



Quality dimensions of licensed, center-based daycare in the state of Montana  
by Carrie Rae Leu

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Home Economics  
Montana State University  
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Abstract:

Research on child care continues to support the claim that the quality of child care programs has a definite and lasting effect on children's developmental outcomes. Embarking on a study of quality variables in child daycare requires an investigation of early childhood staff. Structural dimensions examined in this study included staff/child ratios, group size, staff education and training, and staff stability. Contextual aspects investigated included type of child daycare setting, licensure, staff salaries, staff benefits, and staff working conditions.

The purpose of this study was two-fold: (a) to identify characteristics of the child care staff within licensed, center-based daycare programs in the state of Montana; and (b) to examine structural and contextual aspects of quality on licensed, center-based daycare in the state of Montana. Both structural and contextual aspects were investigated as they related to geographic districts within the state and program auspice. Out of 145 licensed daycare programs in Montana, 90 participated in the survey (62%).

Licensed, center-based daycare staff were predominantly white/Caucasian females over the age of 30, and had worked at their current position for over two years. A majority of programs do not require staff to have greater education and training than that required by the state regulatory agency for licensing purposes. The greatest percentage of licensed, center-based staff are employed by private, not-for-profit programs, earn low wages, and reflected a turnover rate of 31% during the preceding 12 months.

Five research questions guided the study, and Chi-square analysis yielded nonsignificant results due to low cell size. Discriminant analysis identified variables for benefits and working conditions which were differentiated among three auspice groups.

Implications of this study for state agencies, center-based daycare programs, and further research were discussed. This research represents one of the first comprehensive studies of licensed, center-based daycare programs within the state of Montana.

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APPROVAL

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Carrie Rae Leu

This thesis has been read by each member of the graduate committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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## ABSTRACT

Research on child care continues to support the claim that the quality of child care programs has a definite and lasting effect on children's developmental outcomes. Embarking on a study of quality variables in child daycare requires an investigation of early childhood staff. Structural dimensions examined in this study included staff/child ratios, group size, staff education and training, and staff stability. Contextual aspects investigated included type of child daycare setting, licensure, staff salaries, staff benefits, and staff working conditions.

The purpose of this study was two-fold: (a) to identify characteristics of the child care staff within licensed, center-based daycare programs in the state of Montana; and (b) to examine structural and contextual aspects of quality on licensed, center-based daycare in the state of Montana. Both structural and contextual aspects were investigated as they related to geographic districts within the state and program auspice. Out of 145 licensed daycare programs in Montana, 90 participated in the survey (62%).

Licensed, center-based daycare staff were predominantly white/Caucasian females over the age of 30, and had worked at their current position for over two years. A majority of programs do not require staff to have greater education and training than that required by the state regulatory agency for licensing purposes. The greatest percentage of licensed, center-based staff are employed by private, not-for-profit programs, earn low wages, and reflected a turnover rate of 31% during the preceding 12 months.

Five research questions guided the study, and Chi-square analysis yielded nonsignificant results due to low cell size. Discriminant analysis identified variables for benefits and working conditions which were differentiated among three auspice groups.

Implications of this study for state agencies, center-based daycare programs, and further research were discussed. This research represents one of the first comprehensive studies of licensed, center-based daycare programs within the state of Montana.

## CHAPTER 1

## ORIENTATION OF THE STUDY

Introduction

The debate in the United States has shifted from the issue of whether or not mothers of young children should work to the recognition that women are employed and will continue to be employed (Galinsky, 1987). Two-thirds of all preschool children and four out of five school-age children will have mothers in the workforce by 1995 (Children's Defense Fund, 1987). In addition, in 1987, half of all married mothers in the workforce had infants younger than one year (Children's Defense Fund, 1987).

Research on child care continues to support the claim that the quality of child care programs has a definite and lasting effect on children's developmental outcomes (Phillips, 1987). The National Day Care Study (NDCS) (Roupp, Travers, Glantz, & Coelen, 1979) was the first research conducted on a national level to investigate the costs and effects of the regulatable characteristics of daycare. Factors affecting program quality, regardless of type of setting (family home, group home, or center-based), include group size, staff/child ratios, health and safety issues, and training opportunities for staff (Roupp et al., 1979).

