The general purpose of this year-long study was to evaluate the effects of the Edmonton Hospital Workers' Child Care Society programs in three Canadian hospitals on the employers, the employees, and the children served. Specifically, this study investigated the effects of employer-supported child care on (1) employee absenteeism; (2) tardiness; (3) recruitment; (4) retention/turnover; (5) productivity; (6) morale/attitude; (7) shiftwork; (8) awareness, use, and satisfaction with the program; and (9) families' and children's reactions and behavior changes. Data were collected via questionnaires, structured and non-structured interviews, on-site visits, and review of personnel and program records. Findings show that the employer-supported child care programs had no statistically significant effect on absenteeism, tardiness, or recruitment. Statistically significant effects were found in employees' perceptions of lower stress levels, improved concentration on the job, working desired hours, being able to work part-time or full-time, scheduling vacation time, and being able to return to work after the birth of a child when the difficulties due to child-related responsibilities of parent-employees were compared to those of other hospital employees with children less than 13 years of age. These findings are considered to have implications for workers' productivity. (RH)
The Effects of Employer-Supported Child Care in Three Canadian Hospitals

by

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The general purpose of this year-long study was to evaluate the effects of the Edmonton Hospital Workers Child Care Society programs, in three hospitals, on the employers, the employees and the children. Specifically this study investigated the effects of this type of child care on: employee absenteeism, tardiness, recruitment, retention/turnover, productivity, morale/attitude, shiftwork, awareness, use, and satisfaction with the program, and the families' and children's reactions and behavior changes. Methodology included questionnaires, structured and non-structured interviews, on-site visits, and review of personnel and program records. The employer-supported child care programs had no statistically significant effect on absenteeism, tardiness or recruitment. There was some possible effect on parent-employees. There were significant reported effects on parent-employees' attitudes and morale which have implications for improved productivity.
THE EFFECTS OF EMPLOYER-SUPPORTED CHILD CARE IN THREE CANADIAN HOSPITALS

by

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Employer involvement in meeting employees' child care needs has been suggested by some parents, early childhood educators, union groups, business executives, women's groups, and the popular press as one method of helping to meet the child care needs of working parents, especially the increasing numbers of working mothers with young children. Employer-supported child care has been defined as the participation of an employer (e.g., hospital or corporation) in the provision of child care for employees' children (Mayfield, 1985a). This provision of child care can vary in type (e.g., day care centre, information and referral service or flexible personnel policies) as well as degree of employer participation (e.g., provision of start-up costs, partial subsidy of operating expenses or provision of services such as maintenance or accounting).

One example of employer-supported child care in Canada is the three programs of the Edmonton Hospital Workers' Child Care Society (E.H.W.C.C.S.) which were established in 1982 for the employees of three hospitals in Edmonton, Alberta. The general purpose of this study was to evaluate the effects of the E.H.W.C.C.S. programs on (a) the employers, (b) the employees, and (c) the children. The current and future needs for these programs were also assessed.

Background

Employer-supported child care in Canada is a relatively recent development which began in 1964 with an on-site centre at Riverdale Hospital, an extended care facility in Toronto. The next program was an on-site centre at the University of Alberta Hospitals in Edmonton in 1967. Several more employer-supported child care programs were established in the early 1970s; however, the majority of these programs have begun since 1975. A 1985 survey identified 79 programs across Canada (Status of Women, 1985).

Hospitals and Employer-Supported Child Care

Health care organizations have been the leaders in establishing employer-supported child care programs in Canada and the United States. The majority of the current employer-supported child care programs in Canada have been in conjunction with health care organizations (Status of Women, 1985). There are several possible reasons for this involvement of health care organizations in employer-supported child care. It has been suggested that "hospitals are especially likely to value child care. They need recruitment incentives to attract nurses and other highly trained health care professionals ... They also have special scheduling needs ... [and] the fact that they are part of a service industry may also predispose hospital administrators to appreciate the rationale and benefits of child care" (Burud, Aschbacher, and McCroskey, 1984, p. 221). It may be that hospitals, as part of this service orientation, have also developed a greater commitment to maintaining good in-house and community relations than have other non-service oriented employer groups. This was seen in a recent survey of employers in British Columbia that found that hospitals were the most likely group of employers to have had management discussions about child care or taken other steps to investigate the feasibility of employer-supported child care (Mayfield, 1985b).

