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The State of day care in Missoula Montana

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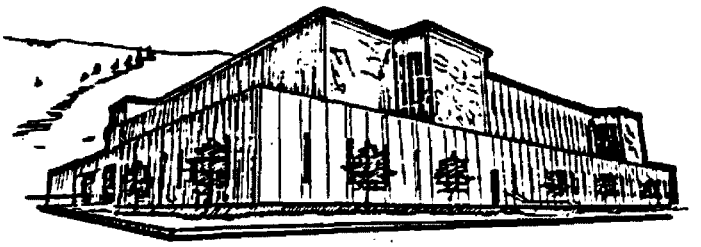

THE STATE OF DAY CARE

IN MISSOULA, MONTANA

by

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During the summer of 1992, a study was undertaken to assess the quality, availability, and affordability of day care in Missoula, Montana. Through personal interviews with the directors of 37 day care centers, group homes, and family-type operations, information was obtained regarding need, cost, and quality of services available for the families of Missoula's labor force. A stratified sampling technique was utilized to identify the sample population of day care providers to be interviewed. The survey instrument consisted of 32 fixed-alternative questions dealing with cost, availability, and quality of services provided. Analysis of variance testing was conducted to determine if differences existed between the three different types of day care facilities.

Results of the study indicate that the overall quality of day care services was appropriate for a city the size of Missoula. The cost for infant care was greater than that for toddlers, which was expected due to the greater supervision and higher child-to-care giver ratio required by younger children. Furthermore, it was found that the cost of day care in Missoula is approximately that of the national average. However, it was also found that a significant number of families cannot afford the full cost of day care without some type of outside assistance. Statistical analysis of the data indicates that there is no difference in the quality of care given by the various facility types. The main shortcoming of day care in Missoula concerned availability, with a noted lack of openings in all age groups. Additionally, the limited hours of operation of most day care facilities precluded many parents who work unconventional hours from using these services.

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Introduction

Young children have always been cared for in the homes of others while their mothers were having babies, nursing a sick member of the family, lending a hand at peak times on the farm, or occupied with other home-based work (Collins and Watson, 1976). Long before it had a name [day care], parents relied on this type of care, leaving their children with a neighbor down the street, a friend who was staying home with her own child, or a grandmother (Berzin, 1990). From these common sense observations, one could conclude that child care outside the home is not a recent phenomenon peculiar to today's hectic society. In the past, these arrangements were a matter of necessity, not choice. Today, however, there are few issues that generate more volatile debates than does the subject of child care outside the home, often referred to as day care. If one accepts Collins and Watsons' assertion that children have always been cared for outside the home, why has this form of child care become so controversial? In today's information age, parents are bombarded with such diametrically opposed viewpoints from any number of child care pundits that the simple fact that children have always been cared for by others gets lost. Glickman and Springer (1978) suggest that we all know, with certain gross exceptions, that the way we give birth, the way we nurse, the way we toilet train, the relationship we have with our husbands, the way we talk or don't talk to our babies and play or don't play with them, the toys we provide them, the vacations we take, the sitters we hire--everything we do is affecting our children. What isn't clear is exactly what, in each of these cases, we should be doing. With this type of demagoguery, initiated by the popularity of Dr. Spock (the first acknowledged child care expert), it is no wonder the issue of how we raise our children generates such polarized positions.

If everything we do, our total environment so to speak, affects our child, why should a single component such as child care be viewed any differently than the toys we provide our children, or

our relationships with our spouses? Perhaps if adequate care is administered, i.e., meeting the basic physical needs of our children, it really doesn't matter who provides the care.

Jane Price (1979) presents a entirely different perspective on the day care dilemma when she states that many of the difficulties faced by working parents have very little or nothing at all to do with their children. They are rooted in the parents' own feelings of guilt, which are nourished by erroneous beliefs about what parents should be doing, and by a general lack of support for families and working parents in this society. This lack of support for working parents was also documented by Grace Mitchell (1979) when she reported that over the years, child care has been made available at no cost to the poor, and the parents at the upper end of the income scale could usually find a combination of nursery school and in-home help, but the great majority of the working middle-class parents are denied assistance of any kind. Apparently this concept remains true today since the federal government has yet to devise a comprehensive social policy that would provide relief to middle income parents.

The latest Congressional action pertaining to child care was vetoed by President Bush on September 22, 1992. The President vetoed legislation that would have provided up to 12 weeks a year of unpaid leave for the birth of a child (Missoulian, 1992). However, the bill was approved by large majorities in Congress, and Senate Majority Leader George Mitchell said a vote on overriding the veto would be scheduled before Congress adjourns. On September 24, 1992, the Senate voted to override the veto and sent the measure back to the House of Representatives. While the House of Representatives did not override President Bush's veto, President-elect Clinton may be more receptive to a family leave plan.

It is obvious from the above statements that the issue of child care encompasses a myriad of conflicting ideas. It is not the purpose of this paper to evaluate the morality of day care, nor is it intended to be a platform for the feminist's movement. Rather, this study accepts day care as a fact of life in the 20th century, and strives to report the state of child care services in Missoula, Montana. To accomplish this task, a review of the current literature was conducted concentrating

on what researchers have found to comprise quality child care, responses by business and industry to the day care dilemma, how other countries provide for their pre-school age children, and the issue of infectious diseases in the day care setting. Through the use of an original survey instrument designed to collect statistical information on day care facilities in the Missoula area, and the information found in the latest census, this study attempts to objectively describe the state of day care in Missoula. The intent of this study is to inform the Missoula public what current research is reporting, and how day care in Missoula compares to the findings cited in that research.

History

Traditionally, America has engaged in a love/hate affair with child care outside the home. It is interesting to note that the federal government has historically supported child care outside the traditional family structure only when it has suited its purpose. For example, day care allows mothers to enter the work force in times of war, unemployment, and feminist discontent. Society also seems to approve of day care for poverty stricken families.

The first recorded child care facility in the United States was the Boston Infant School established in 1828. This nursery was established exclusively for the care of children of working parents (Robins and Weiner, 1978). However, it appears that this type of child care was not universally embraced by the general public since the next documented day nursery was not established until 1838. This facility, also located in Boston, was intended primarily to care for the children of seamen's wives and widows (Robins and Weiner, 1978). As the awareness and acceptance of such facilities grew, more nurseries began operations. Robins and Weiner (1978) report that in 1854, two New York hospitals established similar nurseries. Cook (1989) verified this time-frame when she reported that the first organized, fairly extensive child care program in the United States dates to the 19th century, when middle class women established nurseries for the children of mostly poor widows.

During the latter stages of the 19th century, interest in day nurseries for the poor was tied to concern over immigration from Northern Europe and Ireland (Robins and Weiner, 1978). Not only did the establishment of these facilities assist the working mother, an added dimension was the nursery's ability to teach middle class values and practices by letting the participants [children] teach their parents. Collins and Watson (1976) echoed Robins and Weiner's sentiments when they reported that day nurseries were organized for the children (of immigrants) and supported by charitable contributions, both to give children a safe and healthy environment, while teaching them habits that would assure their future independence, and to demonstrate to their parents how to

care for future American citizens. It is interesting to note that 70 years later, this same strategy was adopted by the Head Start Program of the 1960's.

The first decade of the 20th century saw college-educated women beginning to seek careers for the first time in this nation's history. This early feminist movement provided a new demand for day nurseries and after-school programs. However, it was not until the first World War that the demand for child care increased substantially. During the War, for the first time in America's history, women began to work outside the home in large numbers. Yet there was no major increase in nurseries; apparently child care needs were generally being met through the auspices of local governments and through an expansion of existing facilities (Robins and Weiner, 1978). It should be noted that throughout this period, day care facilities were primarily the responsibility of the private sector. Despite the increase in demand for child care during World War I, federal government involvement remained marginal (Kagan, 1991). After the Great War, interest in child care declined. Passage of the 19th amendment lead to a decline in militant feminism followed by a resurgence of "traditional values." A second factor leading to the decline of day care need was the passage of widows pensions by many state governments. While the sums were nominal, these pensions allowed many widows to remain at home and raise their families in genteel poverty. Kagan (1991) states that by 1919, 39 states had passed mothers pensions. Mothers were supported by these pensions and in return were expected to maintain suitable homes and rear their children.

Until the Depression, the United States was the only major industrial country that did not provide some type of federally funded child care. However, things changed dramatically during those turbulent years. Breitbart (1974) reports that from 1933 to 1940, the federal government spent $3,141,000 on child care. The appropriation for these centers came primarily from the Federal Emergency Relief Act of October 23, 1933. This act provided emergency nursery schools for children of needy unemployed families, from neglected or under-privileged homes where pre-school age children [would] benefit from the programs offered (United States Statutes at

Large, 1933). Nurseries under the Works Progress Administration, Farm Security and Federal Housing Administration, and other New Deal programs eventually totaled 1,900 centers serving 75,000 children (Robins and Weiner, 1978).

With its first substantial foray into child care, the federal government had taken the first small steps toward legitimizing child care outside the home. It is interesting to note that this renewed interest in child care was not precipitated by the demands of working mothers, but was a response by the federal government to reduce unemployment. The focus of the Emergency Relief Act was to help unemployed educators. Robins and Weiner (1978) state that all the personnel, including teachers, nurses, social workers, nutritionists, janitors, cooks, and clerical workers were to come from the relief rolls. As unemployment decreased at the end of the 1930's, federal funding was reduced with little outcry from the public.

During World War II, demand by working mothers replaced the need to reduce unemployment as the main impetus for federal involvement in child care. Between January 1941 and January 1944, the number of employed women increased by 4 million (Breitbart, 1974). With the passage of the Community Facilities Act (United States Statutes at Large, 1942), commonly known as the Lanham Act, the federal government once more found itself in the day care business. The Lanham Act provided an initial $150 million for facilities including child care centers. However, as in previous times of crisis, the need for such centers was expected to last only for "the duration." Cook (1989) reports, that, with this type of attitude prevalent among society, it is not surprising that 2,800 of the 3,000 centers were terminated in 1945 with very little public opposition.

Not only did the federal government encourage child care services during this time, private industry also entered into the child care business. On November 8, 1943, the Kaiser Shipbuilding Corporation opened two child care centers at the entrances to its shipyards in Portland, Oregon. During the 22 months the centers were in operation, they served 4,014 children from 8 months to 6 years of age, 7 days a week, 24 hours a day, 364 days a year (Breitbart, 1974). While Kaiser did receive federal support--the United States Maritime Commission provided buildings and

equipment--this operation was truly a response by industry to fill the demand for child care by its workers. Unfortunately, with the end of the war, the Kaiser child care service centers were closed.