Research indicates that employed parents have a difficult time finding quality care and, when under stress, they enroll their children in the lowest quality child care facilities (Galinsky, 1987; Howes, Rodning, Galluzzo, & Myers, 1988).

In addition, the true cost of child care is not reflected in program cost, but rather is obscured by the subsidies provided by early childhood staff through inadequate compensation (Zinsser, 1985). The National Child Care Staffing Study (NCCSS) was the second national survey to examine the costs and effects of quality daycare. Conducted in five major cities in the United States, the study discovered that poor staff compensation is related to poor program quality [Child Care Employee Project (CCEP), 1989].

Furthermore, inadequate wages contribute to high levels of staff turnover which adversely affect continuity of care (Whitebook, Howes, Phillips, & Pemberton, 1989). Continuity of care is another important aspect of quality as it relates to the relationship between child and caregiver (Cummings, 1980).

Contemporary research has identified two general approaches to delineating quality: global assessments and specific child care dimensions (Phillips, 1987). Global assessments involve criteria which measure the overall quality of environments. Rather than examining individual quality indicators, global assessments place quality on a high/low continuum or utilize rating scales to examine multiple aspects of program content. For example, the Early Childhood Environment Rating Scale (ECERS) (Harms & Clifford, 1980)

examines seven quality dimensions: (a) personal care, (b) creative activities, (c) language/reasoning, (d) fine/gross motor activities, (e) adult facilities/opportunities, (f) furnishings/display, and (g) social development. Thus, global assessments have helped researchers conclude that "better child care is better for children . . . but [these assessments] do not identify which aspects of child care are better" (Phillips, 1987, p. 5).

Specific child daycare dimensions allow researchers to identify program aspects that relate directly to better care. These dimensions fall into three categories. First, structural dimensions are defined as group size, staff/child ratios, and caregiver education and training. These structural dimensions are the same dimensions identified by the NDCS as being linked to child care quality (Roupp et al., 1979). Typically, these dimensions are those which government agencies choose to regulate. "State regulation generally consists of setting minimum standards for health, safety, and development of children. States usually base licensing requirements on easily measurable features, such as group size and ratio of children to staff" (U.S. Department of Labor, 1988, p. 14). The idea behind regulation is to ensure that a minimum level of care is provided across child care settings. The regulatory system generally includes licensing for center-based care and registration (a variation of licensing) for family home or group home daycare. Oftentimes early childhood professionals have an idea for quality which is higher than that set by regulatory agencies. The result can pit policy makers against the early childhood professional in deciding who

will establish the criteria defined as "good quality" within regulations (Morgan, 1985).

Second, contextual aspects of child daycare quality include the type of child care setting and staff stability. Typical categories of child care settings are family home daycare, group home daycare, and center-based daycare. Stability is directly related to child/caregiver relationships and therefore is an important component of daycare quality (Ainslie & Anderson, 1984; Cummings, 1980; King & MacKinnon, 1988). In addition, for the purpose of this study, staff salaries, staff benefits, and staff working conditions can be identified as contextual aspects because they affect the quality of the adult work environment (Whitebook et al., 1989).

Third, dynamic aspects of daycare include those which capture children's daily experiences. Dynamic aspects of daycare include the amount of close interaction between children and teachers, maintaining order, the amount of time a child spends in group activities versus independent/reflective play, and the amount of verbal initiative used by children (Roupp et al., 1979). The dynamic aspects of daycare are impacted by structural features and influence developmental outcomes for children.

Embarking on a study of quality variables in daycare requires an investigation of the early childhood staff. Attempts to access demographic information as related to the child care workforce are fraught with problems (Phillips & Whitebook, 1986). The public lacks accurate perceptions of who the child care

worker is as well as what the child care worker does. Major national statistical agencies, such as the U.S. Bureau of the Census and the U.S. Department of Labor, do not agree on the way to collect and report data, nor do they categorize and define the child care workforce in the same manner (Phillips & Whitebook, 1986). If accurate, basic data on the early childhood workforce are going to be collected to provide the public with correct perceptions about this group of professionals, then the problem of definitions within the profession must be resolved. These definitions include differentiating among teachers, assistant teachers, aides, and so forth. This study utilizes demographic characteristics to provide an accurate picture of the early childhood staff working in Montana's licensed, center-based daycare programs.