Effects of Employer-Supported Child Care

The most frequently given rationale for employer-supported child care is that it can result in: improved recruitment, reduced turnover, reduced absenteeism and tardiness, improved employee morale/attitude, improved corporate image and community relations and increased productivity. The National Employer Supported Child Care Project which surveyed 415 employer-supported child care programs in the United States, found that employers reported a positive effect of their programs in terms of: morale (90% reported a positive effect), recruitment (85%), public relations (85%), worker satisfaction (83%), worker commitment (73%), turnover (65%), worker motivation (63%), absenteeism (53%), productivity (49%) and tardiness (39%) (Burud, Aschbacher, and McCroskey, 1984). On the other hand, other researchers have found no or very few effects in these areas (c.f., Miller, 1984).
One hospital that systematically evaluated the effects of its child care centre program was Sioux Valley Hospital, a community general and teaching hospital in Sioux Falls, South Dakota. The findings were:

- an overall decline in employer turnover rate from 35% to 33%, with a 24% rate for parent-users of the centre;
- a decline in absenteeism by parent-users from 6% to 1% (hospital average was 4%);
- an improvement in hospital recruitment of registered nurses, medical technicians, and radiology technicians;
- a better retention rate for nursing and technical staff;
- an increase in publicity in magazines and newspapers which helped the hospital's public image;
- an increase in productivity of employees;
- a higher level of employee morale, commitment, motivation, and work satisfaction; and
- a net cost benefit in the first year of operation of $18,102. (Burud, Aschbacher, and McCroskey, 1984)

The first Canadian employer-supported child care program at Riverdale Hospital in Toronto was begun in order to assist in the recruitment of needed health care professionals. In 1963, the hospital had expanded its capacity from 104 to 800 beds. As of 1964, 250 employees served 160 beds. The day care program is credited with helping the hospital recruit about 150 employees in a six month period (Bureau of Municipal Research, 1981). There has been little research in Canada on the effects of employer-supported child care programs. The information available at the time of this study was descriptive and anecdotal.

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The Edmonton Hospital Workers' Child Care Society Programs

The 1980 contract negotiations between the United Nurses of Alberta and the Alberta Hospital Association resulted in a collective agreement containing the provision for the establishment of a committee to examine the costs, benefits, alternatives, and need for child care. This ad hoc committee included representatives from the Alberta Hospital Association, the United Nurses of Alberta, the Alberta Union of Provincial Employees, the Health Sciences Association of Alberta, the Canadian Union of Public Employees, and the Alberta Association of Registered Nursing Assistants. Their report recommended the establishment of the Interunion/A.H.A. Child Care Steering Committee to oversee the planning, development, and evaluation of a pilot child care project. The result was a non-profit society, the Edmonton Hospital Workers' Child Care Society, which began three child care programs for the children of employees in Royal Alexandra Hospitals (a general and teaching hospital), Glenrose Hospital and Norwood Extended Care Centre (rehabilitative care facilities).

The first child care program was an off-site day care centre which opened in July 1982. At the time of this study, it enrolled 71 children from 19 months to six years of age of whom approximately 75% are children of hospital employees; the remainder are from the community. The second program, begun in October 1982, was a satellite family day home service for children from birth to school-age. It was designed to meet the needs of employees who work evening and night shifts and weekends as well as employees with infants and those who prefer a family day home setting. There were 95 providers caring for 212 children of whom 25% have parents who are hospital employees. The out-of-school care program began in August 1984 to meet the needs of older children before and after school and during school holidays. The program enrolled 11 children, three of whom are children of hospital employees.

Purpose of the Study

The general purpose of this study was to evaluate the effects of the E.H.W.C.C.S. programs. Specifically, this study addressed the following questions:
1. What were the effects of the E.H.W.C.C.S. programs on the following employer concerns: (a) recruitment, (b) retention/turnover, (c) absenteeism and tardiness, (d) productivity, and (e) employee morale/attitude?

2. What were the effects of the E.H.W.C.C.S. programs on employees including: (a) awareness of the E.H.W.C.C.S. programs, (b) reasons for employees' use of these programs, (c) parent-employees' level of satisfaction with the program, and (d) effect of job-related factors on child care needs and arrangements?

3. What were the effects of the E.H.W.C.C.S. programs on the children in these programs in terms of: (a) children's initial reaction to the program, (b) children's likes and dislikes about the program, and (c) changes in children's behaviour or in the family since beginning in the program, and (d) previous child care arrangements as compared to the E.H.W.C.C.S. programs?

4. What are the current and future needs for this type of program considering the factors of (a) past and present enrolment patterns, (b) current hospital employees' child care needs and preferences, and (c) current child care arrangements of employees and reasons for these arrangements?