The advent of President Johnson's "Great Society" in the mid-1960's marked the federal government's return to the child care business. Congressional action, such as the Economic Opportunity Act of 1964, the Housing and Urban Development Act of 1965, and the Model Cities Act of 1966, were instrumental in establishing the federal government's role in day care. Of these bills, the Economic Opportunity Act probably had the largest single impact on child care with the establishment of the Head Start program. As in the past, the driving force behind the establishment of these programs was not a demand by working mothers for non-traditional child care programs, but the federal government's perceived need to solve a growing "welfare problem." Robins and Weiner (1978) state a primary aspect of mid-60's legislation was a growing concern for welfare costs and a desire to reduce welfare rolls. This was to be accomplished by providing care for children outside the home so that welfare recipients could hold paying jobs. While the Great Society bills did impact child care in the United States, the federal government has yet to establish a national policy. In the 1970's, Congress adopted a bill that would have initiated a federal child care policy, but President Nixon vetoed it (Cook, 1989). On June 23, 1989 the Senate approved the Act for Better Child Care Services (ABC). ABC would have provided $1.75 billion to the states to subsidize child care for low-income families and impose new quality standards (Weber, 1989). However, the ABC bill failed to be implemented and, to date, there is still no comprehensive child care legislation in sight.

The major conclusion that can be drawn from the history of day care in the United States is that it is supported only when deemed to be in the national interest. Kagan (1991) succinctly summarized the government's involvement when she stated the federal government, never fully committed to child care, was only reluctantly pulled in as a means to achieve broader national goals--to stimulate the economy, to support the war, or to provide employment.

Literature Review

Need

In today's society it has become intuitively obvious that there is a desperate need for child care outside the home that is both affordable and available. In 1983, for the first time, half of all mothers with children under six years of age were in the labor force. This means that 7.6 million families now face the problem of arranging alternative care for 8.9 million pre-school age children (Cook, 1989). This increase is in sharp contrast to the family structure of 1960 where, according to LaMarre and Thompson (1984), only 19 percent of married women with children under age six were working. Looking further into the past, in 1950 only 12 percent of women with children under six worked (Thomas and Thomas, 1990). Thomas and Thomas (1990) also projected that single parents and dual career couples with children under six will reach 65 percent by 1995.

When older children are factored into the equation, the figures become staggering. Rodgers and Rodgers (1989) report that the labor force includes more than 70 percent of all women with children between the ages of 6 and 17. These statistics graphically illustrate that today, women comprise a much higher portion of the work force than at any time in history. Shirley M. Dennis, the director of the United States Department of Labor, Women's Bureau, stated "..women who now compose 44 percent of the work force will compose at least 47 percent of the work force by the year 2000. Between now and the year 2000, women will constitute 60 percent of the new work force entry. We know those women will be mothers of young children" (Adams, 1987).

The above statistics suggest that the number of families in need of child care outside the home comprises a significant portion of our population. What is of further interest is that when other groups of employees in need of day care are included, i.e., single parents and dual-career couples, these numbers rise even higher. Thomas and Thomas (1990) report that nearly half of the work force is comprised of dual-career couples and single parents; what's more, this demographic trend is projected to continue. Friedman (1987) has gone a step further and has broken these groups into measurable units by stating that dual-career couples comprise approximately 40 percent of

the work force while single parents comprise close to another 6 percent. Thomas and Thomas (1990) further proclaim that neither the quantity nor the quality of child care services has kept up with the dramatic increase in demand.

Business and Industry Response

It is reasonable to assume from the above information that a majority of employees in the work force have dependents in need of supervision while the employee is at work. However, a question that could be reasonably asked is how does this affect business and industry? Durity (1991) states that dependent care-related absenteeism in the work force is costing U.S. companies $3 billion annually. While this figure would seem large enough to attract the attention of business and industry leaders throughout the country, why should the business community assist employees with dependent care needs? Thomas and Thomas (1990) suggest some companies believe their involvement [in day care] helps increase productivity, work performance, recruiting effectiveness, and employee morale; enhances the corporate image; provides tax benefits; and reduces accident rates, absenteeism, tardiness, turnover, and stress. Michael Conway, President of American West Airlines goes one step further when he states, "aside from the traditional business issues, we are a company that prides itself on being innovative and just simply doing the right thing when it comes to our employees" (Woodford, 1990). While this type of attitude is becoming more prevalent in the business community, companies with a tradition of employee assistance seem to be predisposed to "doing the right thing." Friedman (1987) has found that corporate culture appears to be the greatest determinant of corporate sensitivity to family issues. Hoffman LaRoche, a research-intensive company with headquarters in Nutley, New Jersey, has also publicly declared that its child care policies have aided the "bottom line." According to Leonard S. Silverman, Hoffman LaRoche vice president in charge of human resources, "our contributions to our employees in the form of child care assistance have resulted in a number of intangible benefits, but also measurable ones, including increased productivity, and reduced sick leave, tardiness and turnover" (Werther, 1990).

From the above testimonials, it appears that some companies are beginning to understand that providing some type of child care is good for business. However, the type of assistance that should be offered to the employee is still very much in debate. While on-site day care is often touted as a panacea for child care needs, in reality there are many different forms of assistance that a company can provide, usually at minimal cost to the employer. One such option is the development of cafeteria-style benefit plans. Werther (1989) describes this option as a "flexible" benefit plan that allow employees a "menu" of available taxable and non-taxable benefits. Such a plan, for example, permits an employee who receives health coverage under a spouses' benefit to elect to take a different benefit, such as dental coverage or child care expense reimbursement, from his or her own plan. Werther further suggests the use of flexitime as another inexpensive option available to business and industry. This tool allows employees to determine what their working schedules will be, usually within certain "core hours" set by the company or department, provided the employee works an agreed upon number of hours each week.

In addition to offering cafeteria-style benefits, companies can encourage the use of local services provided by the community. Rodgers and Rodgers (1989) found one increasingly popular way for companies to address child care concerns is through resource and referral services. Typically, such services do three things: they help employees find child care suited to their circumstances, they make an effort to promote more care of all types in the communities where employees live, and they try to remove regulatory and zoning barriers to care facilities.

Durity (1991) describes other forms of support that industry has developed to assist in the acquisition of day care services such as pre-tax spending accounts, employee assistance programs for counseling, and education programs including lunch-time seminars on child care topics. While all of the above mentioned options are in use, some are more popular than others. Weber (1989) reports options such as direct payments to employees are still the exception. Only about 50 companies provide employees with cash vouchers while another 2,000 companies allow workers to set aside pre-tax dollars.

Any discussion of child care usually centers around full-time care for infants and toddlers. However, there are an estimated 10 million "latchkey" children between the ages of 6 and 12 who only need care after school hours (Thomas and Thomas, 1990). While many of these children do very nicely for the two hours they are on their own after school, Immerwahr (1984) cautions that according to some estimates, between 17 and 25 percent of all fires are started by children who are home alone after school. One indication that this time period is affecting the concentration of employees is the emergence of a new term into the business world's vocabulary. The "three o-clock syndrome" refers to reduced productivity and higher error and accident rates as employees' minds turn to their children around the time when school lets out (Friedman, 1986). To combat this problem, many businesses are initiating before- and after-school programs.

Thus far, a variety of methods corporations have developed and employed to answer the day care dilemma have been discussed. One option conspicuous by its absence is the provision for on-site child care. Unfortunately, the high cost of this option often makes it infeasible. Cook (1989) reports that all child care programs are costly, and indeed, one of the serious obstacles to providing good care is its cost, with the question of who is to pay for child care being central.

The cost of on-site care can be prohibitive, even when a company would like to provide it. Thomas and Thomas (1990) report that in 1983, the Campbell Soup company converted part of a warehouse into a day care center that accommodated 120 children at a cost of $5,200 per year per child. They further state that while the rates vary depending on geographic location, the average annual cost of full-time child care is $3,000. With costs such as these, it is easy to see why few companies elect to provide this type of service. Friedman (1987) found that the on-site day care center, most popular with the press, exists at only 200 corporate sites and 500 hospitals. It is interesting to note that in Missoula, Community Hospital does provide an on-site facility for its employees.

While the numbers are few, on-site facilities do exist. Werther (1989) noted that Corning Glass, Stride Rite Corporation, Steelcase, J.P. Morgan, Rodale Press, Hoffman La Roche, and Levi

Strauss all have child care assistance in place. He further states that Hoffman La Roche was named by *Working Mother* magazine in 1987 and 1988 as one of the top five companies in the United States for working mothers. Furthermore, the company plans to expand the capacity of its on-site child care center from 55 to 122 children. On the opposite coast, Genetech Inc., opened one [child care center], an easy 1.5 mile jog from its South San Francisco's headquarters when it realized in 1988 that its 1,100 employee work force was having babies at the rate of one per week and that many new mothers had resigned (Garland, 1989).

It is obvious that on-site facilities work for some corporations. However, it is doubtful there will be a head-long rush to expand this option. In a focus group session, LaMarre and Thompson (1984) reported executives in the Denver area agreed that industry sponsored day care would not happen until the economy recovered and qualified workers became more difficult to recruit. One executive simply stated that day care would become a major benefit only when it becomes a necessity.

Quality Concerns

Within the existing body of literature on day care, no common definition of quality can be found (Robins and Weiner, 1978). Thirteen years later, Zaslow (1991) stated any study of care quality can be categorized in terms of its position on each of three dimensions: its approach to defining quality, the hypothesis or hypotheses being addressed, and the domain of child development being measured. It is apparent from the literature that there are as many ways of defining quality in day care as there are researchers. However, three factors have been found to contribute significantly to a child's experience in day care: adult-child ratio, group size, and training of care givers (Miller and Weissman, 1986).

Care giver-to-child ratio refers to the total number of children assigned to a care giver. The Federal Interagency Day Care Regulations (FIDCR) were developed to determine the optimum number of children of each age who could comfortably be cared for by one adult. Their findings are:

Infants and toddlers (up to age two):	Three children to one adult
Two- to three-year-olds:	Four children to one adult
Three- to six-year-olds:	Eight children to one adult

Reviewing the literature, one finds ample basis for the above mentioned standards of care giver-to-child ratio. Small group size or a low care giver-to-child ratios have been repeatedly documented to increase the likelihood of the kinds of care giver-to-child interactions that appear most central to high quality care (Zaslow 1991). Further, studies have shown that a baby in day care is more likely to thrive and form close personal attachments when one adult is responsible for diapering, feeding, soothing, and putting him to sleep (Miller and Weissman 1986). They further state that when groups are small, care givers spend more time with each child--praising, teaching, comforting, and responding--and that children are more cooperative and more involved in learning. Finally Sjolund (1973) concluded that the principal reason for a poorer development in children from residential homes was to be found in a milieu where there was too small a staff for it to be possible to give the children individual attention.