Thus, a need exists to clarify who the daycare professional is and, secondly, to examine a variety of factors that influence the quality of daycare. The purpose of this study is two-fold: (a) to identify characteristics of the child care staff within licensed, center-based daycare in the state of Montana; and (b) to examine structural and contextual aspects of quality in licensed, center-based daycare in the state of Montana. Structural variables under consideration include staff/child ratios, group size, staff education/training, and stability. Contextual variables include the type of setting and licensure as well as macrosystem factors of staff salaries, staff benefits, and staff working conditions. Both structural and contextual aspects are investigated as they relate to district and auspice. Dynamic aspects of the daycare environment are not examined within the context of this study.



### Conceptual Framework

Ecological theory (Bronfenbrenner, 1977) involves interaction between the developing individual and the environment. The interaction is reciprocal and the environment is composed of four structural levels: (a) the microsystem, (b) the mesosystem, (c) the exosystem, and (d) the macrosystem.

The microsystem consists of the daycare setting or program type, agency regulation via licensure, staff/child ratios, and group size. Bronfenbrenner (1977) described the microsystem as "the factors of time, place, physical features, activity, participants, and roles" (p. 515). The exosystem includes primary social structures influencing the developing person, "such as the economy, the mass media, the legislature, education, health care, housing, technology, and others" (Vander Ven, 1988, p. 150). The macrosystem is comprised of values and beliefs which govern the way institutions are organized. Treatment of children and caregivers is reflective of the cultural value placed on children and the adults who care for them (Belsky, Steinberg, & Walker, 1982).

Because of the reciprocal nature of the interaction between the developing person and the environment, daycare, for the purpose of this study, is viewed as a work environment for adults as well as a learning environment for children. In daycare, caregiver well-being is linked to children's experiences; for example, paid planning time and paid breaks for staff increase teacher effectiveness in the classroom (Whitebook et al., 1989). Thus, the daily learning experiences of

children are influenced by the value and sense of caring shown to the staff by providing good work environments. All ecological levels are viewed in terms of how structure influences experience and how the experiences influence development.

The microsystem, the daycare setting itself, is affected by program type as well as licensure. The environment within family home daycare differs from that of group home daycare as well as center-based care. Research shows marked differences among program types (Clarke-Stewart & Gruber, 1984) and the influence of licensing or lack of licensing on program environments (Morgan, 1985). In addition, the social structures impacting the setting are influenced by staff/child ratios and group sizes (Belsky, 1984). The exosystem, reflecting, in part, the economic issues of the daycare workplace, includes staff salaries, stability of staff, benefits, and working conditions.

#### Nominal Definitions

- (1) Quality — Positive interactions among staff and children within the daycare setting (Bredekamp, 1987).
- (2) Profile — Demographic characteristics of licensed, center-based daycare staff.
- (3) Child daycare — Care provided to a child away from home during the day (one-word spelling adopted from the National Campaign for Child Daycare for Working Families, 1980).

- (4) Family home daycare — A child care program serving three to six children [Montana Department of Family Services (DFS), 1988b].
- (5) Group home daycare — A child care program serving seven to twelve children, registered by the State of Montana DFS (Montana DFS, 1988c).
- (6) Center-based daycare — Child care program serving 13 or more children on a full-day basis, licensed by the State of Montana DFS (Montana DFS, 1988a).
- (7) Auspice — Private/not-for-profit, private/for-profit (synonymous with proprietary), or public/not-for-profit program status.
- (8) District — Geographic areas defined by the State of Montana DFS.
- (9) Adult work environment — Aspects of the work settings which influence staff in their daily contacts with children and other adults and include wages, benefits, and working conditions (Whitebook et al., 1989).
- (10) Working conditions — Conditions included in the organizational climate of a program which enhance professional growth collegiality or sense of value, such as release time to attend conferences/workshops, written job descriptions, paid breaks, paid planning time, periodic merit increases in wages, and compensation for overtime (Jorde-Bloom, 1988).
- (11) Stability — Length of time in a center (Ainslie & Anderson, 1984), represents continuity of care (Cummings, 1980), and is assessed through turnover rates using the following formula: number of staff who have left divided by number of staff positions (Whitebook & Granger, 1989).

