.

Table 11. Correlations, alphas, and loading coefficients for items on the intrinsic subscale (N=154).

	1 <sup>st</sup> $\alpha = .75$			2 <sup>nd</sup> $\alpha = .82$			3 <sup>rd</sup> $\alpha = .82$		
	Correlation with total	Alpha if item deleted	Loading (cutoff=.25)	Correlation with total	Alpha if item deleted	Loading (cutoff=.25)	Correlation with total	Alpha if item deleted	Loading (cutoff=.25)
V1*	.22	.76	.17	.26	.82	.18			
L1*	.43	.74	.31	.47	.81	.31	.45	.82	.30
V2*	.41	.75	.30	.46	.81	.29	.45	.82	.30
L2*	.66	.70	.37	.69	.78	.37	.69	.78	.38
L3*	.43	.73	.26	.43	.81	.26	.43	.82	.27
V3*	.52	.72	.32	.57	.81	.32	.57	.81	.33
L4*	.42	.74	.29	.47	.81	.30	.47	.81	.30
L5*	.06	.82	.02						
V4*	.70	.69	.37	.67	.78	.36	.67	.78	.37
V5*	.56	.72	.36	.61	.79	.36	.61	.80	.37
C5*	.58	.72	.36	.61	.79	.36	.61	.80	.37

\*V1: I am concerned about children having a safe and caring place to be while their parents are at work.

\*L1: I can explore and use my own strengths.

\*V2: I feel compassion toward parents who need care for their young children

\*L2: It allows me to gain a new perspective on things.

\*L3: I learn how to deal with a variety of different people.

\*V3: I am genuinely interested in the development of young children

\*L4: It allows me to learn things through direct, hands on experience.

\*L5: I learn so much that is interesting to me.

\*V4: I feel it is important to help others.

\*V5: It makes a positive difference in the lives of children and families.

\*C5: It is my chosen profession.

Table 12. The 16-item list of motivation statements and the subscales they belong to based on self-determination theory (SDT).

Motivation Statements	SDT Subscale
V2. I feel compassion toward parents who need care for their young children	Intrinsic
V3. I am genuinely interested in the development of young children	Intrinsic
V4. I feel it is important to help others.	Intrinsic
V5. It makes a positive difference in the lives of children and families.	Intrinsic
S1. It makes me feel important.	Extrinsic
S2. It increases my self esteem.	Extrinsic
S4. It is a way to make new friends.	Extrinsic
S5. It makes me feel good about myself.	Extrinsic
C1. It provides me with a financial means of supporting myself and my family.	Extrinsic
C2. It is the work I know best how to do.	Extrinsic
C4. It is a stepping stone to future employment.	Extrinsic
C5. It is my chosen profession.	Intrinsic
L1. I can explore and use my own strengths.	Intrinsic
L2. It allows me to gain a new perspective on things.	Intrinsic
L3. I learn how to deal with a variety of different people.	Intrinsic
L4. It allows me to learn things through direct, hands on experience.	Intrinsic

Table 13. Estimated correlations for subscales based on functional theory ( $N=166$ ).

	Value	Self	Career	Learning
Value	1.00			
Self	.68***	1.00		
Career	.61***	.62***	1.00	
Learning	.60***	.62***	.58***	1.00

~ $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .0001$

Table 14. Correlations, alphas, and loading coefficients for subscales based on functional theory ( $N=166$ ).

	Correlation with total	$\alpha=.85$ Alpha if Item deleted	Loading (cutoff=.30)
Value	.74	.81	.51
Self	.73	.79	.52
Career	.68	.82	.49
Learning	.68	.82	.49

~ $p<.10$ , \* $p<.05$ , \*\* $p<.01$ , \*\*\* $p<.0001$

Table 15. Descriptive statistics for criterion variables and quality ( $N=88$ ).