It has also been reported that the appropriate group size is essential for the highest quality day care experience. The FIDCR has also developed guidelines pertaining to this subject. They are:

Infants and toddlers (up to age two):	No more than 6 children per group
Two-year olds:	No more than 12 children per group
Three- to six-year-olds:	No more than 16 children per group

It is interesting to note that the FIDCR were superseded by the Social Services Block Grant legislation which made states responsible for licensing child care. For example, Mississippi has no regulations at all for children under the age of two, whereas Massachusetts insists upon a three-to-one ratio for that age group (Miller and Weissman, 1986).

While it may be generally agreed upon that small group size is important for the optimum development of children, that ideal is often difficult to achieve. In a study conducted by the RAND

Corporation, the following results were obtained. First, at all ages, preschool children cared for in their own home, or in the home of a relative almost always received care in groups no larger that the recommended size. The same was generally true of children cared for in family day care homes. However, nursery schools and organized child care Centers often failed to meet the requirements for group size. Only one infant in five in a Center, and half of them in a nursery schools received care in groups of the recommended size (Waite, Leibowitz and Witsberg, 1991). It is interesting to note that some research has found that optimal group size varies with the activity. Sjolund (1973) suggests that the optimal [group] size will vary from one activity to another.

A final measure of quality is the amount of training care givers have received prior to their entry into the day care business. Sjolund (1973) suggests when discussing nursery school teachers, it is impossible to avoid committing oneself to defining what such training should entail, or what a nursery school teacher ought to be like. While many at-home care givers have little or no formalized early childhood training, Center directors and staff should have had some basic education in child development. Berezin (1990) reports that a program with a minimum of 200 contact hours and 100 field work hours should be required for care givers. These include instructional lectures, field trips, and discussions under the supervision of faculty.

While training of care givers varies between a formalized academic setting to the brown bag lunch seminars provided by local children's advocates, it is clear some specified training is essential to ensure quality care. Kagan (1991) states the critical issue is not the absolute amount of formal or child-related training and experience, but how these translate into differing behaviors with children. She further states that the National Day Care Study found that care givers with specialized child related education/training, regardless of experience and formal education, delivered better care with somewhat superior developmental effects for children.

Day Care in Other Countries

In any discussion of child care, the topic of how other countries choose to deal with the problem of day care is bound to be raised. The belief that other countries have found ways of

raising their children successfully in groups is dear to the hearts of many day care advocates. (Glickman and Springer, 1978). Often these pundits present glowing accounts of the generous benefits provided by businesses and the government in such exotic countries as Sweden and Denmark. However, the literature found on this subject presents a somewhat different picture. Dreskin and Dreskin (1983) report demographics, as well as cultural attitudes, have influenced European labor laws. Countries with a lower than optimal population had to find ways to encourage women to enter the work force to fill jobs, but child bearing had to be made attractive enough to these women workers that reasonable population growth could also be assured. They continue by explaining that Europeans have avoided, to a great extent, the politics of worker versus the unemployed and the poor confrontation, by making child care benefits available to everyone, regardless of income level or employment-derived earnings.

While well-intentioned spokespersons for nationwide child care preach the great strides that have been made in Europe, we must consider what those programs actually entail. Breitbart (1974) reports that Parisian creches, for children two months to three years in age, are in great demand. Yet the demand is attributed more to economic necessity than to the desirability of care. With an average staff-child ratio of 1 to 6, even the directors and staff with the best attitudes are severely overburdened.

The fundamental need in the first year of life is the establishment of a basic confidence in the world around the child, which pre-supposes warm and constant contact with an adult. If the child does not achieve warm and stable contact, this side of the development of its personality is affected, and a fundamental lack of confidence in other people is established (Sjolund, 1973). Most parents would agree with such a statement and would not dream of enrolling their children in a day care facility where the staff would ignore their baby. However, this seems to be a common practice in many European facilities. Breitbart (1974) reports Belgium creches, usually holding 80 children with a 1-to-6 staff-child ratio, primarily emphasize health care and supervision. She also states that such nursing practices have extended to a rejection of handling babies, on the

rationalization that they might be accidentally bruised. Now, while many European child care facilities may sound outstanding to the American mother of a new infant, it is not yet clear whether she would surrender her child to such an institutionalized setting.

Table 1 describes a closely related topic that may be of value when comparing child care services of other countries to the United States. This topic is the emergence of parental leave.

Table 1 - Summary of information prepared by Dreskin and Dreskin (1983) illustrates the extent of parental leave available in many industrialized countries

Country	Length of Leave With Job Guarantee	Length of Paid Child Care Leave and Benefit Amount
Austria	1 Year	1 year, fixed monthly benefit
Denmark	5 Months	2 months, 100% of salary or 5 months, 50% of salary
France	2 Years	2 to 3½ months, 100% of salary 3½ to 6 months, 75% of salary 6 months and over, 30% of salary
Italy	1 Year	3 months, 100% of salary 6 months, 30% of salary
Spain	3 Years	2 to 3½ months, 75% of salary
Sweden	1 Year	6 months, 90% of salary
United Kingdom	6 Months	1½ months, 90% of salary 4½ months, fixed benefit amount
West Germany	6 Months	2 months, 100% of salary 4 months, fixed benefit amount

One may ask why the European community moved so far ahead of the United States in the area of parental leave. Cook (1989) explains that as the recessions of the late 1970's and early 1980's were reflected in unemployment, and especially in higher unemployment rates for women than for men, conservative political parties tended to support extended maternity leaves for women. The effect, in their view, was at once to encourage women to remain at home in the interests of maintaining the traditional family and to remove them for longer periods from the labor market.

While many of the options offered in the European community are attractive, whether they would work in the United States remains questionable. One must ponder the response by feminists and career-oriented women in the United States to such blatantly sexist policies. However, Dreskin and Dreskin (1983) conclude that we can learn much from the European experience and adapt it to the needs of American parents providing real choices for a balanced, sane approach to the dual responsibilities of wage earning and child raising.

Infectious Diseases in Child Care Settings

No discussion on day care could be considered complete without addressing the issue of infectious diseases. Godes (1987) states that several factors place children attending child care settings at increased risk of infection. These young children are in close physical contact for extended periods of time, which facilitates the spread of communicable diseases. Their hygiene habits and immune systems are not well developed, and, in addition, when there are young children in diapers, spread of diarrheal disease may occur readily when handwashing, diaper changing, and environmental sanitation practices are inadequate. This problem is so prevalent that the medical journal Pediatric Annals devoted its entire August 1991 issue to the topic of infections among children who attend day care. While reporting on this topic, for the Spokesman Review, Torrado (1992) concluded that children, particularly infants and toddlers in groups of seven or more, are at an increased risk for a variety of infections when compared to those who do not attend day care at all. Dreskin and Dreskin (1983) agree with the above observation by

stating all forms of group day care significantly increase the exposure of children, with large day care Centers being the extreme at one end of the spectrum and day care homes with a limited enrollment lying at the other end. Sjolund (1973) reports that as far as infectious diseases are concerned, it is probable that the risk is greater in proportion to the greater number of children associating together.

While there is a concensus among researchers that those attending day care are at a higher risk for infection than those who stay at home, there is still some debate as to whether this is entirely bad. Some research suggests that when it comes to getting sick, the difference between day care and home-reared children seems to be the greatest in the first six months to a year of day care attendance, suggesting that some immunity is acquired in day care (Miller and Wiessman, 1986). Other day care pundits try to put such infections into a historical perspective. Price (1979) states that during the 1930's, children frequently came down with streptococcal infections that could last for weeks and months. Their houses were quarantined and sometimes their toys were burned. Today most childhood illnesses last only a few days. While this historical perspective is interesting, it is of small consolation to today's worried parents.

Description of the Missoula Area

Missoula is located at the hub of five valleys in west central Montana at the junction of U.S. Interstate 90, U.S. Highways 10, 12, and 93, and Montana Highway 200. Centrally located, Missoula is 488 miles east of Seattle Washington, 500 miles north of Salt Lake City, Utah, 400 miles south of Calgary, Alberta, Canada, and 1,229 miles west of Minneapolis/St. Paul, Minnesota.

At 3,205 feet above sea level, Missoula's climate could be considered moderate (table 2).

Table 2 - Breakdown of average tempratures in the Missoula area in degrees Fahrenheit

Month	Minimum Temperature	Maximum Temperature	Mean Temperature
January	13.7	28.8	21.3
April	31.3	56.5	43.9
July	49.5	84.8	67.2
October	44.1	57.0	31.2

The growing season is listed at 137 days with a mean annual rainfall of 13.74 inches. Snowfall on an annual basis has a mean of 47.2 inches (Missoula Economic Development Corporation, 1992).

Missoula is considered by many Montanans as a progressive city with a strong commitment to education. There are 15 elementary schools within School District One serving 6,025 pupils. The teacher/student ratio is 1:16. There are one private and three public secondary schools in Missoula with a total enrollment of 3,341 students and a faculty/student ratio of 1:13. The University of Montana is located in Missoula and has a student population of 10,788 (Missoula Economic Development Corporation, 1992).

The medical community in Missoula boasts two hospitals, Community Medical Center and St Patricks, with a combined total of 328 beds. There are 7 clinics in Missoula with a total of 211 practicing physicians. This cadre of medical personnel is backed by 1,075 registered and practical

nurses. There are 45 physical therapists and 77 dentists (Missoula Economic Development Corporation, 1992).

Missoula offers most amenities found in larger cities with 15 art galleries, 2 museums, and 4 symphonies/orchestras. There are two public libraries, and four theatrical playhouses (Missoula Economic Development Corporation, 1992).

Recreational opportunities consist of 10 health clubs, 9 swimming pools, 4 golf courses, 30 tennis courts, 2 ski areas, and 51 public parks (Missoula Economic Development Corporation, 1992).

As shown in table 3, Missoula enjoys a broad economic base with large employers in the wood and paper products industry, trade center activities (medical services, wholesale and retail), federal government, motor carriers, and the University of Montana.

Table 3 - List of Missoula's largest employers as of December 1991 (Missoula Economic Development Corporation, 1992).