- (12) Staff — All teachers, assistant teachers, teacher/directors, and directors present in the licensed, center-based daycare facility. These four staff groups are individually defined as follows:
- (a) Teachers — Persons in charge of a group of children, often with responsibilities; includes head or lead teachers (synonymous with caregiver).
  - (b) Assistant teachers — Persons working under the supervision of a teacher who help with the care and education of children (synonymous with aide).
  - (c) Teacher/directors — Persons with both teaching and administrative duties.
  - (d) Directors — Persons who have primary responsibility for administration of the program (CCEP, 1988).
- (13) Staff benefits — Benefits provided to staff which include sick leave, paid holidays, health and dental coverage, life insurance, pension plans, and so forth (CCEP, 1988).
- (14) Microsystem — The daycare setting and environment; limited in this study to center-based care and licensing by the State of Montana DFS.
- (15) Exosystem — The social structures that influence the daycare setting; limited in this study to staff/child ratios, group size, staff education/training, and stability.

- (16) Macrosystem — The cultural values and beliefs influencing the treatment of children and the adults who care for them; limited in this study to staff salaries, benefits, and working conditions.

## CHAPTER 2

## REVIEW OF THE LITERATURE

A literature review was conducted to examine structural and contextual aspects of licensed, center-based daycare in the state of Montana as they relate to quality. The literature was reviewed using Bronfenbrenner's (1977) ecological framework. Variables in this study are limited to the levels of microsystems and exosystems.

Specific areas under investigation were:

- (1) Microsystem — Daycare setting (type of program), licensure, staff/child ratios, and group size.
- (2) Exosystem — Economic aspects such as staff salary levels and their impact on staff stability as well as work environments and benefits in licensed center-based daycare.
- (3) Auspice — Program sponsorship and its impact on the structural and contextual aspects of daycare.

Microsystem

The ability to provide quality daycare environments to enhance the development of children and the adults who care for them depends upon an

understanding of what comprises quality. Quality within the microsystem is influenced by the type of program and agency regulation. High quality center-based programs have classroom and outdoor space of sufficient size and design to meet the needs of children. In addition, better quality centers offer opportunities for social, emotional, physical, and cognitive interaction among peers and numerous adults (McCartney, Scarr, Phillips, Grajek, & Schwarz, 1982).

Licensure establishes a minimum level of quality when program size dictates either registration (family home and group home daycare in Montana) or licensing to ensure monitoring of structural aspects of daycare features (Morgan, 1985; U.S. Department of Labor, 1988). Montana requires that programs serving the needs of 13 or more young children full time on a regular basis must be licensed.

Staff/child ratios and group size comprise the social structures influencing the daycare setting. Low staff/child ratios have long been accepted as an indicator of high program quality (*Federal Register*, 1980; Roupp et al., 1979). Staff/child ratios and group size were first examined in connection with federally subsidized child care in the form of the Federal Interagency Day Care Requirements (FIDCR). "Originally established in 1968, the FIDCR were designed to promote development of and prevent harm to children in federally supported care" (Roupp et al., 1979, p. 4). The FIDCR required staff/child ratios of 1:4 for six-week-old to three-year-old children, 1:5 for three-year-olds, and 1:7 for four- and five-year-olds. In addition, group sizes were 15 for three-year-olds and 20

for four- and five-year-olds (Roupp et al., 1979). These ratios were far more stringent than any implemented by states at that time. The FIDCR were never fully implemented and were rescinded by the federal government in 1980 (*Federal Register*, 1980).

The National Day Care Study (NDCS) was undertaken, in part, to examine and collect statistically valid data on staff/child ratios and group size. Furthermore, the NDCS was designed to "investigate the costs and effects associated with variations of regulatable characteristics of center day care" (Roupp et al., 1979, p. iv).