Methodology

The evaluation of the Edmonton Hospital Workers' Child Care Society programs was a 12 month project beginning July 1984. This was the third year of the programs' operation. The principal methodology consisted of questionnaires, interviews, and review of relevant program and personnel records.

Sources of Information

In evaluating an employer-supported child care program, it was judged to be important to utilize several sources in order to obtain the needed information and to cross-validate the information. In this study the following sources of information were used: parents employed by the hospital who
had children enrolled, currently or previously, in the E.H.W.C.C.S. programs (these people are referred to as "parent-employees"), hospital employees who had never had children enrolled in an E.H.W.C.C.S. program, supervisory personnel, personnel officers, directors of the child care programs, children enrolled currently in the program, past and current board members, administrators in professional and government organizations, and personnel and program records.

Instrumentation and Procedure

In order to access information from the above sources, the following instruments were used:

Parent-Employee Questionnaires - Five short questionnaires were distributed to parent-employees at two month intervals. In the day care centre, a questionnaire was sent home for each family with a child enrolled in the centre. In the family day homes, a questionnaire was sent to each family where a parent was a hospital employee. Only parent-employees were surveyed as approximately 75% of the day home users were not hospital employees and therefore could supply only limited information related to this study. The questionnaires were distributed and returned in sealed envelopes via the day care centre or the day home providers. The return rates ranged from 51-78% for an overall average return rate of 62%.

The first questionnaire, distributed in August, asked parents for descriptive information (e.g., date of birth of their child and when the child began the program) and the number of days they were unable to go to work because of child-related responsibilities and the number of hours they arrived late to work or left early for this reason. The last two items were included on all five questionnaires. The second questionnaire was distributed in October and asked parents how they had first heard of the E.H.W.C.C.S. program, if they had recommended the program to others, previous types of child care, why they enrolled their child and hours the parent typically worked. The third questionnaire in December asked about parent satisfaction with program hours and fees, preferred location, information on the family, and the effect of the program on their absenteeism or tardiness in the past year. The fourth questionnaire in February asked about the child's initial adjustment to the program and subsequent changes in the child and family, amount of travel time to the centre or day home, and the importance of the child care
program in working, returning to work or changing jobs. The last questionnaire asked parents to indicate qualities most important to them in selecting child care, the effects of child care on job-related topics, and any problems they had in locating child care.

Hospital Employee Questionnaire - In January, a questionnaire* was distributed with the pay envelopes of all hospital employees at Royal Alexandra Hospitals, Glenrose Hospital and Norwood Extended Care Centre. The employees were asked to complete the questionnaire and return it to a closed box near each cafeteria. The overall return rate for the three hospitals was 12%. Of the questionnaires returned, half were from Royal Alexandra employees, 42% from Glenrose and 8% from Norwood. In terms of the total hospital employee population, Glenrose was overrepresented in the returns (42% vs. 22% of the total employees), Royal Alexandra was underrepresented (50% vs. 70%) and Norwood was representative (8% vs. 8%). Data from these questionnaires for each hospital were handled separately whenever possible because of this representativeness problem.

Supervisors' Questionnaire - A questionnaire was distributed in May to supervisory personnel in the three hospitals. The items on this questionnaire were designed to assess the supervisors' perceptions of the absenteeism, tardiness, productivity, morale, retention rate of parent-employees as compared to other employees. The number of questionnaires returned was 90.

Interviews of Parent-Employees - During the first two weeks of May, a stratified random sample of current and past parent-employees was interviewed. The directors of the day care centre and family day homes provided the researcher with a list of all past and current parents who were hospital employees. Parent-employees who had been in the program fewer than six months were eliminated from the sample as it

*This questionnaire had been pilotted previously with a group of health care professionals in Victoria, B.C. of the questionnaires vs. 22% of the total employees), Royal Alexandra was underrepresented (50% vs. 70%) and Norwood was representative (8% vs. 8%). Data from these questionnaires for each hospital were handled separately whenever possible because of this representativeness problem.
was judged that six months was a reasonable length of time to become familiar with the program. The sample was then stratified on past and current users of the day care centre and family day homes and the hospital of employment. For each stratification, two-thirds of the parents were interviewed based on random selection within that stratification.

The selected parent-employees were telephoned, the purpose of the interview was explained and they were asked if they wished to participate; anonymity and confidentiality were guaranteed. A total of 43 parent-employees were interviewed: 29 current program users and 14 past users. In addition, three of the four parent-employees from the out-of-school care program were interviewed. (As the program had only been in operation since August 1984, no stratification by current or past users was done.) In order to protect the anonymity and confidentiality of their responses, this group was included with the day care centre respondents for purposes of analysis.