1000+ Employees	750 - 1000 Employees	500 - 750 Employees	250 - 500 Employees
University of Montana	Montana Rail Link	Missoula Elementary School District 1	Missoula County
Champion International Corporation	Community Medical Center	Stone Container Corporation	Missoula County Airport
St. Patricks Hospital		U.S. Forest Service	Missoula County High Schools
Southgate Mall		Washington Corporations	City of Missoula

Demographics of the Missoula Area

The following information was reported in the 1990 census data for Missoula County and the City of Missoula. It should be noted that the Missoula urban area is divided into three distinct census districts: Bonner-West Riverside, Missoula City, and Orchard Homes. Obviously, day care needs are not limited to the City of Missoula; however, since this study focuses primarily on the state of day care in Missoula, unless otherwise noted, figures cited pertain only to the City of Missoula. In 1990, Missoula's population was reported as 40,243. This figure is divided into 9,964 family households, comprised of 7,730 traditional households (married couple with a family) and 1,798 family households in which no husband is present. In the remaining 436 family households, no wife was present (U.S. Department of Commerce, 1990a). These figures indicate that 28.9 percent of the family households in Missoula are single parent families. While the number of single parent households is important when analyzing the need for day care, perhaps a better indicator is the number of children that may need this service. In Missoula in 1990, there were 2,831 children under five years of age (U.S. Department of Commerce, 1990a).

Examining the population of Missoula County allows further insight into the area's demographics. In 1990, the total population of Missoula County was 78,687. The number of children under 18 years of age in 1990 was 20,233, or 25.7 percent of the total population. Of that 25.7 percent, 7.2 percent or 5,719 children were under the age of five (U.S. Department of Commerce, 1990b).

A further indicator of child care need is the number of parents in the labor force. In Missoula County, there are 4,129 households in which all parents present in the household are in the labor force. This represents 53.4 percent of all traditional family households. In other words, in over half of all households in which there are two parents, there is some type of need for child care from another adult. As stated in the literature review, Friedman (1987) found that dual-career couples comprise approximately 40 percent of the work force. However, dual-career couples working in Missoula comprise only 22.2 percent of the work force. While this figure is significantly below the

percentage of dual-career couples reported by Friedman, it still represents a large number of families in the Missoula area in need of child care services. It is interesting to note that while the number of dual-career couples in Missoula is lower than that found by Friedman, the 5.5 percent of single parents in Missoula's work force is close to the 6 percent he reported.

Looking at the number of females in the labor force, it is reported that there are 30,986 females 16 years and over in Missoula County. Of that figure, 18,523 are in the labor force. Census data indicate that 4,927 of these females have children under six years of age (U.S. Department of Commerce, 1990b).

Income in the Missoula area is considered moderate. The median household income is $23,388. This figure rises to $30,359 for households with families. Nonfamily households have the lowest median income level at $13,292. Further analysis reveals that Missoula County is home to 20,281 family units, of which 2,522 or 12.4 percent are listed as subsisting below the federal poverty level which in 1989 was $12,675 per year for a family of four (U.S. Department of Commerce, 1991). In addition, Missoula County reported 4,542 family units with children five years of age and below. Of these families, 1,021 or 22.4 percent are described as living below the poverty level. Of the 3,044 families in Missoula County in which a female is listed as the head of the household, 1,247 or 40.9 percent live below the poverty level. Further examination shows that of the 856 households in which a female is listed as the head, with children under five years of age, 566 or 66.1 percent subsist below the poverty level (U.S. Department of Commerce, 1990b).

It must be noted that the above data is based on a sample, subject to sampling variability. For technical documentation, the reader may wish to refer to Summary Tape File 3 provided by the United States Department of Commerce on the variability and limitations of the data.

While census data is often used in making decisions concerning the distribution of public monies as well as all manner of statistical analyses, it must be remembered that the collection and collation of this data is a monumental task. A cursory review of the 1990 data demonstrated one glaring discrepancy. On page 41 of the Summary Social, Economic and Housing Characteristics

for the State of Montana, the population of the City of Missoula is shown as 40,071. However, on page 10 of the Summary Population and Housing Characteristics for the State of Montana, the population for the City of Missoula is shown as 42,918. This example should serve to remind the reader that statistics are subject to error and must not be unquestionably accepted.

Methodology

Conceptual Design

This survey was intended to provide both empirical data in the form of day care costs, availability, etc., as well as exploring the quality of care provided by facilities in Missoula, Montana. The survey instrument was designed after extensive literature review and interviews with local child care professionals. Of special significance was the assistance provided by Marjorie Boshaw, Coordinator of the Resource and Referral program at Child Care Resources in Missoula.

While the majority of the quality issues addressed by this survey resulted in empirical data such as child-to-care giver ratios, visitation policies, and regulations regarding the care of sick children, other elements were scored by the interviewer on a subjective basis. The final section of the interview was designed to gather data on four areas of quality in which there is general consensus on what constitutes a quality environment. These areas include cleanliness and surroundings; staff enjoyment; educational and recreational opportunities; and the safety of equipment and environment. While the observations were subjective, only one interviewer was used to survey the entire sample of facilities; therefore each facility was rated in the same manner. A sliding scale was used to indicate where the facility rated in each of the five categories. A rating of 1 was the best that could be obtained. A rating of 3 was average while a rating of 5 was at the bottom of the scale.

It should also be noted that these observations were only a small part of the entire survey and too much weight should not be assigned to any one aspect of the quality issue.

Measurement of Quality

Zaslow (1991) notes the "first wave" of day care research questioned whether the development of children in day care and home-reared children differs. This type of inquiry has gradually given way to a "second wave" of research which is studying the implications for children's development in light of day care quality. This "second wave" often identifies, and then studies, a

particular set of quality items in isolation. While this type of research is needed, it rarely addresses itself to the lay people who need the information. Glickman and Springer (1978) describe the frustration of many parents when they state that many of the people who purport to speak for the children--doctors, psychiatrists, and behaviorial specialists--speak from a world in which emotions and feelings are described as "affect", school learning is "cognition", and the results of research are stated in null hypotheses to the nearest tenth of a point. Reducing quality issues to some empirically measurable standard is beyond the scope of this project. This study's primary purpose is to determine the availability and the cost of day care in the Missoula area. However, this information should also include some type of measure of the quality of care provided by the various facilities. The approach to quality is based upon what has been cited in the literature and what was learned from conversations with child care specialists such as Marjorie Boshaw, Coordinator of the Resource and Referral program at Child Care Resources, and Jess Munroe, Deputy Director of the Montana State Department of Family Services.

Cleanliness

During each interview several minutes were spent touring the facility. Immediately following the interview, the interviewer quantified his observations onto the survey instrument. The criteria used to make these determinations included, but was not limited to: lighting, ventilation, color scheme, and general tidiness of the facility.

While a facility full of children did not receive a lower score if it was not spotlessly clean, other aspects of the facility's surroundings were evaluated, such as the overall appearance of the furnishings. While children's use of a facility will cause the furnishing to wear faster than normal, the interviewer looked for signs of wear and tear beyond what would be expected in a day care setting. The use of colors and decorations were also evaluated. Facilities that displayed children's artwork were rated higher than those in which decorations were more suitable for an adult atmosphere. Facilities that were light and airy were rated higher than a facility located in a basement.

Staff enjoyment

A review of the literature finds that substandard facilities can often be compensated for by a staff of care givers that excels in their duties. For this study, the interviewer focused on the staff's apparent enjoyment of their duties. During the interview process, the interviewer observed the staff's involvement with the children. Care givers who provided lots of physical contact were rated higher than those who ignored the children. If care givers spent more time conversing amongst themselves than with the children, they were rated lower than care givers who freely interacted with the children. Care givers who moved throughout the facility keeping track of children were rated higher than care givers who remained in one place, verbally handing out orders to the children. A final component was the care givers enthusiasm when talking about day care. Each interview included time at the end in which the interviewer and care giver participated in a free flowing conversation concerning day care. These conversations varied widely and were not confined to child care. Care givers who showed an interest by talking freely about different topics concerning child care were rated higher than those who talked about themselves or other topics unrelated to child care.

Educational and recreational opportunities

Educational and recreational opportunities can be a difficult subject to address. However, literature on the subject gives guidelines as to what constitutes adequate opportunity to learn. For example, infants should have safe, soft, washable toys that they can handle, put in their mouths, and experiment with. There should be a variety of toys available for all children and they should be the appropriate size.

However, there are some very subjective considerations that must be accounted for when addressing this issue. Some parents may object to certain types of toys while other parents would feel they are appropriate. A particularly sensitive topic is the area of violent toys--play guns, army men, etc. Toys that glorify war or violence may not be seen as learning tools by some parents, while

others would find them perfectly acceptable. This researcher ignored this question and did not rate the facility on the number of "politically correct" toys available for use.

A second consideration is the assortment of toys available for different age groups. Toys that are acceptable for older children can be dangerous for a newborn. Facilities were rated lower when children were observed playing with toys inappropriate for their age group.

Facilities were rated not only on the assortment of toys but on their availability. Facilities that allowed children free access to toys were rated higher than facilities in which access was controlled by an adult.

Equipment safety

This category focused on the safety of playground equipment and immediate surroundings. Included in the interviewer's observations were the use of the equipment by children and care givers alike. Playground equipment common to most all of the facilities were swing sets, sandboxes, and shallow wading pools. Equipment was examined for durability, stability, and freedom from sharp edges. Facilities whose equipment was in good repair and had enough room for playing children to avoid collisions rated higher than a facility where the equipment was located in a confined space and in need of maintenance.

A second aspect of this question was the safety of the play area itself. Whether the area was fenced or not played a critical role in the final ranking of the facility. In addition, the location of the facility was taken into consideration. Facilities located at busy intersections or on main arterials ranked lower than those located on quieter streets and avenues.

Research Hypothesis

Child-to-care giver ratios, cleanliness, staff enjoyment, educational and recreational opportunities, and safety are all components that parents should look for when choosing a day care provider. However, the overriding selection criteria often is cost. Therefore, the null hypothesis of this study is that there will be no significant differences shown in the cost or the quality of day care services provided by Family, Group, or Center type facilities in the Missoula area.

Operational Definitions

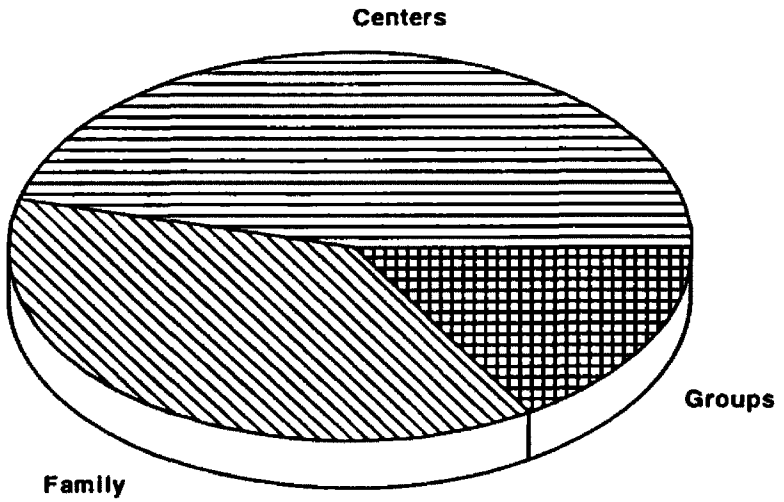
Family day care facility:	-A private residence in which supplemental parental care is provided to 3 to 6 children on a regular basis.
Group day care facility:	-A private residence in which supplemental parental care is provided to 7 to 12 children on a regular basis.
Center day care facility:	-A place in which supplemental parental care is provided to 13 or more children on a regular basis.
Traditional family:	-A family unit consisting of a husband, primarily responsible for generating income; a wife who does not work full time, and one or more children.
Dual-career family:	-All parents present in the household are in the labor force.
Statistical significance	-The result of a statistical test that indicates the difference being measured was sufficiently larger than zero to be detected.
Statistical non-significance	-Any difference that might exist is too small to be detected above the background.
Practical significance	-The difference being measured is great enough to warrant further consideration when making a decision.