Specifically, the NDCS investigated staff/child ratios, group size, and caregiver education and training and their impact on program quality. Interestingly, the study found that staff/child ratios had less impact on NDCS measures of quality than group size, yet had a stronger impact on program costs. Nearly all NDCS sites indicated a strong, positive association between group size and better care and developmental outcomes (Roupp et al., 1979). Moreover, caregiver education and training had moderate influence on quality measures. The NDCS was the first national study to offer evidence that regulation of center-based daycare affects the quality of care provided to young children.

McCartney et al. (1982) examined the effects of quality daycare experience on children in nonmaternal care in Bermuda. Quality was highly associated with the overall experience of the program director and lowest rates of caregiver turnover. Staff/child ratios were less influential in social competence



development but higher in language development of young children. Caregiver turnover also had a greater negative impact on children's social development but more positive influence on language development.

Thus, the structural components of the daycare setting — staff/child ratios and caregiver education and experience — have varied influence over the degree of program quality. Other aspects of the Bermuda study impacting program quality fall into the dynamic aspects of daycare and do not directly apply to the scope of this study.

In more recent studies, staff/child ratios have been found to have less effect on the quality of experiences for preschoolers but have a greater effect on the quality of experiences for infants and toddlers (Howes & Rubenstein, 1985). Howes and Rubenstein found that the staff/child ratio predicted the quality of interactions between caregivers and children, especially when the ratio was 1:3. Specifically, "children and adults engaged in more touching and laughing behaviors" (Howes & Rubenstein, 1985, p. 148). Thus, children in smaller groups had higher scores on talk and play scales.

Francis and Self (1982) studied imitative responsiveness of young children in daycare and home settings and found that lower staff/child ratios promoted an increase in initiative behaviors of young children. In addition, low staff/child ratios enhanced peer interactions, particularly among three-year-olds (Field, 1980). Small group size for children ages three to five had the greatest impact on children's experiences (Belsky et al., 1982).

The National Child Care Staffing Study conducted in 1988-89 (Whitebook et al., 1989) reported similar findings in terms of the structural components of staff/child ratios, group size, and caregiver education and training. Conducted in five major cities across the United States, the study, in part, compared structural components of existing programs to those guidelines initially recommended in the FIDCR. Center-based daycare programs meeting FIDCR guidelines had more sensitive, less harsh teachers who provided appropriate care. The result was a nurturing child daycare environment.

### Exosystem

Exosystem quality, comprised of economic aspects as they relate to staff salary levels, stability and its interaction with salaries, the work environment, and benefits in licensed, center-based daycare, is indicative of the economic realities of the working environments of child care professionals. Low pay, limited benefits, and poor working conditions are reflective of a devalued view of child care practitioners. In essence, daycare staff currently subsidize the true cost of child care by continuing to accept abysmally low wages (Modigliani, 1986; Whitebook et al., 1989; Zinsser, 1986).

The most important predictor of the quality of care children receive among all the adult work environment variables is staff wages (CCEP, 1989). Lower wages are related to higher turnover rates which have a detrimental effect on the experiences and developmental outcomes of children. Oftentimes, benefits and

working conditions supplement salaries, but the child care professional does not receive an adequate supplement to low salaries (Jorde-Bloom, 1988; Kontos & Stremmel, 1988). Modigliani (1988), citing 12 reasons for low wages, stated that "the inequitable wages of women, the devaluation of children in this culture, and the subsequent minimization of the skill involved in working with children" (p. 15) are the main reasons for child care workers' low pay.

Stability is an important component of high quality care for young children because it is directly related to child/teacher interactions. Cummings (1980) defined stability as the length of time a child and caregiver have been together in a daycare setting and asserted that young children demonstrate preferences for stable caregivers. "Caregiver stability is of some importance to child-caregiver relationships; that is, in the ecologically more valid environment of the day-care center, children evidenced a preference for stable caregivers" (Cummings, 1980, p. 36). Whitebook and Granger (1989) predicted that instability, depicted in turnover rates, will continue to plague the daycare practitioner as long as salaries, benefits, and working conditions remain inequitable and non-reflective of education, experience, and training. The National Child Care Staffing Study (CCEP, 1989) found a 41% turnover rate across all participating centers.

