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The Study of Indicators of Quality Care
for Young Children in Day Care

by

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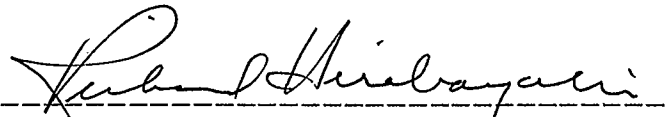
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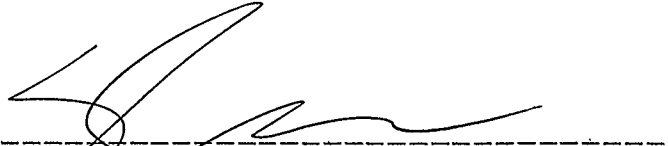
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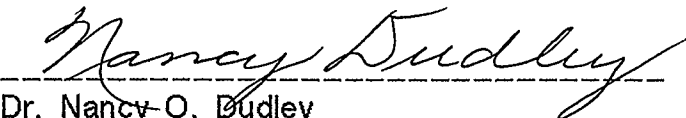
The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled, "The Study of Indicators of Quality Care for Young Children in Day Care" submitted by Virginia Agnes Lyons Friesen in partial fulfillment of the requirements for the degree of Master of Arts.



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Abstract

The increase in the number of children needing high quality child care continues to expand, and with that growth arises concern about the quality of child care in day care centers. This project examines caregiving quality in day care as it relates to program resources--group size, child-staff ratio, caregiver benefits and ratio violations. It also examines caregiver's characteristics--education, country of birth, tenure or center experience, and total caregiving experience. Data on 106 caregivers were derived from an earlier more comprehensive study by Friesen (1992) which included observations of various day care centers, using a variety of instruments to identify specific indicators of quality. Significant factors included: education, center experience, total experience, total group size, and ratio violations. Three factors were not as conclusive...country born, benefits and ratio. This study will, hopefully, assist personnel involved in professional child care settings in providing higher quality care.

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To my husband, John W. Friesen

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CHAPTER ONE INTRODUCTION

Background to the Study

The concern about quality care of day care has recently received a great deal of national attention. Although some efforts have been made to improve day care in Canada, the literature shows that the quality of caregiving is only as good as the caregiver (Balaban, 1993/94). The thesis of this study is to examine the qualifications of a "good" caregiver. The field work of this project meant many hours spent observing the operations of various day cares, using a variety of instruments to identify specific indicators of quality (Friesen, 1992). The instruments employed were designed to maximize the objectivity of the researcher and avoid reflecting the values of the researcher.

This thesis is part of a larger study (Friesen, 1992) which dealt with effects of auspice on day care quality and raised the question about identification of specific indicators of quality care by caregivers. This study sought to answer that question and will, hopefully, assist personnel involved in professional child care settings in providing higher quality care.

This research is concerned with identifying the characteristics of early childhood personnel in day care: the quality of care, and the possible relationship between the characteristics of personnel and the quality of care. Bronfenbrenner's ecological model (Berk, 1989) will be discussed in detail in chapter three of this study. For children to develop optimally, the model indicates the society as a whole must prioritize a positive child rearing environment (Berk, 1989, p. 636).

Purpose of the Study

There is sufficient "talk" today about the quality of care in our day care, but, hopefully, it is not like Mark Twain's observation on the weather that everybody talks about it but nobody ever does anything about it. The aim of this study is to determine specific indicators for quality care for young children.

This project examines early childhood caregiving quality in day care as it relates to the day care program's resources--group size, child-staff ratio, caregiver benefits and ratio violations; as well as the caregiver's personal characteristics--education, tenure, country of birth and child care experience. These were selected for

study on the basis of the day care program resources' pertinence to the policies. In addition the study selection was made on the variations of these resources in the day care centers studied.

This study correlates the caregivers' characteristics, the program's structural aspects, and the type of care children received within the day care setting. Verbal interactions between adults and children are included in this correlation.

This study examines the characteristics of the day care caregivers' backgrounds to determine, as these attributes are amalgamated, the resulting quality of caregiving passed on by the caregiver. Characteristics considered for this study include center experience, country of birth, education, total experience in a caregiving setting, and adult-child interaction, as well as some of the physical working conditions, such as benefits and ratio. These characteristics were examined using a combination of methods including interview, observation and use of a questionnaire.

Significance of the Study

The significance of quality caregiving in day care is more important than ever in our society. Today there are more children in

day care than ever before (Pence, 1989). A workable guideline must be established in order to provide quality care for the children. The correlation between the resources listed above, the quality of child-staff interaction, and the overall quality of caregiving may then be indexed. We may then be able to identify the essential components of providing higher quality care for our children in formal caregiving situations.

Jonathan Kozol views school as the "ether of our lives" and when this schooling or "containment of youth" coincides with an extremely vulnerable life phase of dependency, that is, children spending their preschool years in a formal day care setting, we will have the potential equalled only by an explosion, as far as the impact on children (Suransky, 1982, p. 42). Suransky (1982) cautions society to consider what happens to those lives when from babyhood, the institution has replaced the parents and family as the primary socializer (p. 190). Children in their formative years tend to model their lives after those individuals with whom they have had early bonding experiences. There is an underlying assumption that children deserve the best care society is able to give them short of the secure family life that would probably be in their best interest.

A study on quality caregiving could have far reaching effects in the field of early childhood caregiving. This view is strongly supported by Galinsky (Stone, 1993), who states that the relationship between the teacher and the child is the most important ingredient of child care (Bloom & Sheerer, 1992) and by Stone (1993) who states that the caregiver's language is indicative of a general caregiving style. By looking at these aspects of caregiving we may be able to identify the background for better hiring procedures which is stressed as a great need by Stone (1993). It is hoped that through this study the awareness of those who are in the position of hiring caregivers will be heightened.

Framework of the Study

This study is organized in the following way:

Chapter two reviews the literature available on the subject of professional caregiving and provide the structure on which the research is based. The literature review scrutinizes studies identifying the need and nature of high quality caregiving and examines studies that have been aimed at the process of evaluating quality care in formal day care settings.

Chapter three looks at Bronfenbrenner's ecological model (Berk, 1989) and notes the impact of caregiving on the child. This chapter also outlines the research design, instrumentation, sampling and data collection for this study.

Chapter four analyzes the data in light of insights drawn from the review of literature, and identifies the statistically significant characteristics of quality caregivers. Parallels are drawn between the findings of this research and the literature.

Chapter five includes the summary and conclusions to the study.

Appendix "A" defines the rationale for the use of selected research design and techniques stemming from the Friesen (1992) study from which statistics were drawn for this research.

Definition of Terms

For the purpose of this research, the following definitions will be used:

Early Childhood Program

An early childhood program is defined as any planned set of interactions among adults and children, organized by adults and

designed to promote healthy growth and development of children between birth and eight years of age (Williams & Fromberg, 1992, p. 121). Early childhood programs include family day care homes, nursery schools, day care centers, and kindergartens.

Day Care

The term "day care" is used to describe programs for infants, toddlers, preschoolers and primary-age children, which offer either full or part time programs and educational and nurturing services during the day (Williams & Fromberg, 1992). This study looks at caregivers in day care with specific reference to those who work with toddlers.

Quality Programs

The Thorndike-Barnhart (1962) dictionary defines quality as excellence (p. 773). In looking at excellence in day care programs, Berk (1989) defines high quality programs as those in which group size is small, caregiver-child ratios are low, staff training is high, and adults communicate in stimulating, responsive, and affectionate ways (p. 632).

A high quality program according to Williams & Fromberg (1992), should focus on staff. They suggest a quality program

"provides experienced and well-trained staff who has extra sensitivity to the constantly changing nature of group participants, and who recognizes the separation anxieties of children and parents" (p. 144).

CHAPTER TWO REVIEW OF LITERATURE

This chapter reviews the literature pertaining to the history of the development of day care centers from their earliest formal recognition to the present--a span of time just over a decade. The discussion highlights the need for and the nature of high quality care in these centers, and concludes with a look at the assessment process of quality care in child care centers.

Day Care Research

Origins of Concern

As far back as 1916 reports of undesirable conditions in day nurseries, foster homes and orphanages necessitated that people stop and take a look at developing standards for various types of out-of-home child care (Williams and Fromberg, 1992). Slowly through the years, standards have repeatedly been reviewed in an effort to improve the quality of child care offered in such organizations.

According to the Encyclopedia of Early Childhood Education

(Williams & Fromberg, 1992), most researchers and policy makers today agree that high-quality child care is positively correlated with low child-to-adult ratios and highly educated and trained

teachers. It also correlates with special conditions pertaining to the adult work environment, including salaries and benefits paid to caregivers and their working conditions (p. 142). The attainment of these standards appears to be an unattainable goal.

By the 1960s early childhood programs began to be regarded as a significant enterprise. Up until then, only a relatively small proportion of the early childhood population attended nursery schools, day care centers, or participated in early childhood programs for five-year old children. At that time, the aim of early childhood education was to provide enriched social experiences which children might not have received at home. However, the social reforms of the 1960s changed the attitude of society toward out-of-home programs drastically.

Increasingly more infants and young children were enrolled for extended periods in large numbers in regular out-of-home programs than ever before in history (Elkind, 1987). Pence (1993) reports that between 1951 and 1988 the percentage of mothers in the paid labour force rose from approximately ten percent to over forty percent (p. 137). In 1991 62.9% of mothers participated in the labour force.

Today out-of-home child care has become a routine decision for parents rearing children. Berk (1989) makes the case that many problems faced by families today are beyond their individual control due to the external conditions under which they live (p. 637). The problems, Berk (1989) states, are fewer children in the family, more mobility in families, divorce resulting in single parent families and family blending, mothers in the labor force and need for alternative child care arrangement (p. 600). Olmsted (1993/94) states that the movement of women (including mothers of small children) into the labor force "can be related to the combination of the growing mechanization of household tasks, the desire for more consumer goods, and a desire for personal fulfillment through paid employment" (p. 6). Pence (1993) labels the contemporary shift of mothers out of the home and into the paid labour force as the most significant phenomenon in preschool child care in Canadian history (p. 136). As a result of these developments concern for child care has intensified. Child care, it appears, has come to be a national enterprise--even a way of life.