Subjects

Day care, by its very nature, defies a completely random sampling procedure. While Center and Group facilities must be registered with the appropriate state and local agencies, many Family day care facilities operate without regulation. Determining the sample population for Center type facilities was easy, the entire population was included since its components were known through licensing procedures. However, Group and Family facilities created more of a challenge.

A stratified sampling technique was utilized to obtain samples for both Group and Family facilities. With the assistance of Child Care Resources, each school district was identified. Majorie Boshaw, coordinator of the Resource and Referral Program at Child Care Resources randomly selected one Group and one Family facility from each district. Ms. Boshaw then provided the names and addresses of the provider selected. The sample population for this survey consisted of 37 providers divided among the three types of day care facilities found in the Missoula area. Figure 1 illustrates the distribution of surveys among the various facilities.

Figure 1 - The sample consisted of 17 surveys of Centers, 6 surveys of Group, and 14 surveys of Family day care providers in the Missoula area.



A total of 37 surveys were completed. This included responses from 17 day care Centers, 6 Group day care facilities and 14 facilities registered as Family operations.

Two caveats worth mentioning are: (1) the nature of child care is one of upmost caution, and (2) the registration process associated with the child care industry. While being extraordinarily helpful, Child Care Resources refused to grant unrestricted access to their list of child care providers. The reasoning behind such a policy is one of safety for the children. In fact, even though several minutes were spent establishing the credentials of the interviewer and the purpose of the

visit at the outset of each interview, three day care facilities made inquiries to the Department of Family Services as to the appropriateness of the visits. The second problem of research in this area is limited to Family type facilities. To be included in this study's sample, a Family day care must have participated in the registration or licensing process. While many benefits accrue to facilities that exercise this option, it does have some serious drawbacks. Registration and/or licensing procedures require the participants to open their facilities to inspection by a variety of public officals, i.e., fire departments, social service workers, etc. This may prove to be too much of an inconvience and/or expense for many providers wishing to care for only a few neighborhood children. Therefore, while the sample obtained is as representative as possible, it would be impossible to include every Family day care facility in the population pool unless a door-to-door canvass was made of the entire city.

Instrument

To effectively identify specific day care conditions in Missoula, Montana, a survey was developed with the assistance of Child Care Resources personnel. This study utilized an instrument consisting of 32 questions. The instrument consisted primarily of fixed-alternative questions, and was focused on the scope and quality of day care services provided by the facility. The first element of this survey focused on a description of the facility, i.e., type, policy statements, etc., and contained five questions. The second element concentrated on the availability of the facility, i.e., hours of operation, waiting lists, etc. There were seven questions designed for this section of the survey. The third element of the survey dealt with the cost of day care in Missoula. Five questions such as cost per child, extra fees, etc., were included in this section. The final element of the instrument dealt with the quality of care given at the facility. This element was the most extensive portion of the survey, containing 15 questions. Some portions of this element utilized a numerical scale with a range of 1 (excellent) to 5 (totally unsatisfactory).

Each survey and accompanying facility evaluation required approximately 30 minutes to administer.

Procedure

To effectively evaluate the state of day care in Missoula, Montana, as many day care facilities as possible were included in the study. While the survey instrument remained the same, three distinct groups of day care facilities were defined, Center, Group, and Family.

Whenever possible the director or owner of the facility was interviewed. On several occasions the interviewer was directed to a long-term staff member for the interview. Each site was personally visited, and all portions of the instrument were completed prior to the next interview.

Since the availability of day care facilities fluctuates, i.e., from school year to summer vacations, this survey was completed within a four week period to ensure consistency of attendance among the facilities. The survey was conducted during last two weeks in June and the first two weeks in July, 1992. A second variable that could affect the reliability of the data collected is the time of day each interview was conducted. Most day care facilities have different numbers of children that attend at various times of the day or month. Full-time, part-time, and overlap children can change the make-up of a facility dramatically. To minimize this fluctuation, all interviews were conducted during the weekdays between the hours of 3:00 p.m. and 5:00 p.m. A second advantage to this schedule is that quality issues such as cleanliness, television viewing, etc., were reasonably consistent.

Sampling Error

It has been noted that with many studies involving small sample sizes, the Type II error rate is large–often as high as 80 percent (Booth, 1987). Unfortunately, due to the limited number of day care facilities in the Missoula area, the sample size for this study meets this criteria. While the probability of Type II error may be subject to sample size, the level associated with Type I error can be controlled. For this study an α level of 0.05 was chosen. This confidence level can be interpreted to mean that 5 times out of 100 a Type I error can be expected.

Proper interpretation of the results of this survey requires further explanation concerning the term "significant." In this discussion, the terms "practical significance" and "statistical significance"

must be differentiated. Statistical significance simply means the difference was sufficiently larger than zero to be detected above the background variability. Conversely if a result was found to be not significant, it simply means that any difference that might exist is too small to be detected above the background. A finding of non-significance in no way implies the absence of an effect.

Results

Financial Considerations

Of particular interest to most parents is the tuition charged by day care providers. On the surface, the results of this study indicate that tuition fees charged by day care providers in the Missoula area have a wide range. It also indicates that tuition varied depending upon the type of day care facility. There are two basic rates in the Missoula area, one for infant care and one for toddlers. The age when infants are considered toddlers varied between providers; however, for the purpose of this study it will be defined as one year of age. Table 4 compares each of the three types of facilities in relation to tuition fees for infants.

Infants

Table 4 - Breakdown of daily tuition costs by facility type for infants in the Missoula Area.

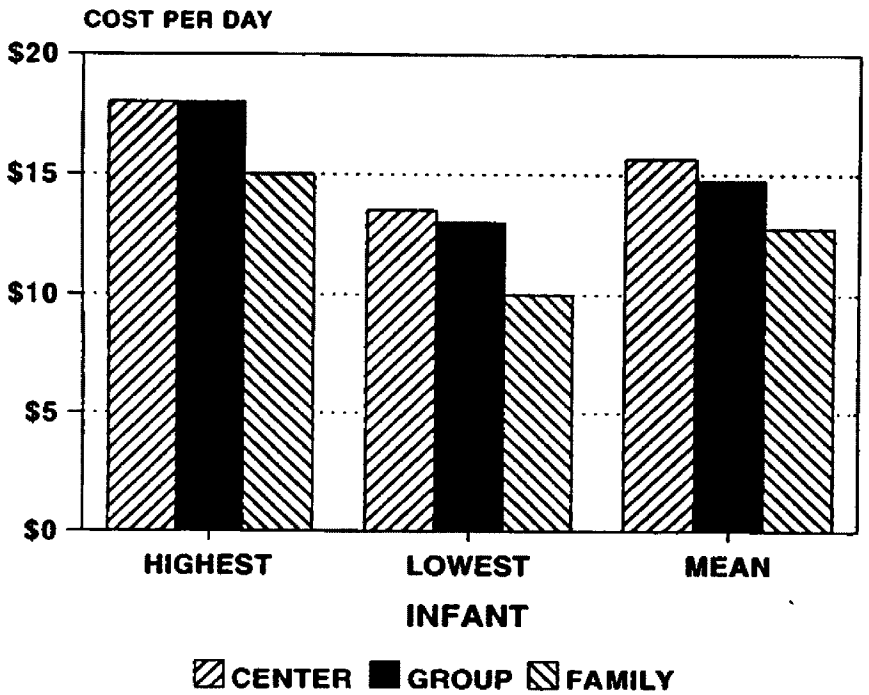
Facility	Highest Tuition	Lowest Tuition	Mean Tuition
Center	$18.00	$13.50	$15.65
Group	$18.00	$13.00	$14.75
Family	$15.00	$10.00	$12.75
All Facilities	NA	NA	$13.82

From table 4, the column detailing mean tuition rates illustrates that the highest tuition rate for infant care was charged by Center type facilities. The highest daily tuition rate charged by a Center type facility was $18.00, the lowest tuition charged by a Center was $13.50 per day, while the mean fee was $15.65 per day.

Tuition charged by Group care facilities is somewhat lower than that charged by Center based organizations. The highest daily tuition charge for a Group setting was $18.00. The lowest daily tuition rate quoted by a Group facility was $13.00 with the mean charge of $14.75 per day.

When the mean scores for infant care are examined it appears that Family type providers are the most affordable facilities. In this group the highest daily tuition rate was $15.00, the lowest $10.00, with the median price for tuition being $12.75 per day. The above information is shown graphically in figure 2.

Figure 2 - Costs of tuition for infants in the Missoula area by facility type



Thus far, observations concerning tuition costs for infants at all types of facilities has focused on the mean tuition costs at each type of facility. To empirically test the null hypothesis that there is no significant difference in tuition rates charged by Center, Group, and Family day care providers in the Missoula area, a one-way analysis of variance (ANOVA) was performed (table 5). This analysis of variance was used because it can test the difference between the daily tuition rates of all three facilities.

Table 5 - ANOVA summary for tuition charges for infants

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-Ratio	Probability
Between Groups	339428.571	2	169714.286	5.715	0.012
Within Groups	534500.000	18	2969.444		

As shown in table 5, the results of the analysis of variance illustrates the probability of significance is ≈ 0.98, which means that the differences between tuition rates charged is highly significant. An alternative method of testing this hypothesis is to examine the critical values of $F_{1,2}$ when $\alpha = .05$. At 2 and 18 degrees of freedom respectively, a F-ratio of 4.46 would be required to reject the null hypothesis. In this ANOVA, the F score was 5.715, well in excess of the score required for rejection. Utilizing this information, it can be stated that there are significant differences in the tuition rates charged by different facility types for infant care in the Missoula area. Further analysis utilizing Tukey's multiple mean comparison test indicates that the above difference in tuition costs is found between Center and Family type facilities, while no difference was found between Center and Group facilities, or between Group and Family providers.

Toddlers

Examining the individual mean tuition of each facility type, day care costs for toddlers fall along the same lines as infant care with Centers charging the most for tuition while Group facilities are the next most expensive providers. It appears that the most affordable care is found in the Family day care setting. Table 6 illustrates the tuition rates charged for toddlers.