In two studies conducted by Pettygrove, Whitebook, and Weir (1984), information was gathered pertaining to compensation received by child care workers. A seven-year span existed between the two studies of different child

care worker populations, yet wages decreased over the time span. In addition, the findings confirmed the disparity between the education/experience of the daycare practitioner and the wages and benefits received.

Several studies (Modigliani, 1988; National Association for the Education of Young Children, 1985; Pettygrove et al., 1984; Whitebook et al., 1989; Willer, 1987) found that daycare practitioners are overwhelmingly female, receive varying salaries depending on work settings, have some postsecondary education, lack the most basic employee benefits such as health insurance coverage, and leave caregiving jobs in large numbers.

Belsky et al. (1982) used an ecological model to examine the effects of daycare on the individual child. Their discussion reported that type of daycare program and variations within type comprised the microsystem. In their analysis of the exosystem, Belsky et al. viewed the adult work environment as that pertaining to the parent. In contrast, the focus of this study is an examination of the adult work environment for the daycare staff.

Thus, issues such as absenteeism, employee productivity, and flexible work hours are examined as they relate to the work environment of parents with children in daycare. These researchers also examined the mesosystem, dealing with communication patterns between parents and daycare staff, and the macrosystem. At the level of the macrosystem, "quality care is dependent on the maintenance of respect for the child rearer" (Belsky et al., 1982, p. 111). While Belsky et al. discussed a lack of respect for parents choosing to remain

at home to rear their children, the low salaries, high turnover rates, and little or no benefits and poor working conditions suggest little respect for staff employed in licensed, center-based daycare programs.

### Auspice

Auspice was found to be a strong predictor of quality daycare (CCEP, 1989). Auspice is divided into three basic groups for the purpose of this study: (a) private/not-for-profit, (b) private/for-profit, and (c) public/not-for-profit. Auspice denotes program sponsorship with private/not-for-profits usually owned by non-profit corporations. Public/not-for-profit programs are those typically found associated with universities, colleges, or other public entities including Head Start (Kagen & Newton, 1989). Private/for-profit programs are ones that may be represented by chains, franchises, or individuals (Osborne, 1986).

In the past, proprietary centers were found to provide only minimal quality. Generally, only those items mandated by licensing requirements were provided. With respect to staff/child ratios and staff benefits, staff typically did not receive paid breaks and were subject to sudden layoffs when enrollment levels declined (Kagan & Glennon, 1982). Not-for-profit centers generally had better staff/child ratios, and neither form of sponsorship differed relative to group size.

Staff tend to have more experience and higher education/training levels in not-for-profit centers (Whitebook et al., 1989). Not-for-profit centers typically pay higher wages and have lower turnover.

Furthermore, proprietary center owners and managers formed the National Association of Child Care Management, an organization established to lobby against government regulation (Kagan & Glennon, 1982). Finally, for-profit centers participate in surveys designed to obtain data on staff working conditions at a lower rate than not-for-profit centers (Modigliani et al., 1986; Riley & Rogers, 1989; Whitebook et al., 1989).

### Conclusion

The microsystem and exosystem provide an ecological framework within which to examine both structural and contextual components of center-based daycare in determining quality. The structural components comprising the microsystem include licensure, staff/child ratios, group size, and caregiver education and training. Licensure provides a minimum standard below which states generally do not allow daycare programs to fall. In Montana, licensed centers are those caring for 13 or more children on a regular basis. Group size has been found to be the most important factor impacting developmental outcomes for young children, with staff/child ratios having less of an impact on quality measures. Caregiver education and training has a moderate impact on program quality and developmental outcomes for children.

Contextual components of the exosystem impacting center-based daycare programs include staff salary levels, stability and its interaction with salaries, the work environment, and staff benefits. Stability is an important component of high

quality care and is influenced by staff wage levels, a predictor of quality of care for young children. High turnover rates negatively impact continuity of care for young children. Even benefits and work environment incentives typically used to supplement low salaries are not sufficient to significantly reduce high turnover rates. In addition, the salaries currently received by daycare practitioners are not reflective of the education, experience, and training held by daycare staff.