Need for Quality Child Care

Pence & Goleman (1988) recognize the economic and social pressures which today have created a different lifestyle of family functioning and have necessitated the need for day care centers. In fact, Vieth (1991) states that by 1995 two-thirds of all preschool children will have mothers in the work force, and thus there is ground for concern about the quality of these centres. Early childhood experts of the 1990s say they are just beginning to understand the ramifications of raising a generation of youngsters outside the home while their parents work (Wingert & Kantrowitz, 1992/93). Often in the pursuit of care for children today many parents suffer from what Hoyt and Schoonmaker (1993-94) refer to as "Day-Care Delusion: The mind rationalizes so that the body can go to work" (p. 36). Parents are not caught in the quest for quality as much as the quest for someone, anyone to care for their children. This growing need for child care (Stone, 1993; Vieth, 1991; Ackerman-Ross, 1989; Kahn & Kamerman, 1987), at a time when child care research is a relatively young field, makes the pursuit of quality care somewhat difficult to determine.

Caldwell & Hillard (1992) stress that early childhood care is just as important as later schooling and must be supported on both a universal and high quality basis. The need for quality care is evidenced in Howes' (1990) study which suggests that preschoolers enrolled as toddlers in high quality care engage in more "social pretend", and have a more positive affect with peers than preschoolers enrolled as toddlers in low quality care.

A most important ingredient of quality child care is the relationship between the child and the caregiver, whether the setting is the child's home, a child care center away from home, or a family day home. If there is one clear message to be drawn from the research on early childhood and child care, it is that the quality of programs has a lasting and definite effect on children's development (Bloom & Sheerer, 1992; Phillips & Howes, 1991; Galinsky, 1990; Howes, 1988). Berk (1989) states clearly that poor quality care interferes with children's optimal development (p. 632). Stone (1993) concurs by stating emphatically that the environment that children find themselves in will affect the rest of their lives and probably at least in some small way affect others' lives as well. Howes (1990) states that "Children who entered low quality child

care as infants were [the] least task oriented and considerate of others as kindergartners, had the most difficulty with peers as preschoolers, and were distractible, extroverted, and hostile as kindergartners" (p. 292).

The rising concern over quality of care has focussed attention on the need for well-educated and highly-trained staff. Research by Belsky, Steinberg, and Walker (1982) underscores the importance of the relationship between the caregiver and the development of the whole child. An extensive study by McCartney (1984) to determine whether variations in the quality of child care affect various aspects of child development resulted in findings that children profited from time spent with their adult caregivers. McCartney (1984) specifically examined the relationship between the language children heard and their own ability to use language well. Child development specialist, Phil Wishon, states that *what* teachers or caregivers say to children conveys more than facts and ideas; they are also transmitting attitudes and values (Wolf, 1984). Almost all human transactions or interactions involve a conscious or unconscious communication of values. This reality supports the purpose of this study in looking at the influences on quality of care

that is provided for children in an attempt to determine components that might produce better child caregiving.

It is becoming clear that someone must take responsibility for lowering the risk to the child's well-being and raising the standard of care. Mills, Matlock and Herrell (1988), express great concern that children's cognitive, social and emotional skill development might suffer because parents and caregivers are not sufficiently aware of the critical importance of providing stimulating and responsive environments during the first three years of a child's life. Mills et al. (1988) further state that improved health care, more stimulating and responsive environments and lower caregiver-infant ratios are all vital to quality child care settings. These authors suggest that the missing keys to high quality care are commitment and will.

Nature of High Quality Care

Early studies of day care in the 1970s indicated that there were no ill effects from full-day child care (Belsky & Steinberg, 1978); however, some researchers today suggest that definitive explanations may not be known until the 21st century, when the

children of today's working mothers are parents themselves (Wingert & Kantrowitz, 1992/93). As research has expanded since the 1970s it has become more and more evident that child care programs have been extremely heterogeneous in quality (Whitebook, Howes, Phillips & Pemberton, 1989). Contemporary research efforts are underway to determine both the quality and advisable future direction of quality day care with greater precision.

Verbal Interaction

At first glance it appears that the nature of good quality care has been defined in as many different ways as the number of interest groups clarifying it. McCartney (1984) emphasizes the importance of the kind and amount of verbal interaction between the caregiver and the child, and the time spent in caregiver-child interaction. Poorer social and language skills as well as diminished achievement are part of the great cost society could pay for inadequate teaching relationships in children's early years (Galinsky, 1992/93). The words caregivers use establish either a negative or positive verbal environment which in turn affects children's self-esteem (Galinsky, 1992/93; Kostelnic, Stein & Whiren, 1988). In Clarke-Stewart's (1991) study one of the five most significant

indicators of quality child care was shown to be frequent, verbal, and educational child-caregiver interaction rather than custodial and controlling interaction. Research further shows that centers with high levels of verbal interaction also tend to emphasize use of both fine and gross motor equipment for children: these centers also employ caregivers who plan creative activities and also make extra provisions for the personal care of the children (McCartney, 1984). In other words, these centers are clearly showing signs of high quality care for children.

Education

An important component in quality child care is the amount of and/or years of education which caregivers have attained. This appears to be a factor significant in relation to their caregiving skills (Pence, 1993). For example, teacher education as an indicator of quality care has been a controversial point among researchers of early childhood even in the relatively short lifespan of early childhood research. Today, as more research is being done, the literature on the relationship between the level of education and program quality is becoming much more available. Literature on the education of caregivers divides into two main perspectives: first,

the view that the specialization of education is the most important criteria for a quality program; and, second, the view that the amount of post secondary education singularly is important to a quality program.

Specialized education in child-related areas.

The research on the kind of education that a caregiver might have falls naturally into two categories. There are caregivers who have *specialized* education in early childhood and caregivers who have pursued *higher education* in any given area of learning.

Research by Berk (1985) indicates that caregivers with two years or more of education are more likely than less educated caregivers to display encouragement, promotion of verbal skills and teacher direction (Phillips & Howes, 1991). The study suggests that specialized education is even more positive in terms of quality of care.

The National Child Care Staffing Study (Whitebook et al., 1990) emphasizes that the importance of specialized education in the area of child care is very clear. The study shows that children under the care of specially educated caregivers behave more positively, are more cooperative, and are more involved in program activities. The

final report of the National Day Care Study by Ruopp, Travers, Glantz, and Coelen (1979) supports the importance of increased education and specific professional practice in the area of child care. Child-related education is linked to an increase in social interaction between the caregiver and the children.

The 1979 National Day Care Study also showed that specialized caregiver training and group size emerged as the two most potent predictors of positive classroom dynamics and child outcomes (Phillips and Howes, 1991). Fischer (1989) found that education in child care was the single most important predictor of the quality of caregiving practices. Results from a study by Debord (1991) indicate that an important criterion that affects quality of child care is caregiver education in child-related areas.

According to Roupp et al. (1979) caregivers with more years of child-related education spent more time in social interaction with children. Children in their care were more socially active and gained higher scores on tests. The number of years of formal education the caregiver had was not as important as the specialized education with regard to child outcomes. Against this background of research it is difficult to argue that education is *not* important. What

remains to be determined with greater precision is the specialization of the caregivers' education as it relates to quality care.

Education in areas not necessarily early childhood care.

The National Child Care Staffing Study (Whitebook et al., 1990) indicates that the years of formal education of caregivers is a more significant factor in quality care overall than specialized early childhood education alone. According to The 1979 National Day Care Study, the number of years of formal education is not related to child outcomes (Roupp et al., 1979). The study shows that overall years of education which are not necessarily in the specialized area of early childhood are positively related to the amount of social interaction observed in toddler groups (Phillips and Howes, 1991). Research by Berk (1985) indicates that caregivers with at least two years of college education use more encouragement, give teacher direction and help in the development of verbal skills. On the positive side, they rank lower in restriction of children than caregivers with no college education.

In a study by Arnett (1989) caregivers who completed at least two courses of a specialized child care training program were found

to be less authoritarian than those with no specialized training.

These caregivers also rated higher on positive interaction with the children in their care and lower on detachment in their interaction with children.

Stuart (1988) rates the education of the caregiver as very significant in keeping with the research findings that the most effective caregivers are more highly-educated caregivers, particularly those whose two dominant personality traits are intellectual curiosity and assertiveness. Thus the amount and nature of training are important factors, although certain personality traits appear to come into the picture.

No post secondary education.

Caregiving responsibilities in some people's minds takes the form of various qualifications. For example, some people would argue that personal experience as a mother is sufficient to qualify one for the job of caregiver in day care. However, Katz discovered that mothering and child care caregiving demand different skills (Howes, 1991). There is an assumption that in mothering there is a bond between mother and child. However in caregiving with the absence of this bond there is an on going objectivity required. Where

mothering utilizes instinctive protective and nurturing skills, child care utilizes the intellectual development of specified skills.

Weekes' (1986) research shows that the caregiver's ability to work as a team increases the quality of care and in fact ranks higher in giving quality care, than the amount of caregiver's education.

According to Weekes, gaining control of the environment, defining an area of expertise, team building, and presenting a professional image are even more necessary to high quality caregiving than the amount of the caregiver's education.

Total Group Size and Ratio of Child-staff

The most significant finding of the National Day Care Study funded by the United States federal government in the 1970s was that caregivers in small groups spent more time being *with* children and less time simply watching them (Galinsky, 1990). The important factor was not the ratio of child to caregiver as much as the total size of the group. Robinson, Robinson, Darling and Holm (1979) suggest that larger groups who maintain the required child-staff ratio tend to have more interaction with the children. This occurs because as the children are scattered around the room, playing freely, they can be contacted more frequently by two adults than

one. Whitebook et al. (1990) concur with this finding and found that in smaller caregiver-child ratios, caregivers spent more time being with the children, and more time involved verbally with the children. The children were, in turn, involved in more developmentally appropriate activities.

Howes (1983) study indicates that the adult-child ratio is the best predictor of care in day care center care. Clarke-Stewart (1991) concurs by having listed an adequate adult-child ratio and a reasonable group size as one of the best clues to indexes of quality child care. Russell's (1990) study also shows that child-staff ratio affects the level of quality care. Russell suggests that the quality of staff interaction deteriorates as the ratio goes up because staff are confronted with a substantial increase in problematic child behaviors. In addition, the child's access to staff on an individual basis was considerably reduced with the higher ratios.

The majority of studies reveal that child-staff ratio has a significant effect on adult and child behavior in child care (Dunn, 1993; Phillips & Howes, 1991; Mills et al, 1988). The conclusion of The National Child Care Staffing Study by Whitebook et al. (1990) shows that fewer children per caregiver are associated with more

developmentally appropriate activities. Teachers in these groups of fewer children are more sensitive, less harsh, and less detached when interacting with children (Galinsky, 1990, p. 231). Research by Phillips and Howes (1991) tends to parallel this, while at the same time, indicates a stronger emphasis on group size and specialized caregiver training than on ratio of child to staff in day care with respect to positive classroom dynamics and child outcomes (p. 2).