<i>Criterion variables and quality</i>	<i>Participants</i>
Age	$M=47(SD=10)$
Marital Status	
Married	76%
Single, separated, or divorced	24%
CDA	
Yes	19%
No	81%
Providers' Professional Network	$M=8.16(SD=2.57)$
Association Number	$M=1.49(SD=1.05)$
0	20%
1	27%
2	39%
3	11%
4	1%
5	1%
Quality	$M=4.73(SD=1.52)$

Table 16. Estimated correlations among motivation scores and criterion variables/motivation scores and quality ( $N=88$ ).

	Age	CDA	Marital	PPN	AN	Quality	Motivatin _self	Motivaitn _value	Motivaion _learning	Motivaion _career	Motivaion _intrinsic	Motivatin _extrinsic
Age	1.00											
CDA *	.18	1.00										
Marital*	.10	.06	1.00									
PPN*	.02	-.08	.08	1.00								
AN*	.27*	.18~	-.08	.24*	1.00							
Quality	-.14	.16	-.09	.02	.13	1.00						
Motivation _self	.24*	-.03	.15	.10	.05	-.18~	1.00					
Motivation _value	.25*	-.03	.20~	.07	-.02	-.13	.71***	1.00				
Motivation _learning	.30**	-.06	.29* *	.18	.08	-.08	.65***	.57***	1.00			
Motivation _career	.28**	-.10	.08	.10	.15	-.06	.59***	.63***	.60***	1.00		
Motivation _intrinsic	.31**	-.01	.25*	.13	.04	-.13	.78***	.89***	.87***	.75***	1.00	
Motivation _extrinsic	.27*	-.04	.15	.13	.11	-.17	.92***	.71***	.73***	.77***	.84***	1.00

~ $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .0001$

\*CDA: Child Development Credential

\*Marital: Marital status

\*PPN: Provider's Professional Network

\*AN: Association Number

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## APPENDIX

### Family Child Care Partnerships Provider Information Survey

**Family Child Care Partnerships  
Provider Information Survey**

ID# \_\_\_\_\_

Your Child Care Services and Operations

For each question, please **CIRCLE THE NUMBER** beside the response which best applies to your situation or fill in the blank next to the question.

- Q1. What type of child care service are you licensed to operate?
- 1 Family day care home
  - 2 Group day care home
- Q2. How many children are you licensed to serve? \_\_\_\_\_
- Q3. How many years have you worked for pay by caring for children in your home?  
\_\_\_\_\_
- Q4. Do you have your CDA (Child Development Associate) credential? \_\_\_\_ Yes  
\_\_\_\_ No
- Q5. Which of the following statements best describes the operating hours of your child care home?
- 1 I have set operating hours, and I tend to be strict about keeping them.
  - 2 I have set operating hours, and I tend to be flexible about keeping them.
  - 3 I set my operating hours according to the needs of the specific families enrolled.
  - 4 I do not have set operating hours.
- Q6. At what time of day does your business open? \_\_\_\_\_  
At what time of day does your business close? \_\_\_\_\_
- Q7. How many full-time paid assistants (not substitutes) work for you? \_\_\_\_\_
- Q8. How many part-time paid assistants (not substitutes) work for you? \_\_\_\_\_
- Q9. How do you generally structure your fees? (Circle the number of **ALL** that apply.)
- 1 I have a set daily (or weekly or monthly) fee per child
  - 2 I change my fees somewhat for families who enroll more than one child.
  - 3 The fees I charge are different based on the age of the child.
  - 4 My fees are set by the state because I accept child care subsidy payments.
- Q10. In an average year, what is your total **CHILD CARE** income (before taxes)?
- 1 Less than \$10,000
  - 2 Between \$10,001 and \$20,000
  - 3 Between \$20,001 and \$30,000

- 4 Between \$30,001 and \$40,000
- 5 Between \$40,001 and \$50,000
- 6 Between \$50,001 and \$60,000
- 7 Over \$60,000

Your Unique Situation and Background

Q11. What is your sex?

- 1 Female
- 2 Male

Q12. What is your age? \_\_\_\_\_

Q13. What ethnic or racial group do you identify with or belong to?

- 1 White or Caucasian
- 2 Black or African-American
- 3 Hispanic or Latino
- 4 Asian or Pacific Islander
- 5 American Indian or Native American
- 6 Other (please specify): \_\_\_\_\_

Q14. What is your current marital status?