Auspice is identified as program sponsorship, i.e., private/for-profit, private/not-for-profit, and public/not-for-profit. Studies indicate that a strong relationship exists between daycare quality and program sponsorship. Private/for-profit programs typically meet only minimum standards in terms of quality measures. Conversely, staff in not-for-profit center-based programs receive higher wages, have higher education/more training, and lower turnover rates.

## CHAPTER 3

## METHODS AND PROCEDURES

The descriptive method was chosen as the overall design for this research study. In keeping with the descriptive study design, this study assessed demographic information collected through a survey questionnaire. Given the exploratory nature of the research, formulated research questions rather than hypotheses guided the investigation. Based on the review of literature and the population selected, several research questions were formulated.

Research Questions

- (1) What are the demographic characteristics of center staff? What are the ages of the staff? How long have the staff worked in the field? Is their education/training more than the minimum required by state regulation?
- (2) What are the structural and contextual characteristics of center-based programs? What is the number of children being served? What is the number of staff employed? What is the number of for-profit businesses? What is the number of not-for-profit enterprises? What are the staff/child ratios and group sizes?
- (3) What are the salary levels, benefits provided, and types of working conditions?



- (4) What is the overall stability of center staff?
- (5) Is there a relationship between: turnover rates and salary levels, auspice and salary, auspice and turnover, auspice and benefits, or auspice and working conditions?

### Population

The population for this study was comprised of 145 licensed daycare centers in eight districts within the state of Montana. District configuration for child care licensing is determined by boundaries established by the Montana Department of Family Services. District sizes vary within the state and are listed in Table 1.

Table 1. Number of licensed, center-based daycare programs by district.\*

Districts (N=8)		Number of Centers per District (N=145)
Number	Location	
8	Missoula	43
1	Billings	34
4	Great Falls	23
5	Helena/Bozeman	19
7	Kalispell	10
2	Butte	7
6	Miles City	7
3	Glasgow	2

\*Refer to map (Appendix F).

The size of the population (N=145) lends itself to the acquisition of information about the entire population, not just a representative sample. Therefore, the survey attempted to gather data from every member of the population (Gay, 1987).

### Limitations

The quality dimensions explored in this study were limited to center-based programs. Licensed, center-based daycare programs were selected to serve as the population because mandatory state licensing makes them readily identifiable and ensures a large number of staff from which to compile the demographic characteristics. As a result, even though registered group daycare homes technically have "staff" in that they must have two providers for every seven to twelve children, these programs were not included in this survey. In addition, Montana does not regulate early childhood programs which label themselves "preschools" within the state; therefore, the quality dimensions investigated within the boundaries of this study were not applicable to preschool programs and their staff.

The survey questionnaire was completed by directors, owners, teacher/directors, and others for each center. Thus, responses do not represent information that might have been included had other center staff completed the survey. The survey instrument was designed to document salaries, benefits, working conditions, and stability, but not in an exhaustive manner. A survey of

each individual staff member at each center could be difficult and cumbersome given the number of people to identify, contact, and follow-up.

Finally, participation was self-selected, and any findings must be reviewed with that in mind. Participants may have several reasons for being reluctant to cooperate with a survey of this type. Directors may resent the interruption of their routine and the time needed to complete the survey. Also, some of the survey items may be viewed as invasive or threatening to program operation or the director's managerial skills (Miller, 1986). Lack of prior experience or a distrust of and lack of knowledge about the research process may cause reluctance to participate.

### Survey Instrument

The Child Care Staff Salary and Working Conditions Survey (CCSSWCS) was developed by the Child Care Employee Project (CCEP) of Oakland, California (CCEP, 1989). The purpose of the instrument was to identify key issues including child care staff salaries, staff benefits, staff working conditions, and stability, as well as group size and staff/child ratios. In addition, the instrument lends itself to discovery of auspice and other categorical information desired by users. (A copy of the survey instrument is presented in Appendix A.)

In the spring of 1989, the CCEP analyzed data collected in three states (Hawaii, Colorado, and Illinois) as well as data from seven regional/community surveys using the CCSSWCS. Items included on the survey allow access to

information similar to the National Child Care Staffing Study so that indirect comparisons can be made. Direct comparisons are not possible when sampling techniques vary (CCEP, 1989).