Field's (1980) study concludes that not all is lost in higher ratios of staff to children. The findings show that children in a 1:12 ratio and enclosed-space classrooms have higher frequencies of peer interactions and verbal and fantasy play than children with a 1:4 ratio and open-space classroom. Howes (1991) identifies the three most important areas on which to do a study to determine the optimal center-based care as adult-child ratio, caregiver continuity and caregiver training. The importance of the adult-child or child-staff ratio stems from studies which suggest that the first three years of a child's life are crucial in the development of cognitive, social and emotional skills (Mills et al., 1988). Infants need trusted regular contact with at least one adult (Howes, 1987, p. 81).

Palmerus' (1991) study on the impact of ratio of child-staff on

social interaction indicates that as the ratio of children to caregivers goes up, less time is spent alone with each of the children.

Child-staff ratios in France are very different to the standards required in the United States or Canada. According to Wingert and Kantrowitz (1992/93) most experts in North America say it should be no more than 4:1 for infants, 5:1 for 18 months to 2 years; 8:1 for 2 to 3 years; 10:1 for 3 to 4 years and 15:1 for 5 to 6 years (p. 228). McMahan's (1993/94) study shows ratios for two to five year old children in the schools in France is 14 students to one teacher, with class size consisting of 28 students in each class. They argue that the "stability gained by paying professional salaries to a highly qualified staff is a reasonable trade-off for the problems created by large classes" (p. 54).

Experience

Research findings on the relationship between quality care and years of experience working in the field of child care are mixed. The 1979 National Day Care Study conducted in the United States indicates that caregivers with more years of experience have been found to engage in less social interaction and cognitive stimulation

with infants and toddlers (Phillips & Howes, 1991; Phillips, Scarr & McCartney, 1991). Howes (1983) studied specific indicators of child care quality and found that in the area of years of experience caregivers with more years of experience were more responsive to the children's bids for attention in their care. Clarke-Stewart (1991) indicates that caregivers with balanced training in child development and some degree of professional experience in child care, constitutes one of the best clues to quality child care. Undoubtedly not all experience is alike, making this a very difficult area to research with accuracy. Certainly, experience alone would not be a predictor of high quality caregiving (Howes, 1983; Kontos & Fiene, 1991).

Powell & Stemmell (1989) indicate that higher training and experience result in high involvement in conventional forms of professional development. However, higher training with no experience may result in a decrease in use of center information sources, in professional reading and in conferences attended. This would seem to imply that enhanced professional development would produce a higher quality of caregiving combined with a higher level of training and more experience. Benjamin (1989) examined the

complex relations among quality caregiving indicators and found that a higher level of education combined with a higher level of experience scored at the high end of the quality spectrum, and low education combined with low experience scored at the low end of the spectrum.

Center Experience

In the quest to provide quality for children, the early childhood field must be attractive enough to entice and retain qualified staff. Children need to feel the stability of the relationship between themselves and their caregiver. The 1990 National Child Care Staffing Study (Whitebook et al., 1990) indicated disturbingly low results in children's social and language development when they were enrolled in programs with high rates of staff turnover.

According to Laird (1992), "Staff turnover is one of the main problems facing the day care industry today. The pay is low and the work is difficult" (p. 31), and unfortunately this makes the day care a stepping stone for most grads as they work themselves up to better paying, higher profile jobs. LaGrange and Read's (1990) study reported a turnover rate as high as 43% in day cares studied. It is especially difficult for the child who undergoes staff turnover

because continuity is gone and the child must build trust in a new relationship in order to communicate his/her needs (Laird, 1992).

Rapid turnover of staff is a very crucial issue for children who spend several hours a day at a day care center (Suransky 1982; Berk 1989, p. 458). Children need to form relationships with other significant adults since they are away from their parents for such great lengths of time. The institution is actually required to replace parents and family as primary socializers (Suransky, 1982). Staff attachments never totally replace bonding with parents but may provide children with a secure base from which to operate during the day (Phillips & Howes, 1991). Suransky's (1982) research shows that children in day care with rapid staff turnover were actually being socialized into detachment and the result of constant staff turnover, particularly with regard to older day care children, was hostility or indifference to the teacher (p. 111). With regard to stability of caregiver-child relationships, according to Galinsky (1990) some parents report their children resist going to day care because they simply do not know *who* will care for them that day (p. 230).

Kanfer (1993/94) suggests that parents shopping for a caregiving facility look for one where teachers have been working for at least three years. Howes' (1991) study specified and utilized caregiver continuity as one of the three criteria in determining an optimal center-based care because it is associated with positive child and caregiver behaviors (p. 81). Based on these findings, Howes (1991) emphasizes that "one of the most important tasks of the infant-toddler period of development is establishing secure attachment relationships" (p. 82). These necessary warm and secure attachments are fostered by caregivers who are sensitive and responsive (Scarr, Eisenberg & Deater-Deckard, 1994).

Researchers of child care facilities in France, where class ratios are larger than those required by law in Canada or the United States, argue that larger class sizes are counter balanced by "the stability gained by paying professional salaries to a highly qualified staff..." they also point out that "...the extremely low staff turnover ensures that children can count on adults not to disappear and that teachers get to know children well" (McMahan, 1993/94, p. 55).

Country Born

"Multicultural educators are generally agreed that an

appreciation for cultural diversity enhances the variety of the social life of a nation and provides a platform by which to promote individuality" (Friesen & Friesen, 1992). Day care in Canada is made up of children from widely diverse cultural backgrounds. Thus it seems to follow that cultural diversity in staffing of a day care facility would also enhance the program for the day care. Saracho & Spodeck (1983) advise that children given early opportunity to develop healthy respect for cultural pluralism will stand them in good stead on attaining adulthood.

Sallegio (1992) suggests that a culturally diversified staff better understands that disregard or disrespect for a child's cultural heritage can wilt self-esteem just as it is beginning to blossom. Gee (1992) concurs that a multiculturally varied staff enriches the program and allows understanding of the diverse family backgrounds in which their students were reared. Gee (1992) goes on to say that cultural norms for and expectations about a child's behavior with regard to body language, ways of learning, or ways of expressing emotion, must be understood (p. 74). Friesen & Friesen (1992) postulate that it is essential that the caregiver be able to interpret the child's behavior in a cultural context rather than judging

behavior based on the norms of the dominant culture. Campbell (1992) stresses that in an atmosphere of mutual interest, trust and respect, teachers and families can work to share their cultural heritage and preferences in a way that benefits all children in group settings.

Benefits

Galinsky (1990) concedes that the determinant indicator of lower program quality was associated with programs offering lower staff salaries, fewer benefits, and poorer working conditions. This study suggests that staff retention, which has been argued previously in this paper as being essential to high quality programs in day cares, was higher in programs that paid higher wages, a point supported in the findings of the National Child Care Staffing Study by Whitebook et al. (1990). On a contrary note, Laird (1992) suggests many day care centres today have gone to the shift staffing method, so the staff members pay can be minimal (p. 31). Yet, programs that provide caregivers with better wages and more benefits measure higher quality on test scores (Galinsky, 1990).

Evaluating Quality Care

Nearly half of all North American children now spend their preschool years in the institutional setting of day care or playschool (Boisvert, 1989). With the rising need for child care there naturally follows a concern over the *quality* of child care. In fact, for the last decade, early childhood researchers have been challenged by the pursuit of a measure of quality child care. Clearly, some progress has been made with regard to the availability of functional measurement techniques.

Today, there are several evaluation measurements available to help parents and caregivers determine what constitutes quality care. Some examples are The Assessment Profile for Early Childhood Programs or "Profile" (Abbott-Shim & Sibley, 1987) which is intended as a guide to in-depth self-evaluation; The Early Childhood Environment Rating Scale or "ECERS" (Harms & Clifford, 1980) which is frequently used in research studies addressing child care program quality; The Infant-Toddler Environment Rating Scale or "ITERS" (Harms, Cryer & Clifford, 1986), which like two previous environmental rating scales produced by the authors, provides a comprehensive picture of day care quality using the specific age-

Figure 2.1

Subscales of Formal and Informal Quality Evaluation Instruments

Infant-Toddler Environment Rating Scale (Harms et al., 1990)

1. furnishings and display
2. personal care routines
3. listening and talking
4. learning activities available
5. interactions
6. program structure
7. adult needs

Child Care -- A Checklist for Parents (Alberta Social Services)

1. first impressions
2. day care centre staff
3. program of daily activities
4. day care centre facility
5. health and safety
6. care of infants
7. administration

NAEYC Scale (Friesen, 1990)

1. physical environment
2. health and safety
3. nutrition and food services
4. administration
5. staff qualifications and development
6. staff-parent interaction
7. staff-child interaction
8. child-child interaction
9. curriculum
10. evaluation

Profile (Abbott-Shim & Sibley, 1987)

1. administration (including--physical facility, food service, program management, personnel, program development)
2. safety and health
3. learning environment
4. scheduling
5. curriculum
6. interacting
7. individualizing

segregated room as the unit of analysis; and the new and as yet unpublished, Spot Observation Scale (Belsky, 1981) or "SOS" which evaluates child-staff interaction by a series of "spot" observations in a room. There is a checklist of nine positive and nine negative items for the observer to indicate which items were present or absent during the five-minute time period.

Figure 2.1 identifies the subscales within some of the above mentioned evaluation tools for quality care. While some components overlap, it is also important to note the differences. The scales among these four instruments differ in two significant ways--in the components for "quality" care and in the weights assigned to each of these components. The Profile scale includes a major administrative component weighted to almost fifty percent in the scale, while ITERS has no subscale dealing directly with administration (Friesen, 1990). These two instruments were used in this study and will be discussed further in chapter three.

Eheart (1989) suggests that a further complication to the assessment of quality day cares comes in the discrepancy between what caregivers *intend* to provide for children--a loving, attentive, play-filled environment--and what consistently happens

in practice. Eheart's research shows that caregivers in actuality do not provide the type of atmosphere for children that they claim to provide or think they are providing.