Table 6 - Breakdown of tuition costs by facility type for toddlers in the Missoula area

Facility	Highest Tuition	Lowest Tuition	Mean Tuition
Center	$18.00	$10.00	$13.82
Group	$13.50	$12.00	$12.58
Family	$18.00	$10.00	$12.73
All Facilities	NA	NA	$13.20

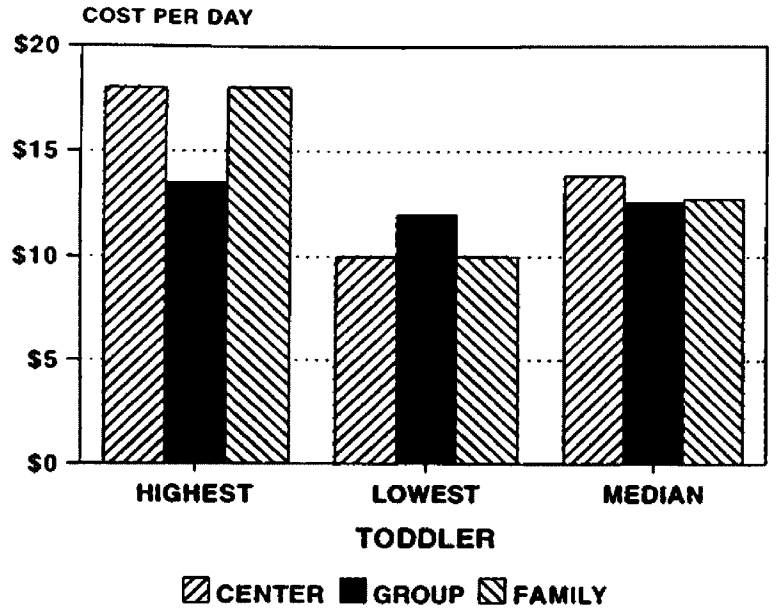
A closer examination of these costs reveal Centers charge a mean daily tuition of $13.82 for toddlers with the highest tuition rate costing $18.00 per day and the lowest fee of $10.00.

As could be extrapolated from the earlier data, daily tuition rates at Group facilities for toddlers are slightly lower than the Centers with a mean rate of $12.58. Group facilities tuition rates ranged from a high of $13.50 to a low of $12.00 per day.

Interestingly, Family day care facilities appears to charge more for toddlers than do Group providers. The mean Family rate is $12.73 per day with a reported high of $18.00 and the lowest reported tuition rate of $10.00 per day.

It is interesting to note that while there is a difference between the mean tuition rates for infants and toddlers at both Center and Group facilities, most Family providers charge the same or similar rates for both infants and toddlers. The above figures are displayed graphically in figure 3.

Figure 3 - Graphic display of daily tuition charges for toddlers in the Missoula area by facility type.



As shown in table 6, the difference between the high and low means for toddler tuition rates is $1.24 per hour. Table 7 supports this apparent difference in rates by indicating that there is ≈ 0.74 probability that differences in the tuition rates charged by Center, Group, and Family day care facilities is significant. However, examining the critical values of F for an α of 0.05, indicates an F-ratio of approximately 3.30 would be required to reject the hypothesis of no difference in tuition rates for toddlers in Missoula area day care facilities. It is interesting to note that the F score associated with tuition rates for toddlers is 1.407, well below the requirements for rejection.

Table 7 - ANOVA summary for tuition charges for toddlers

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-Ratio	Probability
Between Groups	119522.319	2	59761.160	1.407	0.259
Within Groups	1443619.573	34	42459.399		

In addition to tuition fees, many day care providers assess an additional charge in excess of the regular tuition. This often consists of deposits required to pre-enroll children. It must be noted that in some cases this deposit is not always excess revenue for day care providers; rather the deposit is sometimes applied to the first weeks tuition if the child eventually does enroll in the facility.

Additional fees are not common in the Missoula area. Only 7 of the 37 or 18.9 percent of the facilities surveyed charged an upfront deposit. Further analysis reveals that 4 of the 17, or 23.5 percent of the Center facilities required an upfront deposit. These deposits ranged from a low of $20 per child to a high of $25 per child. While none of the Group facilities surveyed charged an upfront deposit, it is interesting to note that 3 of the 14 or 21.4 percent of the Family facilities did require this fee. Of special note, while the fee for Center operations were fairly consistent, deposits for Family operations varied dramatically. The highest deposit reported was $70 with the lowest being $20. This represents a 350 percent difference in the required fee. Table 8 illustrates the costs associated with deposits required by day care providers.

Table 8 - Breakdown of fees in addition to regular tuition charges in Missoula area day care facilities

Facility	Highest Fee	Lowest Fee	Mean Fee
Center	$25.00	$20.00	$22.50
Group	$0.00	$0.00	$0.00
Family	$70.00	$20.00	$46.66

A final financial consideration that must be included in the cost of day care is the charges levied by providers when children are not picked-up on time. Slightly over one-half (56.7 percent) of the providers surveyed impose a fee if the child is not picked-up by the end of normal business hours.

Of the three groups surveyed, day care Centers have the highest number of facilities that impose this fee with 64.7 percent of the facilities utilizing this charge. Group and Family facilities were equal with 50 percent of each group exercising this option. When data for all facilities was examined, the mean charge for late pick-up amounted to $24.55. Table 9 illustrates the charges levied by day care providers when parents cannot pick their children up on time.

It appears from the facilities surveyed that Center and Family facilities costs are similar, while the Group type facilities had the highest cost in each of the categories. The highest late pick-up charge for all three facilities is $60.00 per hour. Family facilities charged the lowest amount at $4.00 per hour while the lowest cost for a Center was reported at $4.60 per hour. The lowest charge for a Group facility was $20.00 per hour. When the mean late pick-up charge is calculated, it is interesting to note that Center facilities have the lowest charge at $22.41 per hour with Family facilities second at $22.71 per hour. Group facilities have the highest mean charge at $36.66 per hour.

Table 9 - As with any business, at times it is difficult to close at the appointed hour. To discourage parents from leaving children at day care facilities after the scheduled pick-up time the majority of providers asses a late pick-up charge. This table illustrates, by type, the amount facilities charge parents when they are late in picking up their children.

Facility	Highest Charge	Lowest Charge	Mean Charge
Center	$60.00 Per Hour	$4.60 Per Hour	$22.41 Per Hour
Group	$60.00 Per Hour	$20.00 Per Hour	$36.66 Per Hour
Family	$60.00 Per Hour	$4.00 Per Hour	$22.71 Per Hour

Without explanation the above figures can be misleading. During interviews with providers it was repeatedly mentioned that this fee is levied infrequently. It is more of a deterrent than an everyday cost that should be considered when choosing a provider. Many providers stated that

they regularly worked with parents who were unavoidably detained. If given notice, and late pick-ups are not an on-going phenomenon, the fee was waived. It seems to be levied most often on parents who are continually late in picking-up their children without informing the providers of their intentions.

Availability of Day Care in Missoula

While financial considerations are important in choosing a provider, often the driving force behind a parent selecting a particular day care is the availability of an opening. Of the 37 providers surveyed, 22, or 59 percent of the facilities maintained waiting lists. Table 10 illustrates these findings.

Table 10 - Percentage of Missoula area day care operators that maintain waiting lists for future slots in their facilities

Facility	No. Respondents	No. W/Waiting Lists	% W/Waiting Lists
Center	17	11	64.7%
Group	6	3	50%
Family	14	8	57%
Total	37	22	59%

Data collected in the survey reveals that the highest percentage of facilities that maintained waiting lists were day care Centers. Of the 17 facilities surveyed, 11 or 64.7 percent maintained waiting lists. Family providers had the next highest percentage with 8 of the 14 facilities surveyed or 57 percent maintaining lists. The smallest number of facilities with waiting lists were Group homes where three of the six, or 50 percent of the providers surveyed, stated they keep waiting lists.

While the number of providers that maintain waiting lists is significant, a better indication of the length of time required before a opening becomes available would be the number of children

on each list. For Group providers, 19 is the mean number of children waiting for space. This is the largest of the three types of facilities. Center operations reported a mean of 15 children waiting while Family providers surveyed indicated that a mean of five children were waiting to be enrolled. Further analysis of this important variable of the day care equation reveals that the number of children on waiting lists varies dramatically with the provider. The highest number of children on a single list was identical for both Center and Group facilities, which was 50 children. The maximum number on any one Family provider's list was ten (table 11).

Table 11 - Breakdown by facility type of the number of children on waiting lists for future slots

Facility	Maximum Number of Children on List	Minimum Number of Children on List	Mean Number of Children on List
Center	50	3	15
Group	50	3	19
Family	10	2	5
All Facilities	50	2	12

One consideration that must be taken into account is the fact that the day care providers stated that these lists may not give a true and accurate picture of the number of children in need of day care. From interviews with providers, it appears that parents often sign up at more than one day care and simply pick the first one that opens. If their child is enrolled in a different facility, parents often neglect to inform the other providers that they no longer require their services.

Another measure of availability of day care is the operating hours of the facility. Table 12 illustrates the daily length of operations for Missoula day care facilities which shows that the majority of day care facilities operate for approximately 11 hours per day.

Table 12 - *Average opening and closing times for day care facilities in the Missoula area. Note that all times have been rounded to the closest quarter hour.*

Facility	Average Opening Time	Average Closing Time	Average Operating Hours
Center	7:15 a.m.	6:20 p.m.	11.06
Group	7:30 a.m.	6:00 p.m.	10.5
Family	7:30 a.m.	5:30 p.m.	10

While average opening and closing times may be of interest, to get the true picture of the operating hours at Missoula's day care facilities, frequency tables must be constructed (tables 13 and 14). As shown in table 13, the range of opening times varies with the type of facility. Center operations have the largest range at three hours, (from 6:00 a.m. until 9:00 a.m.). While opening times for Group and Family facilities have the same total range of 1½ hours, there is a difference in opening times. Group facility opening times begin at 6:00 a.m. and continue until 7:30 a.m. while the earliest a Family provider opens is at 6:30 a.m. and continues until 8:00 a.m. The mode opening time for all facilities is 7:30 a.m. with 19 of 37 or 51 percent of the providers opening at that time.

Table 13 - Range of opening times for Missoula day care providers by facility type.

Opening Times	Center	Group	Family	Aggregate
6:00 a.m.	3	1	0	4
6:30 a.m.	3	0	1	4
7:00 a.m.	1	0	5	6
7:30 a.m.	8	5	6	19
8:00 a.m.	1	0	2	3
8:30 a.m.	0	0	0	0
9:00 a.m.	1	0	0	1

When examining closing times for day care providers in Missoula, it is interesting to note that most providers close at 5:30 p.m. or 6:00 p.m. (table 14). As found in the frequency distribution of opening times, Center type facilities have the widest range of closing times at 4½ hours. Family facilities demonstrate the second widest range with 2½ hours between the earliest and latest closing facilities. Group type facilities have the narrowest range with just one hour between the closing times of the various providers.