Thirty-eight items relate to stability factors for teachers, assistant teachers, and directors. These stability factors include 13 subscale items on working conditions, 24 subscale items on retention and recruitment of staff, 11 subscale items on benefits, and 18 subscale items on salaries.

Group size factors and staff/child ratio factors are derived from five subscale items. Other items examine demographics of staff including number of staff on payroll, age, gender, ethnicity, and education/experience/training required beyond licensing.

### Procedure

All licensed daycare centers in Montana (N=145) were invited to participate in this research. A list of all licensed daycare facilities was obtained from the Montana Department of Family Services (DFS). Licensed facilities were divided into eight DFS districts within the state (see Table 1).

A formal request soliciting participation in the study was included in the survey cover letter (Appendix B). One week after the cover letter and survey were sent, a follow-up postcard reminder was mailed (Appendix C). A final follow-up telephone call was made to urge those who had not yet sent in their surveys to do so (Appendix D). A response rate of 60% was considered

sufficient for descriptive purposes. Several salary surveys conducted on both the national and state levels have reported response rates less than or close to 70% (CCEP, 1989).

### Data Reduction and Transformation

The data gathered by the survey were entered and stored on disk utilizing the Database III computer software program. Using the Statistical Package for the Social Sciences—Personal Computer (SPSS-PC), frequency checks were run on the data to detect gross inconsistencies. To ensure accuracy, 10% of the cases were randomly selected for verification of data. A code sheet was developed for use with the SPSS-PC.

### Data Analysis

Data collected for this study were analyzed using descriptive statistics. Frequency tables and percentages were used to describe the variables. Cross-tabulation analysis using contingency tables investigated sets of relationships between two or more variables (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975).

Chi-square is a statistical process used to summarize the statistical independence of the variables. Used to compare group frequencies, chi-square involves comparing observed outcomes to expected outcomes (Ferguson & Takane, 1989). Expected frequencies were obtained by multiplying appropriate row and column marginal totals and dividing by the total number of observations

(Hopkins & Glass, 1978). An underlying assumption in the use of this statistic is that variables are measured at the nominal level (Huck, Cormier, & Bounds, 1974). Variables under consideration for statistical independence were staff salaries, staff benefits, staff working conditions, stability (assessed through turnover rates), auspice, and district. For purposes of analysis, the variables of salaries and turnover rates were placed in categories. Salary categories included the highest hourly wage any staff member earns and the lowest hourly wage any staff member earns. The highest and lowest hourly wages were then categorized by amount based on the data received. Turnover rates would be determined as high or low in comparison to the NCCSS turnover rates for each staff category. Although the nature of this study was exploratory, the data were tested at the .05 level of significance but reported at a level between .10 and .05.

The continuous nature of the data collected on salaries allowed for assessment of the relative magnitude of variations using a one-way analysis of variance (ANOVA) procedure. The concept underlying the ANOVA procedure is that the total variance of values is attributed to the variance between groups and the variance within groups (Adams & Schvaneveldt, 1985). Thus, the one-way ANOVA was used to compare staff salaries by auspice and district. Statistically significant differences were further investigated using either the Neuman-Keuls or Scheffe Post Hoc comparison tests.

## CHAPTER 4

### RESULTS

Several research questions guided the focus of this study. First, demographic profiles were developed on center-based daycare staff. These profiles included age, length of employment in center-based programs, and the level of education/training of staff when compared to state regulation requirements.

Second, structural and contextual characteristics were examined by assessing the total number of children served in each program, the number of staff employed in each program, the determination of program auspice, and the request for information on staff/child ratios and group sizes.

Third, an examination was made of salary levels, staff benefits, and working conditions. Salary levels ranged from highest hourly wage paid to lowest hourly wage paid for each staff category. Benefits provided by the center-based program included sick leave, paid holidays, paid vacations, and an assortment of insurance coverage packages. Working conditions included a variety of items such as paid break time, paid planning time, written job descriptions, written contracts, and yearly cost-of-living increases in wages.

Fourth, stability was investigated through information supplied about the number of staff who had left during the 12 months prior to the study.



































































































































