Mulrooney's (1990) research reflects a cautionary note in that high-quality in day care, once attained, does not necessarily last forever and must therefore, continually be in check. Empirical data support the importance of the role of the director and staff in determining and maintaining the quality of the program. Therefore, any negative stability of teaching staff such as that implied in Mulrooney's research would tend to indicate a problem in ascribing to a day care center the title of "high-quality". Once accredited a means for periodic inspection would need to be devised. Pence & Goleman (1988) suggest that government licensing does not always differentiate between high and low quality care and parents are left to assume responsibility for making the differentiation of high or low quality day care themselves.

Young children continually gather information about their value as persons through interactions with significant adults in their lives. Certainly input from all disciplines of life of those significant adults is essential if high quality comprehensive programs are to be

available. This study looks at quality of caregiving with specific attention given to child-staff interaction. Components that may affect that quality of care, such as training in child care, experience in child care, years of experience in child care, and child-staff ratio, will be examined to determine if there is a relationship between these variables and quality of caregiving. For the purpose of this study, the quality of care is determined by the total score achieved by the day care on ITERS and the Spot Observation Scale. Each of these two instruments distribute the caregiving into high, average, and low quality scores.

CHAPTER THREE METHODOLOGY

This chapter delineates aspects of Bronfenbrenner's ecological model as it applies to this study. It also discusses how the statistics from the larger study (Friesen, 1992) are applied in this study. Appendix "A" contains a summary of the methodology of the larger study which was adapted for use in this project.

Bronfenbrenner's Ecological Model

Bronfenbrenner's (Berk, 1989) theory of the ecology of human development shows environmental influences as a series of nested environmental structures that extend beyond the immediate setting (p. 22). Beginning with the child in the center, each respective layer of the environment is regarded as having a powerful rippling effect on the child's development. Neither the child, nor the family for that matter, is separate from the effects of members of the larger part of society with whom they rub shoulders day to day. The level in Bronfenbrenner's model closest to the child in the center is called the microsystem, which refers to entities

immediate to the child such as family, day care center, and peers, that is, those relationships within the child's immediate surroundings. Bronfenbrenner, unlike traditional psychologists, points out that children are affected by adult behavior, as well as adults being affected or influenced by children's behavior. For the purpose of this study, this bidirectional influence stance recognizes the impact of children's characteristics who attend day care on the reaction they receive from their caregivers. Stable care in a center where there are few changes in children's placement or in caregiver's placement, a generous caregiver child ratio, and caregivers who engage in sensitive one-on-one interaction with the children are necessary components at the level of the microsystem (Berk, 1989, p. 457). When caregivers are positive, the quality of child behavior and development of children in their care are enhanced. Child development, therefore, must be understood within the microsystem of complex, interacting relationships (Berk, 1989).

The second level of Bronfenbrenner's ecological model is called the mesosystem (Berk, 1989). Interrelationships among mesosystem settings involve the family, school, day care center, and church. Child development, according to Bronfenbrenner, is facilitated by

interconnections among these settings as opposed to being isolated from them. The primary function of the family is to socialize children (Williams & Fromberg, 1992), to give them a sense of self, and to help them become fully functioning adults. Until recently this socialization was seen as one-sided, that is the parent guiding the child. However, present researchers recognize that the concept to be observed and studied is interactive (Williams & Fromberg, 1992). There must be frequent communication between the child's life at home from the parents and the child's life at day care from the caregiver.

The third level called the exosystem (Berk, 1989) refers to social settings that do not actually include children, but affect their experiences. Examples of this level are mass media, friends of family, neighbors, extended family, employers and agencies that license day cares (Berk, 1989). These settings include benefits at work like paid maternity leaves, sick days available for parents when children are sick, and others that indirectly enhance child development. They include people inside and outside the child's family unit like grandparents, aunts, uncles and others who influence the child rearing and socialization, certainly more so in

some families and less so in others. This web of people does not necessarily actually encompass the child, but it can have a significant influence on the child's experiences.

The fourth and final level of Bronfenbrenner's model is the macrosystem (Berk, 1989). This level includes the overall attitudes and ideologies of culture, that is, values, laws, regulations, rules and customs. This includes the vital role of respect given by society to the caregivers who act as substitute caretakers in place of parents who are at work. Significance given by this level to children's development will have a great impact on children's experiences and development at the inner levels of this model.

As seen in Bronfenbrenner's model, there are many forces at work in the child's development besides the impact received while actually at day care, and each of these levels must be harmoniously integrated for the optimal development of the child. However, in establishing characteristics of quality day care caregivers one must take into consideration that, as seen in the microsystem, which is the first level, the relationship of the child to the caregiver is most significant.

In review of Bronfrenbrenner's model it is necessary to emphasize that all the levels of the system as presented in this model interact directly with the child. However, the extent to which the child is affected by any one entity is different from one context to another. This study looks at some aspects of this system that might influence quality care. Perhaps an alternative picture of the model to demonstrate the interaction between the four circles of the model would be a spider's web, where there are many strands interconnecting and therefore, holding the web together. The interconnectedness of relationships would be better represented than is indicated in the present model of separate circles.

Research Design

This chapter continues with a description of the design used for this study as adapted from the data collected for "A Sociological Examination of the Effects of Auspice on Day Care Quality" (Friesen, 1992) which was used as a base for this research (see Appendix "A").

For the purpose of this study the unit of analysis was transformed from centers (N=46) to caregivers (N=106). The change was required in order to look at personal characteristics of

caregivers, as well as the day care program's resources and the impact of a variety of these factors on the quality of care.

Instrumentation

The Infant-Toddler Environment Rating Scale or "ITERS" furnishes an extensive representation of day care quality using an age-segregated room as the unit of analysis. ITERS incorporates aspects of the environment as a whole in seven sub-scales: furnishings and display, personal care routines, listening and talking, learning activities, interaction, program structure, and adult needs. This study uses ITERS to provide, in numerical form, an overall quality for the various programs in the project in order to draw a comparison to the caregivers who work in day care. In the analysis where ITERS is used as an independent variable, the quality of care is recoded into three categories of "poor" for those centers scoring 140 or less; "fair" for scores ranging from 141 to 174; and "good" for those centers scoring 175 or more, as per the distinctions given by the ITERS (Friesen, 1992, p. 155).

The score for the individual caregiver is based on the Spot Observation Scale (Shimoni et al., 1990) or "SOS". The SOS checklist

consists of nine positive and nine negative items that the caregiver either did or did not demonstrate while interacting with the children. These interactions are not necessarily in the context of formal instruction where specific informational content is conveyed from the caregiver to the children. The score is computed out of 180 and for simplicity of analysis the number has been rounded out to the nearest 10.

Sampling

Fifty day care centers were randomly sampled from a list of 169 in the city of Calgary, Alberta. In order to be included in the sample, each center had to provide full-time care for at least toddlers (ages 19 to 35 months). Centers were limited to one municipality in an effort to hold constant any variation in federal, provincial and municipal regulations which might adversely affect the level of quality in the centers (Friesen, 1992).

In the 46 day care centers observed in the Friesen (1992) study, 106 caregivers were observed caring for the children in the toddler rooms. These 106 caregivers are used as the data base for this study.

Data Collection

Since this study is a secondary data analysis, the first step in data collection was to choose the variables from the available data in the Friesen (1992) study that would best suit the research purpose of this project. For the purpose of this study specifically, the 106 caregivers were observed in the areas of education, tenure, child care experience, country born, benefits, and ratios of children to caregivers in the rooms. After being chosen, the variables then had to be operationalized or converted from concept level statements to measurable objective operations (Moore, 1983). The unit of analysis then had to be transformed from centers (N=46) to caregivers (N=106) resulting in a new set of data with which to work. In order to make the project more functional, the response categories from the parent study then were collapsed (Babbie, 1990, p. 254).

Analysis

The statistical procedures used are chi-square for nominal data and the procedure analysis of variance (ANOVA) for interval data.

Hypothesis

The hypotheses in this report are stated as Null Hypotheses.

Education

First, it was hypothesized that no significant relationships will be obtained between the amount of education and the quality of caregiving.

Second, it was hypothesized that no significant relationships will be obtained between the quality of caregiving by caregivers with specialization in child care related areas and caregivers without specialization in child care related areas.

Center Experience

First, it was hypothesized that no significant relationships will be obtained between the years of experience in the present day care center in increasing the quality of caregiving.

Second, it was hypothesized that no significant relationships will be obtained between the total years of experience in child-related care and the years of experience in the present day care center in increasing the quality of caregiving.

Third, it was hypothesized that no significant relationships

will be obtained between the years of education and the center experience in increasing the quality of caregiving.

Total Experience

First, it was hypothesized that no significant relationships will be obtained between the total years of experience in child care and the quality of caregiving.

Second, it was hypothesized that there will be no significant relationship between the total years of experience and the years of education in increasing the quality of caregiving.

Country Born

First, it was hypothesized that no significant relationships will be obtained between the country where the caregiver was born and the quality of caregiving.

Second, it was hypothesized that no significant relationships will be obtained between the country where the caregiver was born, post secondary education, experience in child care centers, benefits, and ratio of children to staff.

Benefits

It was hypothesized that no significant relationships will be obtained between the benefits and the quality of caregiving.

Group Size

It was hypothesized that no significant relationships will be obtained between the size of the group of toddlers and the quality of caregiving.

Ratio

It was hypothesized that no significant relationships will be obtained between the child-staff ratio and the quality of caregiving.

Ratio Violation

It was hypothesized that no significant relationships will be obtained between child-staff ratio violations and quality of care.

CHAPTER FOUR DISCUSSION OF FINDINGS

Descriptive information is presented at the beginning of this chapter in order to provide a profile of sample caregivers studied. Included in this information are caregiver characteristics data (Table 4.1) as well as program characteristics data (Table 4.2).

Bivariate relationships between the caregiver quality score and the specific characteristics of the program and caregiver are then reported. Analysis of variance tests and correlation tests are used to examine the relationships.

Depiction of Caregiver Characteristics Observed

In the 45 day care centers, 106 caregivers were observed caring for children in the toddler rooms.

Education

As seen in Table 4.1, 59 (55.7%) of the 106 caregivers reported having high school or less with no post secondary education, while 29 (27.3%) of the caregivers reported having some type of specialized education in the area of early childhood. Post secondary education includes five (4.7%) caregivers having taken or currently enrolled in the Day Care Society of Alberta Training Program or

Table 4.1
Table of Demographic Characteristics of Sample
N=106

Formal Education

	%	Cases
High School or less	55.7	59
DCSA or City Credit	4.7	5
1 Year Diploma	16.0	17
2 Year Diploma (various areas)	17.0	18
B.Ed/BA(related areas)	6.6	7

Center Experience/Tenure

Months	%	Cases*
0 - 2	26.4	28
3 - 12	30.2	32
18 - 36	25.5	27
40 - 240	17.9	19

Average Amount of Time

At present center	2.2 years
In child care work	3.6 years

Length of time in Child Care Employment/Work

Months	%	Cases*
0 - 9	28.3	30
12 - 48	45.3	48
60 - 284	26.4	28

Country Born

	%	Cases
Canada	70.8	75
Other Industrial Countries	11.3	12
Non Industrial Countries	17.9	19

*These categories were collapsed to maintain balance in the groupings.