Table 14 - Range of closing times for Missoula day care providers by facility type.

Closing Times	Center	Group	Family	Aggregate
4:00 p.m.	0	0	1	1
4:30 p.m.	0	0	1	1
5:00 p.m.	0	0	0	0
5:30 p.m.	7	3	4	14
6:00 p.m.	5	2	7	14
6:30 p.m.	3	1	1	5
7:00 p.m.	0	0	0	0
7:30 p.m.	1	0	0	1
8:00 p.m.	0	0	0	0
8:30 p.m.	0	0	0	0
9:00 p.m.	0	0	0	0
9:30 p.m.	0	0	0	0
10:00 p.m.	1	0	0	1

While waiting lists and operating hours are good indicators of the availability of day care facilities, a provider that operates 24 hours per-day, with immediate openings, is of no value if the

facility requires the child to be of a particular minimum age. Age requirements are common in Missoula day care facilities with Center facilities having the widest range of minimum age requirement of the three groups. Center facilities age requirements range from 1 to 60 months with a mean of 21.7 months. Group facilities generally allowed younger children to participate in their program with a range of 1 to 48 months. The mean age requirement for Group providers was 12.5 months. As with Center and Group facilities, some Family providers accept children as young as one month. However, the range is considerably smaller than with Center and Group facilities as the maximum limit for this attribute is only 48 months for a mean of 6.5 months.

Quality of Day Care in Missoula

Child-to-care giver ratios are an important component in any analysis of day care facilities. As expected and permitted by law, Center type facilities have the highest child-to-care giver ratio with 1 care giver to 9.33 children (table 15). Group facilities are next with 1 care giver to 6.5 children, and Family providers have the lowest ratio of 1 care giver for every 6 children. While the above figures represent the highest ratio for each type of facility, the mean child-to-care giver ratio may give a closer approximation of the actual number of care givers to children.

Table 15 - Breakdown of child-to-care giver ratios for Missoula area day care facilities

Facility	Highest Ratio	Lowest Ratio	Mean Ratio	Standard Deviation
Center	9.33	1.0	5.04	2.54
Group	6.5	4.5	5.54	0.77
Family	6.0	1.0	4.42	4.42

When the mean child-to-care giver ratio is examined, Group type facilities are found to have a higher ratio at 1:5.54 than do Centers which have a 1:5.04 ratio. As expected, Family providers have the lowest mean ratio of 1 care giver for every 4.42 children.

To empirically test the above observations concerning the number of care givers for each child, an ANOVA test was constructed to test the hypothesis that there is no difference in the care giver-to-child ratio among the various types of day care facilities in Missoula. As shown in table 16, the probability of a significant difference in child/care giver ratio is ≈ 0.86. Utilizing the critical value of F, with 2 and 34 degrees of freedom respectively, it would require an F value of approximately 3.28 to reject the null hypothesis. Table 16 shows that the critical value of F for this ANOVA is 2.108, obviously well below the value in which the hypothesis could be rejected.

Table 16 - ANOVA summary for care giver to child ratios

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-Ratio	Probability
Between Groups	17.814	2	8.907	2.108	0.137
Within Groups	143.646	34	4.225		

Another attribute often associated with quality child care is the possibility of exposure to infectious diseases. This possibility is a major concern to any parent who utilizes day care facilities. Question number eight on the survey instrument (Appendix 1) asked, "Do you care for sick children?" For the purposes of this survey, sick was defined as an illness more than the common cold, usually manifested by a fever of over 99° and/or visible symptoms such as occurs with chicken pox or measles.

Only 1 of 17 center type facilities or 5.8 percent indicated they did care for sick children. However, it should be noted that this facility, Cuddles and Care, is operated by St. Patrick's hospital and its sole mission is to provide child care for children unable to attend their regular facility due to an illness. When this facility is removed from the sample, none of the Center providers offered care for children who are ill. Group facilities had a higher percentage of providers willing to care for sick children with 1 of 6 or 16.6 percent providing this service. Family facilities were most likely

to care for sick children with 5 of 14 providers or 35.7 percent indicating they allow children with an illness to attend their facility.

A third component of quality that was examined in this survey was the number of child care providers who had raised children of their own. While no causal relationship exists between the bearing of children and providing quality child care at a day care facility, it is still interesting to determine how many providers have children of their own. For this section only Group and Family providers are included since questioning each staff member at a Center would have been an intrusion of privacy in this respect. The results of this question were a startling 100 percent affirmative.

The final section measuring quality in Missoula area day care facilities deals with the four areas identified earlier: cleanliness, staff enjoyment, educational and recreational opportunities, and equipment safety. The basic statistics for measuring these attributes of quality are shown in table 17.

Table 17 - Breakdown of means and standard deviations for the four essential ingredients for quality day care.

Facility	Mean Cleanliness Score and Standard Deviation	Mean Staff Enjoyment Score and Standard Deviation	Mean Ed. and Rec. Score and Standard Deviation	Mean Safety Score and Standard Deviation
Center	2.568 / 0.795	2.471 / 0.800	2.941 / 0.429	2.706 / 0.849
Group	2.833 / 0.983	3.333 / 0.516	3.000 / 0.000	3.5 / 0.548
Family	2.714 / 0.825	2.571 / 0.938	2.857 / 0.363	2.714 / 0.611
Cumulative Standard Deviation	0.818	0.857	0.363	0.764

The information captured in table 17 was utilized in constructing an ANOVA test to determine if the hypothesis that no difference exists in the quality of care in the different types of day care facilities in Missoula, Montana. The four attributes used to determine the quality of the facility (cleanliness, staff enjoyment, educational and recreational opportunities, and equipment safety) were analyzed individually. As shown in table 18, the probability of a significant difference

in the cleanliness of a Center, Group, or Family facility is ≈ 0.19. Utilizing the critical value of F, with 2 and 34 degrees of freedom respectively, for an α of 0.05, it would require a value of approximately 3.28 to reject the null hypothesis. Table 18 shows the critical value of F for this ANOVA is 0.214, well below the value in which the hypothesis could be rejected.

Table 18 - ANOVA summary for measuring cleanliness

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-Ratio	Probability
Between Groups	0.300	2	0.15	0.214	0.808
Within Groups	23.808	34	0.700		

The scores for staff enjoyment assigned to each provider by facility type using the ANOVA process are demontrated in table 19. It can be seen that in this attribute of quality, the probability of a significant difference being discovered is ≈ 0.90. When we look at the critical value of F at an α of 0.05 with 2 and 34 degrees of freedom respectively, it would require a value of approximately 3.28 to reject the null hypothesis. Table 18 shows the critical value of F for this ANOVA is 2.539, still below the requirements for rejection.

Table 19 - ANOVA summary for staff enjoyment

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-Ratio	Probability
Between Groups	3.435	2	1.718	2.539	0.094
Within Groups	22.997	34	0.676		

An interesting problem occurred when an ANOVA of the educational and recreational opportunities attribute was executed. The computer package (SYSTAT) could not find a variance in the Group facility type. This is verified by examining table 17 which shows the standard deviation for educational and recreational opportunities in the Group facility is 0.00. An effort was made to "fool" the computer by increasing the raw scores of each piece of data in this attribute 10 fold; unfortunately, there was still no variance. Therefore, Bartlett's test for homogeneity of group variances was performed (table 20).

Table 20 - Summary of a Bartlett test for homogeneity of group variances

Chi-Square	Degrees of Freedom	Probability
.001	1	0.980

It can be deduced from looking at table 20 that the probability of finding significant difference in the educational and recreational opportunities between Center and Family providers is 0.02. Obviously the hypothesis that there is no significant difference among different facilities in this particular area cannot be rejected. Referring back to table 17, one can see that the range of means for all three types of facilities is 0.14. This indicates that even though Group facilities were not included in the Chi-Square analysis, it can be stated that there is no significant differences between any of the three types of providers.

The final quality attribute to be examined concerns equipment safety. The scores for equipment safety assigned to each provider by facility type using the ANOVA process are demonstrated in table 21. It can be seen that in this attribute of quality, the probability of a significant difference being discovered is ≈ 0.064. When we look at the critical value of F at an α of 0.05 with 2 and 34 degrees of freedom respectively, it would require a value of approximately

3.28 to reject the null hypothesis. Table 20 shows the critical value of F for this ANOVA is 2.985, still below the requiements for rejection.

Table 21 - ANOVA summary for equipment safety

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-Ratio	Probability
Between Groups	3.140	2	1.570	2.985	0.064
Within Groups	17.87	34	0.526		

Discussion and Conclusions

Financial Considerations

The evaluation of tuition rates at day care facilities exemplifies the importance of practical versus statistical significance. Tuition rates in the Missoula area were divided into two distinct categories: infants and toddlers. The finding of statistically significant differences between the three types of day care providers' tuition rates for infants was entirely expected. However, while the same differences were expected to be found for tuition rates charged for toddlers, the statistical tests applied to this data seemed to give mixed results. The probability of significant differences was quite high at ≈ 0.74; however, the F score was well below the required value to reject the hypothesis that no difference existed. Referring to table 6, it can be seen that the difference between the high and low mean scores for toddler tuition rates is $1.24 per hour. While there was insufficient evidence to reject the hypothesis, it is obvious that to the single parent, who is working for minimum wage, the $1.24 per hour difference does have practical significance.

While the statistics found in the results section of this paper are necessary to quantify price differences between facilities, it may help to apply the information to the local population to get a clearer picture of what these rates mean to many families with day care needs. By averaging the mean infant tuition of all facilities with the mean toddler tuition of all facilities surveyed, an average cost of $13.51 per day per child was calculated. By multiplying this figure by 250 days, (5 days of child care per week, 50 weeks per year), the average cost of child care in Missoula amounts to $3,377.50 per year. According to the 1990 census, 2,522 families live below the federal poverty line, which in 1989 was $12,675 per year for a family of four (U. S. Department of Commerce, 1991). It could be inferred that for many of those families, 26.6 percent of their income was spent on child care.

To summarize, it appears that the cost of day care in Missoula is comparable to the national average, which as stated previously is approximately $3,000 per year per child. However, it also

appears that a significant portion of the Missoula population cannot afford to pay the full tuition charge unless some other financial assistance is available.