- 1 Married
- 2 Single, separated, or divorced

Q15. Not counting yourself, how many adults (19 or older) live with you on a full-time basis? \_\_\_\_\_

Q16. How many children (under age 19) live with you on a full-time basis? \_\_\_\_\_

Q17. Which choice best describes your current level of education?

- 1 High school or GED
- 2 Some college credits, but no degree
- 3 2-year Associate degree
- 4 Bachelor's degree
- 5 Master's degree or higher

Q18. If you are currently attending classes, please indicate the program(s) in which you are involved. (Circle ALL that apply)

- 1 GED classes
- 2 CDA classes
- 3 The TEACH program
- 4 Working on Associate degree
- 5 Working on Bachelor's degree

- 6 Working on higher degree  
7 Other (please describe):
- 

Q19. What is your total **HOUSEHOLD** income each year (before taxes)?

- 1 Less than \$10,000
- 2 Between \$10,001 and \$20,000
- 3 Between \$20,001 and \$30,000
- 4 Between \$30,001 and \$40,000
- 5 Between \$40,001 and \$50,000
- 6 Between \$50,001 and \$60,000
- 7 Between \$60,001 and \$70,000
- 8 Between \$70,001 and \$80,000
- 8 Over \$80,000

Q20. Which of the following responses best describes where you live? (Check one.)

- In a rural area *more than 30 minutes* from a town with a population of 5,000 or more
- In a rural area *less than 30 minutes* from a town with a population of 5,000 or more
- In a small town (with a population less than 5,000)
- In a medium-sized town (with a population between 5,000-25,000)
- In a city or large urban area (with a population over 25,000)

Q21. Family child care providers have different reasons that motivate them to care for children day in and day out. For each statement below, put an “X” in the box that best represents how true it is as a statement about why you care for children in your home.

Providing family child care is something I do because...	Very True Of Me	True of Me to Some Extent	True of Me a Bit	Not Really True of Me	Not True of Me at All
A. I am concerned about children having a safe and caring place to be while their parents are at work.					
B. It makes me feel important.					
C. I can explore and use my own strengths.					
D. It provides me with a financial means of supporting myself and my family.					
E. I feel compassion toward parents who need care for their young children.					
F. It is the work I know best how to do.					
G. It allows me to gain a new perspective on things.					
H. I learn how to deal with a variety of different people.					
I. I am genuinely interested in the development of young children.					
J. It allows me to learn things through direct, hands on experience.					
K. It allows me to be at home with my own children.					
L. It increases my self esteem.					
M. I learn so much that is interesting to me.					
N. It makes me feel needed.					
O. It is a stepping stone to future employment.					
P. It is a way to make new friends.					
Q. I feel it is important to help others.					
R. It makes a positive difference in the lives of children and families.					
S. It is my chosen profession.					
T. It makes me feel good about myself.					

Q22. Which statement above is THE MOST IMPORTANT reason for why you are a family child care provider? \_\_\_\_\_ (Place the letter of that statement in the blank.)

Q23. Family child care providers receive training for licensing from many sources. Please indicate the program(s) from which you have received training hours for licensing in the past 12 months and estimate how many training hours you received from each sources.

(Circle ALL that apply)

- 1 Childcare Management Agency \_\_\_\_\_
- 2 Family Child Care Partnerships \_\_\_\_\_
- 3 Alabama Public Television (APT TV) \_\_\_\_\_
- 4 Alabama Cooperative Extension Service \_\_\_\_\_
- 5 College Coursework \_\_\_\_\_
- 6 Kids 'n' Kin \_\_\_\_\_
- 7 Child care conference(s) \_\_\_\_\_
- 8 Other (specify) \_\_\_\_\_ # of hours \_\_\_\_\_

Q24. Approximately how many training hours did you received in the past 12 months in each DHR licensing category?

_____ Child Development	_____ Universal Health and Safety Precautions
_____ Quality Child Care	_____ Child Care Professional and the Family
_____ Language Development	_____ Positive Discipline and Guidance