"DCSA"; 17 (16%) caregivers with a 1 year Early Childhood Education Diploma; and seven (6.6%) caregivers with a Bachelor's Degree in areas related to Early Childhood. Eighteen caregivers (17%) reported post secondary education not necessarily related to early childhood.

Center Experience

Although the average amount of time the 106 caregivers spent in child care at their present center was 2.2 years, this is not reflective of the true picture. Table 4.1 indicates that 28 (26.4%) plus 32 (30.2%) of the caregivers for a total of 60 (56.6%) of the 106 caregivers had been on the job at their present center for a year or less. Just under half of the remaining caregivers, 27 (25.5%) had been on the job between 1 1/2 years and 3 years, and 19 (17.9%) between 3 years 3 months, and 20 years.

Total Experience

Twenty-eight (26.4%) of the 106 caregivers had five or more years of experience working in the early childhood field. Forty-eight (45.3%) had one to five years of experience, and 30 (28.3%) had less than one year of experience. The average amount of time the 106 caregivers spent in child related employment was 3.6 years as reported in Table 4.1.

Table 4.2
Table of Demographic Characteristics of Programs
N=106

Benefits

Number Offered	%	Cases*
0	9.4	10
1-3	29.3	31
4-6	21.7	23
7	17.0	18
8-11	22.6	24

Group Size

Average Group Size	%	Cases**
4 - 6	17.9	19
7 -10	20.8	22
11-15	34.9	37
16-24	24.5	26
N/A	1.9	2

Toddler Ratio

Children per Adult	%	Cases**
2.5-4.8	24.5	26
5.0	59.4	63
5.3-6.0	16.0	17
N/A	1.9	2

Staff/Child Ratio Compliance

Score	%	Cases
1	.9	1
2	2.8	3
4	2.8	3
5	6.6	7
6	7.5	8
7	12.3	13
8	9.4	10
9	4.7	5
10	39.6	42
N/A	13.2	14

*These categories were collapsed to maintain balance in the groupings.

**Groupings collapsed in order to reflect government regulation compliances.

Country Born

Of the total caregivers, 75 out of 106 (70.8%) were born in Canada, with 12 (11.3%) born in other industrial countries and 19 (17.9%) born in non-industrial countries. Most of this part of the research would be significant to Canadian born caregivers, although there were 31 who were born in other countries. It is encouraging from a multicultural perspective, that in an atmosphere of caregivers from many countries, children (Gee, 1992; Salegio, 1992) may develop a healthy respect for cultural pluralism (Friesen & Friesen, 1992; Saracho & Spodeck, 1983).

Depiction of Program Characteristics Observed

The discussion to this point has focussed on examining the characteristics of the caregiver. The discussion of the findings will now examine the program characteristics (see Table 4.2).

Benefits

In terms of the number of program benefits offered at each center 10 (9.4%) of the 106 caregivers were in programs that offered no benefits at all. Thirty-one (29.3%) were in programs that offered 1-3 benefits, 23 (21.7%) were offered 4-6 benefits, 18

(17%) were offered 7 benefits and 24 (22.6%) were offered 8-11 benefits.

Group Size

The average toddler room group size was observed for each of the caregivers involved in the study. It must be noted that the Alberta government regulations restrict maximum groups sizes up to 10 children for toddler rooms (Friesen, 1992). Nineteen (17.9%) of the 104 caregivers (2 cases were missing) were in programs with an average toddler group size of 4 - 6 children per room. Twenty-two (20.8%) of the caregivers were in programs with an average group size of 7 - 10 children per room; 37 (34.9%) with a group size of 11-15; and 26 (24.5%) caregivers work with an average group size of 16-24. The percentage of the total caregivers working in centers which exceeded the government restriction was 59.4%.

Toddler Ratio

Government regulations at the time of this study required a minimum ratio of staff to children of 1:5 for toddlers aged 19 to 35 months (Friesen, 1992). Actual child-staff ratios were met or exceeded by most caregivers sampled in 26 (24.5%) plus 63 (59.4%)

of the cases for a total of 89 (83.9%) of the 106 cases as seen in Table 4.2.

Staff-Child Ratio Compliance

Ten independent spot-observation checks were taken randomly throughout the observation day to indicate whether child-staff ratios were in compliance with government regulations. Ratios were most often violated when staff were not replaced while taking coffee or lunch breaks. Scores were 1 for each time proper ratios were observed, and 0 for each time ratios were violated (Friesen, 1992). Table 4.2 indicates that while many of the 92 caregivers (42 or 39.6%) met or exceeded government requirements, it was found that 50 (47.2%) of the caregivers were in violation of the government regulations.

Examination of Tests of Quality

Day care quality was measured using the ITERS (Harms, Cryer and Clifford, 1990). Harms et al. (1990) suggest that "good to excellent centres" are those whose scores exceed 174 on ITERS. The ITERS has a range of 210, with a low of 35 and a high of 245. The

actual scores from the study ranged from a low of 76 to a high of 212, eliciting a range of 136, a mean of 152.3, and a median of 149.

The main emphasis of the Belsky scale, which was the basis for determining the caregiver quality scoring in this study, is adult-child interactions. The observed interactions were within the natural day care setting. As suggested by McCartney (1984) and Belsky (Phillips & Howes, 1991), stimulating adult verbal interactions between the caregiver and the child are a positive and significant indicator of quality. The Belsky scale used in this study has a range of 10, with a low of 0 and a high of 10. The scores in these findings ranged from 0-9.

The results of this study also show this interaction between the caregiver and child to be a significant and positive predictor of center scores as seen in their high correlation coefficient (.48) with the center score on ITES. The data in Table 4.3 indicate higher quality programs according to ITES to be significantly associated with higher quality caregivers according to the caregiver rate. The correlation coefficient of the caregiver score and ITES score for the center is .48 (significant at $p < .001$), which indicates a

statistical-significance between these two methods of determining quality in a day care. ITERS is proportional to the caregiver rate.

The procedure ANOVA was conducted on caregiver rates and found to be significant at $p < .001$. Caregivers in the poor, fair/minimal and good range on ITERS had means of 5.33, 6.07 and 7.24 respectively for the Belsky scale.

Table 4.3
Summary Table of Two Quality Tests
Measuring The Day Care and The Caregiver
N=106

Results of ITERS (possible 245)

Label	Score	%	Cases
Poor	0-140	40.6	43
Fair\Minimal	141-174	28.3	30
Good	175-210	31.1	33

Results of Caregiver Rate (out of 10)

Label	Score	%	Cases
Poor	0-5	34.9	37
Adequate	6	22.6	24
Good	7-9	42.5	45

Differences Observed in Caregiver and Program Characteristics

Do differences appear with regard to quality of care and the caregiver characteristics or program characteristics? The statistical procedure used for this question was the ANOVA using SPSS for windows. The ANOVA was used to test whether the difference or variance among the means of these characteristics is significant due to chance alone (Moore, 1983).

The results of the analysis of variance comparing the characteristics of caregivers and the differences in quality of care are presented in Table 4.4. For this table, the caregiver quality rate was divided into two groups: those caregivers who received a score of 7-9, which is deemed high quality caregiving, and those who received a score of 0-6, which is identified as poor quality caregiving. In Table 4.4 the extreme left column reports the variables tested against the caregiver rate of quality care.

The second column is the source of variation. The word "explained" represents the observed differences between the means, or *between groups*, and the word "residual" represents individuals differing within each group or *within groups* (Moore, 1983, p. 283).

Table 4.4
Statistical Significance of Variables
According to Quality of Care
N=106

Variable	Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F
Education	Explained	5.78	4	1.44	7.247***
	Residual	20.12	101	.20	
	Total	25.90	105	.25	
Center Exp.	Explained	2.13	3	.71	3.040*
	Residual	23.77	102	.23	
	Total	25.90	105	.25	
Total Exp.	Explained	1.93	3	.64	2.730*
	Residual	23.97	102	.24	
	Total	25.90	105	.25	
Country Born	Explained	.81	2	.40	1.660
	Residual	25.09	103	.24	
	Total	25.90	105	.25	
Benefits	Explained	.55	3	.18	.728
	Residual	23.28	92	.25	
	Total	23.83	95	.25	
Group Size	Explained	2.25	3	.75	3.230**
	Residual	23.65	102	.23	
	Total	25.90	105	.25	
Ratio	Explained	1.22	2	.61	2.549
	Residual	24.68	103	.24	
	Total	25.90	105	.25	
Ratio Violation	Explained	3.70	8	.46	2.061*
	Residual	18.61	83	.22	
	Total	22.30	91	.25	

*p<.05 **p<.01 ***p<.001

The remaining columns relate the ANOVA results. A star ("*") appearing after the number in the last column on the right indicates a statistically significant relationship between the quality of caregiving and the variable listed.

Five of the eight variables observed in this study were identified as being statistically significant: education, center experience, total experience, group size, and violations of the child-staff ratio. No significant differences were found in the quality of care by a caregiver observed in the areas of country born, benefits, and child-staff ratio. Each of these findings will be discussed separately.

Education

This section will look at two hypotheses, as postulated in the beginning of the study, with regard to education of caregivers in day care centers. First, it was hypothesized that no significant relationships will be obtained between the amount of education and the quality of caregiving. Second, it was hypothesized that no significant relationships will be obtained between quality of caregiving by caregivers with specialization in child care related

areas and caregivers without specialization in child care related areas.

In regards to the first hypothesis, as noted in Table 4.5 using the procedure ANOVA, it was found that there *were* differences in quality of care between caregivers with post secondary education and caregivers without post secondary education ($p < .001$).

Literature findings resulting from research by the National Child Care Staffing Study (Whitebook et al., 1990) and Berk (1985) support that post secondary education was significant to higher quality of care by caregivers.