Availability

As shown in tables 13 and 14 (frequency distributions of facility opening and closing times), day care in Missoula Montana is pretty much an 8:00 a.m. to 5:00 p.m. affair. Unfortunately, this time frame is barely adequate for many parents, and totally unacceptable for parents needing child care at times other than the typical workday. Referring to table 2, one can determine an 8:00 a.m. to 5:00 p.m. schedule is sufficient to cover the day care needs of only one of the four largest employers in the Missoula area. The University of Montana, a State agency, generally conforms to the 8:00 a.m. to 5:00 p.m. schedule associated with government employers. While it is true there is an extensive continuing education program sponsored by the University, the number of employees affected by this program is nominal.

Two of the four employers (St. Patrick's and Champion International) in Missoula with 1,000 or more employees are open 24 hours per day. The presence of shift work presents additional logistical problems to parents trying to find adequate day care. While the last employer of over 1,000 employees (SouthGate Mall) is not open 24 hours per day, the stores do remain open until 9:00 p.m. daily except Sunday. Since the majority of day care facilities close between 5:00 and 6:00 p.m., this still represents a significant challenge to employees requiring child care.

This pattern is repeated for the two businesses in Missoula that employ between 750 and 1,000 employees. Montana RailLink and Community Medical Center are both 24 hour per day, year-round industries. Since the majority of day care facilities are only open 5 days per week (Monday - Friday), scheduling day care arrangements still presents a major obstacle.

Continuing with the data provided in table 2, it can be seen that two of the four businesses that employ between 500 and 750 employees (Stone Container and the U.S. Forest Service) also operate on schedules that are not always conducive to the available day care coverage.

On the bright side of this dilemma, the Forest Service is taking steps to alleviate this situation. The Forest Service differs from most federal agencies with its unique responsibility to suppress forest fires. This yearly phenomenon requires many employees to work extended hours on a daily basis for weeks at a time. Often the services of these employees are needed at a moments notice with little time available to make new child care arrangements. To facilitate the ability of employees to be utilized to their highest potential, Region One of the Forest Service in conjunction with the Intermountain Fire Sciences Laboratory is studying the feasibility of establishing an on-site child care facility at the Aerial Fire Depot. It is envisioned this facility would operate around-the-clock, seven days a week during emergency fire situations. While this will create a solution for many Forest Service employees, 8 of Missoula's 14 largest employers still have no satisfactory day care arrangements for the employees who work non-traditional schedules.

Quality Issues

With the explosion of media reports concerning child abuse and sexual abuse of children that occurs at day care facilities across the country, parents are demanding to know that their children are safe. One tactic for avoiding these problems is an open door policy where parents are welcome to drop in at the facility at any time. This issue is important enough to warrant a question on the survey instrument. Only 1 of 37 providers, or 2.7 percent interviewed had a restricted visitation policy. It appears from responses that most day care facilities not only have an open door policy, but encourage parents to visit as often as possible.

Another often cited attribute of quality care is the child-to-care giver ratio. It was somewhat surprising to find that the mean of each facility type surveyed fell below the maximum guidelines established by the FIDCR. This would seem to indicate the quality of care as measured by this particular attribute is above average in the Missoula area.

As expected, Family providers maintained the lowest mean child-to-care giver ratios. What was surprising, was the fact that Center type facilities maintained a lower mean ratio than did Group providers.

Possible exposure to infectious diseases is another component of the overall quality of a day care facility. This concern seems to be of minor consequence in the Missoula day care population. Center type providers have stringent regulations concerning the care for sick children. The fact that these guidelines are accepted and enforced by the day care providers themselves is demonstrated by the fact that only one Center type facility accepted children who were ill and this facility was designed especially for sick children. Group homes are more likely to care for sick children than Centers. However, with only 16.6 percent of these providers caring for children who are ill, it is likely that this segment of day care providers pose little threat in creating an epidemic. Family providers are the most likely to accept a child who is ill with 1 in 3 facilities being willing to care for sick children. While the Family provider is most likely to accept children that are ill, the limited number of children cared for by Family providers effectively limits the number of other children that may become exposed.

As with most issues in the day care area, the care or lack of care for children who are ill is a mixed blessing. While parents may feel comfortable knowing that large numbers of children with infectious diseases are not attending day care with their children, this also means there are very limited resources available to assist parents when their children are ill. Childhood illnesses are a fact of life. If a working parent cannot utilize their regular provider when illness strikes, other arrangements must be made for the duration of the disease. This usually translates into the parent missing work for several days.

Facility cleanliness was examined in this study based on the parameters listed earlier. Examination of the mean scores shown in table 17 shows that Center, Group, and Family facilities rank highest to lowest respectively. This was not altogether unexpected since Center and Group providers are regulated more strictly by State agencies than are Family facilities. While no statistical significance was found between types of facilities, once again the practical significance must be considered. In the real world there were differences between types of facilities as well as between

providers in the same facility category. It is up to the parent to inspect each prospective provider and, based on their personal preferences, decide which facility best meets their needs.

Staff enjoyment was the third component of table 17. Referring to this table, it can be seen that the mean scores for Center and Family providers differ by only 0.1, while the mean score for Group facilities is much lower. While there may be a multitude of explanations for this difference, it appears the child-to-care giver ratio is an excellent indicator of this result. Since the child-to-care giver ratio is lower in both Center and Family facilities, staff members in these facilities may have more time to interact with the children which could reduce the stress associated with overwork and too few resources.

The component involving educational and recreational opportunities presented a problem during the statistical analysis of the data. As noted in table 17, the mean scores were very close for all types of facilities. One reason for the narrow range of scores was the problems encountered comparing the extreme differences in the types of opportunities available at each type of facility. While Family and Group providers consistently offered fewer numbers and less variety of toys and books than did Center operations, these facilities also had fewer children needing the materials. In addition, Center facilities provided a more professional program aimed at developing the educational abilities of their children. However, while Group and Family facilities provided a more informal program for learning the skills usually associated with educational achievement, children attending these types of facilities were exposed to more fundamental skills usually associated with everyday living such as grocery shopping, cooking meals, housekeeping, etc. In addition, while Center type facilities often had state-of-the-art recreational facilities, they are limited to the space at the providers site. Family and Group providers on the other hand, were frequently situated close to an elementary school or park and utilized the playground equipment to supplement their own play areas.

The final component of quality examined in this study concerned the safety of the facility and its equipment. While no statistical difference was found to reject the hypothesis that

differences exist among the different facility types, a practical significance was very real. Once again the importance of these differences to a parent will depend on personal preference. During the inspection segment of the facilities, no obviously dangerous situations were observed. However, this does not mean all facilities were equally safe. Several of the facilities were located at busy intersections with little or no parking available for pick-up and delivery of the children. Some parents would find this unacceptable while others would not be bothered by the arrangement.

To this point, the discussion has concentrated on what was learned about the state of day care in Missoula. However, what was not learned can be just as important. One statistical test that was not completed was an ANOVA test using tuition costs as the dependent variable and comparing it to the quality scores for cleanliness, staff enjoyment, educational and recreational opportunities, and safety assigned to the different types of facilities. This test was intended to determine if providers with a higher quality rating in turn charged higher tuition fees. Unfortunately, when the test was performed, the data was insufficient to provide the needed variances to be analyzed. When the raw data was examined, it was determined that the variety of tuition rates among the providers combined with the relatively similar quality scores frustrated all attempts at analysis. A similar incident occurred during the ANOVA test comparing child-to-care giver ratios with tuition costs.

Reviewing steps that could be taken to remedy this situation it would seem obvious that by simply enlarging the sample size, the desired results could be obtained. The problem associated with this technique is that while only a sample of the Family and Group providers were taken, the entire population of Center facilities were surveyed.

While the following conclusion is not empirically defensible, one could conclude that since tuition rates are so varied, and the range of mean quality scores associated with the facilities was so narrow, it would appear that facilities with higher quality scores or lower child-to-care giver ratios do not consistently charge higher tuition rates.

In conclusion, it appears that the state of day care in Missoula, Montana is uniformly good. While a statistical difference did occur in tuition rates for infants between the three different facilities, this was the only variable measured in which the null hypothesis of no difference between facilities was rejected. While practical significance was found in every area, this significance must be interpreted by the prospective parent. Throughout the interviewing process, there was no finding of child neglect or endangerment. While the day care situation could be improved in terms of availability and afforability, the quality of day care in Missoula appears to be appropriate for a city of its size and location.

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Appendix One

Day Care Survey

1. Name of Facility: _____

2. Type:

1	Family	_____
2	Group	_____
3	Center	_____

3. How long has your facility been in operation?

Years/Months	_____YRs ____MTHs
Date of Operations	_____

4. What are your usual hours of operations? _____ TO _____

5. How do you bill your customers?

_____ Hourly
_____ Daily
_____ Weekly
_____ Monthly

6. What is the cost per child?

$_____ per Hour
$_____ per Day
$_____ per Week
$_____ per Month

7. Do you offer a price reduction for more than one child?

_____ Yes
_____ No

7a If yes; List the amount and limitations

_____
_____
_____
_____
_____

8. Do you care for sick children

_____ Yes
_____ No

9. What is the youngest child you will accept?

_____ Months
_____ Years

10. What is the oldest child you will accept? _____ Years

11. How many caregivers do you employ? _____

Day Care Page 2

12. How many caregivers are on duty today? _____

13. How many children are in the home today? _____

14. What are their ages? _____

15. Do you have Children of your own? _____

16. Are you a part of the Child Care Food Program? _____

17. Are you Registered or Licensed?
_____ Registered
_____ Licensed
_____ None

18. Do you require an upfront deposit?
_____ Yes
_____ No
$_____ Amount

19. Do you have a written policy statement?
_____ Yes
_____ No

20. Do you provide a contract?
_____ Yes
_____ No

21. Are Parents welcome to visit at any time?
_____ Yes
_____ No

22. Do you have a waiting list?
_____ Yes
_____ No
Number on list: _____

23. Are any caregivers qualified in CPR
_____ Yes
_____ No

24. Do you charge extra for late pickup?
_____ Yes
_____ No
Amount $_____

25. Do you have a backup if you are ill?
_____ Yes
_____ No

Quality Issues

1. Name of Facility: _____

2. Type:
   1 Family _____
   2 Group _____
   3 Center _____

3. Is the facility clean? _____ Scale 1 - 5

4. Does staff appear to enjoy themselves? _____ Scale 1 - 5

5. Are infants held when fed? _____ Yes
   _____ No

6. Does each child have a particular place for his/her belongings? _____ Yes
   _____ No

7. Is the diaper changing area adjacent to a sink? _____ Yes
   _____ No

8. Is there a safety strap on the changing table _____ Yes
   _____ No

9. Are toys appropriate size? _____ Scale 1 - 5

10. Does play equipment appear safe? _____ Scale 1 - 5

11. Is the television turned on? _____ Yes
    _____ No

12. What television show is playing? _____