Berk (1985) suggests that caregivers with at least two years of college education were higher quality caregivers. The data in Table 4.5 indicates that caregivers with *any* education over high

Table 4.5
Summaries of Caregiver Rate
by Levels of Education
N=106

Variable	Value	Label	Mean	Std Dev	Cases
Education	1	High School or less	5.59	1.48	59
Education	2	DCSA or City Credit	7.40	.89	5
Education	3	1 Yr. Diploma	6.65	1.37	17
Education	4	2 Yr. Diploma in various areas	7.06	1.35	18
Education	5	B.Ed/B.A. in related areas	6.14	1.77	7

school level show higher quality of care. Caregivers who are working at a day care while they take further education such as the DCSA or city credit courses show a higher level of care than other caregivers with post secondary education. Perhaps this is due to the fact they are able to apply their new knowledge immediately to the workplace since these courses are offered as evening classes during the week. Another factor connected to the apparent higher level of care might be the type of courses offered such as non-theoretical courses emphasizing hands on participation on the part of the caregiver, courses which would be applicable to the classroom by the caregiver the following day at work. Scarr et al. (1994) suggest that overall education level of caregivers appeared to be less important than the specialized education in child care related areas.

Table 4.6 contains data pertaining to post secondary educated caregivers with specialization in child care related areas by levels of caregivers in two groups: those who are poor to adequate caregivers according to the Belskey scale and those who are good or effective caregivers. The results indicate that higher quality caregiving comes from caregivers who have specialized education in child-related areas. A chi-square corrected for ties shows 6.23

with a significance of $p < .01$. The observation that caregivers with specific education in child care and child development provide higher quality care concurs with findings by Scarr et al, (1994), Whitebook et al. (1990), Berk (1985), and Roupp et al. (1979).

Table 4.6
Summaries of Caregiver Rate
by Levels of Early Childhood Education
N=106

Variable	Value	Label	Mean	Std dev	Cases
Education	1	No ECE education	1.35	.48	77
Education	2	ECE education	1.62	.49	29

Center Experience

Three hypotheses of the relationship between center experience and quality of caregiving were investigated. First, it was hypothesized that no significant relationships will be obtained between the years of experience in the present day care center or tenure in increasing the quality of caregiving. Second, it was hypothesized that no significant relationships will be obtained between the total years of experience and the years of experience in the present day care center or tenure in increasing the quality of caregiving. Third, it was hypothesized that no significant

relationships will be obtained between the years of education and center experience or tenure in increasing the quality of caregiving.

First, in regards to the years of experience in the present day care center and the quality of caregiving, as noted in Table 4.7 a one way ANOVA indicates that there *were* differences in quality of care between caregivers with more center experience in the quality of caregiving. There is a significant difference, $F(3, 102) = 3.040$, $p < .05$, between the amount of experience and the quality of care. Table 4.7 indicates that as the number of years of center experience goes up the mean number of caregiver rate also goes up with a slight fluctuation at the 3-12 month level.

Table 4.7
Summaries of Caregiver Rate
by Levels of Center Experience
N=106

Variable	Value	Label	Mean	Std. Dev.	Cases
Center Experience	1	0 - 2 months	1.21	.42	28
Center Experience	2	3 - 12 months	1.47	.51	32
Center Experience	3	18 - 36 months	1.44	.51	27
Center Experience	4	40 -240 months	1.63	.50	19

Second, in regards to the total years of experience and the years of experience in the present day care center or tenure and the quality of caregiving, There is no significant difference ($p > .05$) when combining total experience and center experience in the increase in quality of caregiving. This compares with Phillips & Howes (1991) and Phillips et al. (1991) who suggests that caregivers with more years of experience do not show a measurable increase in quality of caregiving.

Third, the correlation between the years of education and the center experience and the quality of caregiving was assessed. As per Table 4.8, there was no significant difference in quality of caregiving when education and center experience were measured. The amount of education showed significance in quality of care, but center experience did not.

Of the 106 caregivers observed, 19 (17.9%) were in the same center for more than 3 years. The results in Table 4.7 indicate that these caregivers provided higher quality of care. This concurs with Howes' (1991) study which recommends that these centers are the preferred day care centers to choose for quality care.

Table 4.8
ANOVA Summary Table of Caregiver Rate by Levels
of Education and Center Experience
N=106

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F
Main Effects	52.65	7	7.52	.002
Education	37.04	4	9.26	.002
Center Experience	7.62	3	2.54	.301
Explained	52.65	7	7.52	.002
Residual	201.50	98	2.06	
Total	254.15	105	2.42	

Results of this study in Table 4.7 indicate that 56.6% (60) of the 106 caregivers reported being on the job at their present center for one year or less. This is similar to findings of LaGrange and Read's (1990) study, who reported a turnover rate as high as 43% in day cares studied.

Total Experience

First, it was hypothesized that no significant relationships will be obtained between the total years of experience in child care and the quality of caregiving. Second, it was hypothesized that there would be no significant relationship between the years of experience and the years of education in increasing the quality of caregiving.

First, as noted in Table 4.4, there were differences in quality of care between caregivers with more total experience in child care than those with less total experience in the quality of caregiving. A one way ANOVA of the caregiver rate indicating quality of care and the total years of experience in child-related work showed significance $F(1,4) = 2.730$, $p < .05$. Table 4.10 presents a summary of the caregiver rate by levels of total experience. It should be noted that the mean of quality care goes up as experience goes up.

These findings concur with Howes (1983) who states that caregivers with more experience are more responsive to childrens' needs. However, these results do not necessarily compare with research on quality caregiving by Kontos & Fiene (1991) who state

Table 4.9
Summaries of Caregiver Rate
by Levels of Total Experience
N=106

Variable	Value	Label	Mean	Std. Dev.	Cases
Total Experience	1	2 - 4 months	1.21	.42	28
Total Experience	2	8 - 26 months	1.44	.51	25
Total Experience	3	30 - 48 months	1.48	.51	25
Total Experience	4	60 -284 months	1.57	.50	28

emphatically that experience alone would not be the sole indicator of quality care.

Second, it was hypothesized that no significant relationships would be obtained between the years of total experience and the years of education in increasing the quality of caregiving. As noted in Table 4.10 using the procedure ANOVA it was found that education is significant ($p < .001$) to the quality of care given by the caregiver. However, when the caregiver's education is combined with the caregiver's total experience ($p > .05$), there is not a significant rise in the quality of caregiving.

This finding does not exactly parallel the findings of other studies which show that a higher level of education and experience on the part of caregivers may show higher scores in quality of

Table 4.10
ANOVA Summary Table of Caregiver Rate
by Levels of Education and Total Experience
N=106

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F
Main Effects	49.22	7	7.03	.003
Education	37.74	4	9.44	.002
Total Experience	4.19	3	1.40	.574
Explained	49.22	7	7.03	.003
Residual	204.94	98	2.09	
Total	254.15	105	2.42	

caregiving, for example, Benjamin (1989) and Clarke-Stewart (1991). The finding in this study may be due to the fact that caregiving experiences vary, thus making this a difficult area to research with any degree of specificity.

Country Born

First, it was hypothesized that no significant relationships will be obtained between the country where the caregiver was born and the quality of caregiving. Second, it was hypothesized that no significant relationships will be obtained between the country where the caregiver was born, post secondary education, experience in child care centers, benefits, and ratio of children to staff.

First, in regards to the country born and the quality of caregiving, as noted in Table 4.4 using a one way ANOVA it was found that there is no significant difference ($p > .05$) between caregivers born in Canada, or other industrialized nations, or non-industrial nations in quality of care.

Second, in regards to country born and education of the caregiver, center experience, child-staff ratio in the classroom, and benefits, there is no significant difference, as noted in Table 4.11,

between caregivers born in different countries. Education and country born appears to show general significance; however a two-way interaction indicates no statistically significant difference, $p > .05$. Where education has shown a significant difference to the quality of care it has been deemed not so significant when coupled

Table 4.11
Statistical Significance of Variables
According to Caregiver's Country of Birth
N=106

Variable	Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F
Education	Explained	70.72	13	5.44	2.728**
	Residual	183.43	92	1.99	
	Total	254.15	105	2.42	
Total Exp.	Explained	15.26	5	3.05	1.278
	Residual	238.89	100	2.39	
	Total	254.15	105	2.42	
Center Exp.	Explained	25.11	10	2.51	1.042
	Residual	229.04	95	2.41	
	Total	254.15	105	2.42	
Benefits	Explained	22.85	6	3.81	1.630
	Residual	231.30	99	2.34	
	Total	254.15	105	2.42	
Ratio	Explained	13.54	8	1.69	.682
	Residual	240.61	97	2.48	
	Total	254.15	105	2.42	

* $p < .05$ ** $p < .01$ *** $p < .001$

with the country born. Perhaps this is an indicator of the various types of post education received by caregivers in the respective countries in which they were educated.

As indicated in Table 4.12, caregivers from industrial nations excluding Canada (mean score 2.67) have a higher level of education than non-industrial nations (mean score 2.58) which is followed by education of caregivers born in Canada (mean score 1.95). The results shown on this table may be due to the fact that it is often the more educated immigrants who are invited to take up permanent residency or gain citizenship in Canada (Friesen & Friesen, 1992) and cannot find jobs commensurate with their education level.

Table 4.12
Summaries of Education
by Levels of Country Born
N=106

Variable	Value	Label	Mean	Std Dev	Cases
Country born	1	Canada	1.95	1.34	75
Country born	2	Other Industrial Nations	2.67	1.56	12
Country born	3	Non Industrial Nations	2.58	1.50	19

Table 4.11 shows that there is no significant difference, between experience, whether caregiver's total experience ($p > .05$), or caregiver's center experience ($p > .05$), and the country of birth in

quality of care. There is no significant difference ($p > .05$) between country of birth and benefits offered to the caregiver in the quality of care. There is no statistically significant difference ($p > .05$) between country of birth and ratio of children to staff in quality of caregiving. Perhaps the amount of education that a caregiver has and/or their experience more than compensates for any difference that country of origin may make in quality of caregiving.

Benefits

It was hypothesized that no significant relationships will be obtained between the benefits and the quality of caregiving, and it was found that there was no significant difference ($p > .05$) between benefits and quality of care. This does not exactly parallel with the findings that lower staff benefits produce lower quality care (Galinsky, 1990). This may be due to the fact that salaries and working conditions are not included in this part of the analysis. McMahan's (1993/94) study found that some centers trade program characteristics, such as benefits or group size, for higher wages which produces higher quality caregiving.

Group Size

It was hypothesized that no statistically significant relationship will be obtained between the size of the group of toddlers and the quality of caregiving.

According to the findings of this study, there is a statistically-significant difference, $F(3,102) = 3.23$, $p < .05$, between the total size of the group of children and the quality of care. Table 4.13 shows the description of subpopulations of the caregiver rate by the size of the toddler group.

Table 4.13
Summaries of Caregiver Rate
by Levels of Total Group Size
N=106

Variable	Value	Number of Children	Mean	Std Dev	Cases
Group Size	1	4 - 7.5	5.92	1.74	24
Group Size	2	9 - 12	6.46	1.26	28
Group Size	3	13 - 15	6.50	1.70	26
Group Size	4	16 - 24	5.64	1.42	28

The optimum size of group to receive a higher quality of care, according to these data is 13-15 children followed closely by a group size of 9-12, then a group size of 4-7.5, and least optimal is

the groups of 16-24. This concurs with the findings of the National Day Care Study (Galinsky, 1990), which reported that the important factor in achieving quality of care was not so much the ratio of staff to children as it was the total size of the group (Phillips & Howes, 1991). Other literature support the findings of this study in reporting larger groups who maintained the required child-staff ratio tended to have better quality caregiving (Robinson et al., 1979). The suggestion that the largest groups in our study do not have the highest quality of care is supported in the literature by Clarke-Stewart (1991) who indicates that a combination of adequate adult-child ratio and *reasonable* group size is one of the best clues to indexes of quality child care. Howes (1991) concurs with Clarke-Stewart (1991) by suggesting that "the number of children with whom each caregiver can engage in a stimulating and sensitive fashion is by necessity limited" (p. 82).

In reviewing the results of the procedure of ANOVA on the ITERS data, which is the score of quality received by the entire day care center, compared with total group size in the toddler room, there is a significant difference, $F(3,102)=7.072$, $p < .001$, between the quality rating of the center and the total group size of the

toddler room. Table 4.14 indicates that the center with the highest overall quality score had a total group size in the toddler room of 13-15 children. This concurs with the finding of caregiver quality compared to total group size as seen in Table 4.13. The overall center rating as seen in Table 4.14 then indicates that the next centers in quality ranking have total group sizes of 4-7.5 children, followed then by groups of 9-12, and lastly by groups of 16-20 which also concurs with findings revealed in Table 4.13 with regard to optimal group size.

Table 4.14
Summaries of Overall Center Quality
by Levels of Total Group Size
N=106

Variable	Value	Number of Children	Mean	Std Dev	Cases*
Group Size	1	4 - 7.5	150.08	24.16	24
Group Size	2	9 - 12	145.71	19.27	28
Group Size	3	13 - 15	173.65	28.35	26
Group Size	4	16 - 24	141.71	35.96	28

*Groupings collapsed in order to reflect government regulation compliances.

Child-staff Ratio and Ratio Violations

It was hypothesized that no significant relationship will be obtained between child-staff ratio and quality of caregiving.

Results indicate that there is no significant difference ($p > .05$) between the child-staff ratio on the measure of quality of caregiving. Phillips et al. (1991) suggest that maintaining positive ratios may be more important in programs with less skilled caregivers than in programs with well-trained, stable caregivers. This study does show in Table 4.4 that education and experience are significant to quality care, but it does not show ratios as significant, perhaps it is because of the combination of ratio and education suggested above by Phillips et al. (1991). The majority of the literature seem to support the view that child-staff ratio is very important (Russell, 1990; Howes, 1983). However, Phillips and Howes (1991) tend to suggest a stronger emphasis on group size, rather than child-staff ratio, towards attaining higher quality care. A possible reason for the lack of significant difference in ratios and quality of care may be a resultant affect of high ratio violations occurring during the course of the day in the day care rooms. According to Friesen (1992) many child-staff ratios are violated during staff coffee breaks and lunch breaks when staff are not replaced by other staff members. It was hypothesized that no significant relationships would be obtained between child-staff

ratio violations and quality of care. However, the results of this study show a significant difference, $F(8,83) = 2.06$, $p < .05$, between the child-staff ratio violations and quality of caregiving. The results indicate that as the ratio violations increased the level of quality of caregiving decreased. This concurs with the literature (Phillips & Howes, 1991; Whitebook et al., 1990; Galinsky, 1990; Mills et al., 1988).

Conclusion

The conclusions of this study basically compare with the findings in the literature. Factors which proved to be significant compare with other studies: education (Whitebook et al., 1990) center experience (Howes, 1991), total experience (Phillips & Howes, 1991), total group size (Clarke-Stewart, 1991), and ratio violations (Phillips et al., 1991). Three factors were not as conclusive...country born, benefits and child-staff ratio.

CHAPTER FIVE SUMMARY AND CONCLUSIONS

The main purpose of this study was to examine the indicators of a quality day care caregiver. The study examined a variety of characteristics of day care caregivers to determine the resulting quality of caregiving. Characteristics investigated included: education, center experience, total experience, country born, benefits, groups size, ratio and ratio violation. Of the four center characteristics and four caregiver characteristics, five were identified as being statistically significant and three showed no statistically significant differences.

Summary of Findings

Results of this study showed five variables to be *statistically significant* in quality of caregiving. These variables included: education, center experience, total experience, group size and ratio violations. Higher level of post secondary education resulted in a higher quality of caregiving, particularly so with caregivers educated in the specialization of early childhood. More caregiving experience in the present day care center in which the caregiver was working as well as more caregiving experience in the area of child

caregiving per se had a positive effect on the level of quality of care. The total size of the group under the caregiver's care proved to be a significant factor in determining quality of care with the apparent optimal size of group between 13-15 children. This point is validated by studies in France where it was shown that the "stability gained by paying professional salaries to a highly qualified staff is a reasonable trade-off for the problems created by large classes" (McMahan, 1993/94, p. 54). The final variable to show a statistically significant difference in quality of care was ratio violations. Quality of care was higher as the violations became less frequent. The principal findings of this study are comparable to similar studies conducted on factors affecting quality caregiving in formal day care settings, such as Howes (1991) and Scarr et al. (1994).

Conclusions

Bronfenbrenner's (Berk, 1989) theory of the ecology of human development, which was discussed in chapter three, differentiates the nature of environmental influences on the development of the child. The first level of Bronfenbrenner's model, the microsystem,

refers to entities immediate to the child, and the second level, the mesosystem, refers to the interrelationships among the entities of the first level. The statistical significance of the caregiver's years of experience in the present day care, as well as years of experience in general, in increasing the quality of caregiving, support Bronfenbrenner's postulation that the child's development is influenced by his immediate surroundings. The stability of the caregiver's commitment increases the quality of care which in turn enhances the child's development.

The exosystem which is level three of Bronfenbrenner's model refers to social settings that affect the child's experiences. The statistical significance of group size, and the education of the caregiver in increasing the quality of care by the caregiver, support Bronfenbrenner's case that the child is influenced by social settings. Some policy of day care is determined by legislation while other policy is more informally concocted by the local or individual day care centers.

The fourth and final level of Bronfenbrenner's model, which is called the macrosystem, includes the overall attitudes and ideologies of culture. The statistical significance reported in this

study, pertaining to the ratio violations in the day care setting and the quality of care given by the caregiver, supports the impact that Bronfenbrenner purports between the child and the macrosystem. The attitude of the culture to the importance of children is reflected in the compliance to a policy of ratio in the day care.

The five statistically significant indicators found in this study, education, center experience, total experience, group size and ratio violation could be named as joiners on the spider's web of Bronfenbrenner's revised model. These indicators, like the connecting strands of the spider's web, affect the total environment and play an important part in integrating the different levels in the child's life. These factors should clearly be looked at when government policies for day care are formulated.

This study would not be complete without discussing a very important point that emerged from the findings. This has to do with caregiver's country of birth. There was no statistically significant difference found between quality of caregiving by caregivers born in Canada or those born in other countries. The fact that the country of birth did not make a significant difference in the quality of caregiving is very significant with regard to the potential to decline

racism in Canada. It is also possible that cultural diversity in staffing could enhance the program for day care.

This study raised a number of relevant questions which one should ask in searching for a day care with high quality caregiving.

For example:

1. Education. What are the educational qualifications of the caregiving staff? Do the staff have specialized training in early childhood education?
2. Center Experience. What are the number of years of experience in child care related work of the caregiving staff at their present day care?
3. Total Experience. What are the total number of years of experience in child care related work of the caregiving staff?
4. Group Size. What is the total group size in the caregiving room? Is it between 13 and 15 children for the toddler room?
5. Ratio Compliance. What is the attitude towards the importance of maintaining the legislated staff-child ratio? Are staff always (sometimes, or never) replaced while on coffee or lunch breaks during the day?

Observations

One day care visited on this research project displayed a poster in the staff room that read "children are such a nice way to start people". Children are indeed priceless possessions and one must be aware of societies' responsibility towards them (Pence, 1993) on behalf of these "people starters". Since we are not a child-oriented society (Caldwell & Hillard, 1992) at present it may be time for society to change its primary focus towards the well being of children. According to Suransky (1982), brick by brick we are building a society of people raised in day care and we do not yet know the *full* consequences of this on society.

If there is one apt message to be gleaned from the research on early childhood and child care, it is that the quality of programs in which children have been involved has a lasting and definite effect on children's development (Wingert & Kantrowitz, 1992/93; Berk, 1989). Society must face the reality that where good day care may be good for children, bad day care is bad for children! This underscores the need to make the search for the highest quality care center for a child an imperative step in the life of that child.

One potential finding of this study is how well individual characteristics of centers predicted measures of quality using the informal Belsky scale as adapted for the study, and ITERS which is a more formal scale for assessing day care centers. Therefore, one could surmise that the informal Belsky with the 18 five-minute spot checks is a more time efficient method of determining quality caregiving. It could therefore be a more time efficient predictor of quality than ITERS which requires checking on 245 observed points. ITERS requires considerably more time to determine quality. Certainly the Belsky scale is not as thorough an instrument, but if a concerned searching parent does not have the time to take the thorough route in determining a day care center, then the Belsky scale could provide a quicker yet fairly reliable method of investigation of a prospective day care for his/her child.

According to Caldwell & Hillard (1992), the future of quality child care can only be guaranteed to improve by large-scale public efforts--if the public has the will to provide the higher quality that it demands. The concerned public, which for the most part consists of parents, generally agrees with the experts on the quality of care it is seeking in formal institutions such as day care (Ehrlich, n.d.).

Suggestions for Further Research

Research cautions that high-quality day care, once attained, does not necessarily last forever and must therefore continually be in check. LaGrange (1991) also advises that children change so much and so often that teachers or caregivers of young children require knowledge of child development in order to understand and keep pace with these changes (p. 50). As society strives to provide the best of care for children there must be a constant check both on programs and training. There is always room for improvement, and when dealing with such a precious human resource as our children, society must be responsible and make frequent checks on day care operations. Therefore, this study is only the beginning of an ongoing and possibly never ending pursuit of quality in day care. According to Zigler (Mills et al., 1988) we have all the knowledge necessary to provide absolutely first rate child care today. All that is missing is the commitment and the will.

It is recommended that future studies be carried out in the following areas:

1. Further research coming out of this project might include three kinds of comparative study utilizing the same instrumentation as

the Friesen (1992) study (a) a replication of this study for evaluative measures, (b) a study of day care centers in various cities, or (c) a study of day care centers in different provinces.

2. Further studies of the correlation of the Belsky scale and the ITERS scale might be done. The results of which may assist parents in their search for quality care for their children.

3. Further studies could be done to look at the effects of other factors on the quality of child care in day care settings, such as family life. In measuring these other factors that affect child development, we may discover whether these other factors may interact with, or compensate for poorer quality child care, or possibly operate completely independently of the influence of child care quality. In light of this it would seem that further studies are needed to research the influence of parents and family life in general on the quality of care in a day care center.

4. Further research could be conducted on the effects of the various levels, from poor to high, of child care quality on child development.

The future development of high quality day care programs is essential in order to support work in families and the future of the nation. There is an African proverb that says it takes an entire village to raise a child...this study has been a contribution to the village children from one of the villagers!

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APPENDIX "A"

Selected Research Design and Techniques

Friesen Study (1992).

The appendix explains the rationale for the use of selected research design and techniques derived from an earlier more comprehensive study by Friesen (1992) from which data were drawn for this study. Data which were gathered, but not analyzed in the Friesen study will be referred to in this study.

Research Design

The data collected for "A Sociological Examination of the Effects of Auspice on Day Care Quality" (Friesen, 1992) in Calgary, Alberta between October 1989 and December 1990 will be used as a base for this study. The design used for Friesen's study (1992) will be described here.

The ex post facto design for Friesen's (1992) study was done in the natural setting and therefore does not allow for the addition or removal of the variables. The study was a one-shot case study design. The stimulus in the study was the auspice of the centre, that is, for-profit or non-profit, and the posttest was a comparison of

the quality of care taken after a period of time. The reliability of this study is assured, since the auspice cannot be changed after it has been determined (Friesen, 1992).

For Friesen's study (1992), the researcher took a list of Calgary day care centers in July 1989 from a federally-funded child care information and referral service called "Choices in Child Care". Day care centers were first contacted by letter, followed by a telephone call. Center directors were offered a confidential assessment of the quality of their toddler room as measured by The Infant-Toddler Environment Rating Scale or "ITERS" (Harms, Cryer & Clifford, 1990), and an anonymous rating comparing their center's quality to the other centers in the study, suitable for advertising purposes.

Of 50 day care centers first contacted and who agreed to participate, two centers dropped out later in the study and were not replaced leaving 48 centers to participate. Quality assessments were performed in all of the remaining 48 centers, and all but two of the centers returned the director mail-in survey.

There are several evaluation measurements available today to help parents and caregivers determine what constitutes quality care.

Some examples are The Assessment Profile for Early Childhood Programs or "Profile" (Abbott-Shim & Sibley, 1987) which is intended as a guide to in-depth self-evaluation; The Early Childhood Environment Rating Scale or "ECERS" (Harms & Clifford, 1980) which is frequently used in research studies addressing child care program quality; and The Infant-Toddler Environment Rating Scale or "ITERS" (Harms, Cryer & Clifford, 1990), which like two previous environmental rating scales produced by the authors, provides a comprehensive picture of day care quality using the specific age-segregated room as the unit of analysis.

Instrumentation

The two standardized observation instruments used for testing in the toddler room of the day care center were the new and as yet unpublished, Spot Observation Scale or "SOS" scale by J. Belsky (Shimoni, 1990) and the Infant-Toddler Environment Rating Scale or "ITERS" (Harms, Cryer & Clifford, 1990). The Spot Observation Scale was used to assess caregiver strategies through caregiver-child interaction. Caregiver interaction was observed in the realm of praising, nurturing and redirective interactions. ITERS, on the other

hand, provided a more comprehensive picture of the quality of the whole environment.

A third survey instrument, entitled Day Care Director Survey, was created for the project, primarily to measure the organizational characteristics of each center and to correlate information gleaned through interviews. The instrument was pretested, revised and pretested again with two groups of early childhood professionals and day care directors (Friesen, 1992).

Spot Observation Scale

The SOS was originally drafted by Dr. Jay Belsky from the University of Pennsylvania. It attempts to serve as a diagnostic tool for assessing interactions between caregivers and children by a series of "spot" observations in a room. There is a checklist of nine positive and nine negative items for the observer to indicate which items were present or absent during the five-minute time period. If the caregiver does not clearly demonstrate the item as listed on the scale it is indicated on the data as "not observable". Here is an example of a positive item and followed by a negative item.

Figure A.1 .
Example of Scale Item
for the Spot Observation Scale

Positive Item:

Use of Vocal, Facial and Body Expressions--a caregiver enunciates clearly and slowly when speaking to a child, and often accentuates her or his display of affect; be it happiness, laughter or sadness.

Negative Item:

Caregiver Belittling--caregiver speaks down to a child, or openly demeans, ridicules, threatens or criticizes.

Infant-Toddler Environment Rating Scale

The ITERS produces interval level data on a seven point scale for 35 measured items. The researcher administering the ITERS tries to remain unobtrusive, redirecting children to other activities if approached. Child caregivers are asked about their professional background, information on daily routines and day care policy. The following is an example of ITERS:

Figure A.2

Example of Scale Item for the

Infant-Toddler Environment Rating Scale

	Inadequate 1	2	Minimal 3	4	Good 5	6	Excellent 7
Books and Pictures. Materials: vinyl or hardpage infant/toddler books, pictures of people and familiar objects, simple picture games.	-Fewer than 4 toddler books accessible daily for much of the day. -Caregiver does not name objects or pictures for children.		-At least 6 infant/toddler books accessible daily, for much of the day. -Books and pictures used by adult with children at least three times a week. -Participation encouraged only while children are interested; children not forced to participate.		-At least 12 infant/toddler books (but no less than 1 for each child in group) accessible daily for much of the day. -Adult talks about pictures, reads books, or says nursery rhymes daily with individuals or very small groups of interested children.		-Adult carries out at least one language activity using books, pictures or puppets for each infant/toddler daily. -Cozy book area set up for toddlers to use independently.

As reported by Friesen (1992), one researcher performed all evaluations using the ITERS for the 48 centers. Harms et al. (1990) reported an alpha reliability coefficient of .83 for the ITERS scale; Friesen's study reported an alpha coefficient for the scale of .81. Harms et al. also report subscale coefficients ranging from .58 to

.89, while Friesen's study ranged from .44 to .76. Due to the lower subscale coefficients, only the total scale score should be used in reporting (Friesen, 1992).

Day Care Director Survey

A mail-in survey assessing a number of structural variables, that is, the organizational characteristics of each centre, was left with each director at the time of the center visit, along with a stamped, self-addressed return envelope to be returned within one week of the visit. Forty-six of the 48 surveys distributed were returned.

Measures

Formal Education

Caregiver training has been identified as an important variable contributing to positive child development. Directors were asked to report the caregivers with high school diploma, Day Care Society of Alberta Training Program, E. C. E. Diploma, E. C. E. Certificate and Bachelor's Degree. Percentages were then computed comparing the caregivers.

Center Tenure

The length of time caregivers stay at the same center should increase the level of quality, since caregivers get to know the needs of the individual children. Directors were asked to write in whether the caregivers had been at the center for less than 1 year, between 1 and 2 years and so on up to 5 years or longer.

Total Experience in Child Care Employment

As in the center tenure or experience directors were asked to write in the total amount of time caregivers had been employed in a child care job.

Country Born

The director was asked to indicate the country in which each individual staff member was born. The countries were indicated by "1" for born in Canada, a "2" for born in another industrial country and a "3" for born in a non-industrial country. Countries included in category "2" were England, Ireland, Switzerland, Japan, Poland, Russia, Singapore and Hong Kong.

Number of Benefits

The number of benefits the caregivers receive at the center can also positively affect their feeling about their profession and

the children in their care. Directors were asked to indicate the benefits a caregiver employed at their center for one year would receive. Centers scored "1" for each benefit. Caregiver benefits include: health care, dental plan, paid maternity/paternity leave, paid vacation, professional development, life or disability insurance, paid short-term sickness leave, reduced child care costs, pension or flex-time.

Group Size and Ratios

Previous research has indicated that group size is an important component of a quality child care environment as well as low staff-child ratios. Directors were therefore asked to report the number of children in each grouping and the number of caregivers in each group. Staff/child ratios were computed by dividing the number of children by the number of caregivers in each group.

Toddler Ratio Compliance

In addition to the group size variable, data were gathered on toddler ratio compliance during center observations. Ten five-minute spot-observations were taken at various times during the day. During these times, a quick tally of the child-staff ratio was taken. Centers received a "1" if government child-staff ratios were

met or exceeded, and received a "0" if they required ratios were violated.

Sampling

Fifty day care centers were randomly sampled from a list of 169 in the city of Calgary. In order to be included in the sample, each center had to provide full-time care for at least toddlers (ages 19 to 35 months). Centers were limited to one municipality in an effort to hold constant any variation in federal, provincial and municipal regulations which might adversely affect the level of quality in the centers.

Three researchers conducted three pre-tests on three centers not included in the sample. An inter-rater reliability rating of over 92% agreement on first-choice items occurred on all three scales.

Data Collection

Centers were visited on a prearranged day by at least one researcher from approximately 8:00 a.m. to 1:00 p.m. Observations were made in toddler rooms with children between the ages of 19 and 35 months.

Researchers attempted to maintain a low-profile while observing. Observations were also made in infant rooms when available, or preschool rooms. Researchers used two scales, the ITERS (Harms et al., 1990) and the SOS by Belsky (Shimoni, 1990). Day care administrators were also interviewed for approximately 45 minutes, and were requested to complete a 45-minute mail-in survey regarding their day care's policies and procedures. The Day Care Director Survey measuring the organizational characteristics of each center was correlated with information gleaned through interviews.