Other Interviews and On-Site Visits - Structured and non-structured interviews were done with the program directors and personnel officers of the three hospitals in August, December, and May. Past and current board members were interviewed in May to obtain information on the Edmonton Hospital Workers' Child Care Society. An on-site visit in May to the day care centre included informal discussion with staff members and children. Additional professionals in the hospital and child care communities were contacted to provide general background information. Table 1 is a summary of the data sources and methodology of this evaluation.

Insert Table 1 About Here

Analyses of the Data

The responses from the hospital employees' questionnaire were coded and recorded for computer analysis using the SPSS-X program. In addition to descriptive data, cross-tabulations of selected variables were done. Chi square tests of significance were done where appropriate.
The level of significance for this study was set at .05. The data from the parent-employees' questionnaires and interview were analyzed descriptively, cross-tabulated for selected variables, and t-tests of significance were done where appropriate.

Limitations of the Study

The major limitation of this study is the paucity of base-line data from before or at the beginning of the programs. Historical data on absenteeism, retention and recruitment could be retrieved from personnel and payroll records. However, information on the children, parents' attitudes, and employee productivity were not obtained at the beginning of this three year project and therefore pre-post comparisons are limited. While the lack of provision for collecting base-line data is not uncommon in field-based program evaluation in this area, it did limit the research designs and analyses that could be used. Other limitations of this study are those associated with the use of questionnaires (e.g., self-reported data, respondents' commitment and motivation, and representativeness of the respondents).

Results and Discussion

Employer-supported child care can affect the employer, the employees and the children using the program. The results of this study are described and discussed in terms of (a) the effects on the employer, (b) the effects on the employees, (c) the effects on the children, and (d) the current and future need for the programs.

The Effects on the Employer

Employer concerns include the effect of employer-supported child care on absenteeism, tardiness, recruitment, retention/turnover, morale/attitude, and productivity.

Absenteeism - One of the most frequently mentioned potential effects of employer-supported child care is the reduction of absenteeism. Absenteeism has also been reported as the most frequent child care related problem for employers (Copeland, 1982). Although "health care organizations are particularly prone to having absenteeism problems" (Schneller, Kopelman and Silver, 1982, p. 63), it is open to
debate how much of this absenteeism is related directly to child care responsibilities.

Some hospitals with employer-supported child care programs have reported reduced absenteeism, e.g., Mt. Vernon Hospital in Virginia (Reece, 1982) and St. Francis Regional Medical Center in Kansas (Leon, 1983). Sioux Valley Hospital in South Dakota reported a decrease in the absenteeism of parent participants from 6% to 1% at a savings of $89,856 a year (Burud, Aschbacher and McCroskey, 1984).

The average number of days absent per employee in Alberta hospitals was 6.5 days per year (.54 days per month); smaller institutions tended to have lower absentee rates than larger institutions (Alberta Hospital Association, personal communication). The average number of absentee days per month per employee for Glenrose and Royal Alexandra Hospitals were almost the same (.62 and .64 respectively). However, when interpreting averages it should be kept in mind that there can be great variation within each group. Norwood's average of .37 days fit the overall provincial pattern of smaller institutions having lower absentee averages. The differences among the absentee averages for the three hospitals and between the hospitals and the Alberta average were not statistically significant.

For the period July 1984 to May 1985, the parent-employees using the family day homes and all the parents using the day care centre were asked to give the number of days they were unable to go to work each month due to child-related responsibilities. The average number of absentee days per month for each group is presented graphically in Figure 1.

The pattern of absenteeism due to child-related responsibilities was very similar for the day care centre and family day home parent-employees. The pattern for users of the day care centre who were not employees of the three hospitals showed a generally higher average absentee rate than that of parent-employees. Overall, the pattern of absenteeism was more similar for day care parent-employees.
and family day home parent-employees than was the pattern within the two groups of program users.

In order to compare the average number of monthly absences due to child-related responsibilities for all hospital employees with the parent-employees who use the E.H.W.C.C.S. programs, all employees with children under age 13 who completed the general hospital questionnaire were asked how many days of work they missed in January 1985 due to child-related responsibilities. These data were then compared by union group to the data for parent-employees from the three hospitals who used the E.H.W.C.C.S. programs during January. Overall, the parent-employees using the E.H.W.C.C.S. programs had a lower absentee average for January 1985 than other hospital employees with children under age 13.

In order to try and determine if the number of days parent-employees were absent changed after their child had begun an E.H.W.C.C.S. program, the personnel records of each employee were analyzed. The number of days the parent was absent from work for 12 months before the child began an E.H.W.C.C.S. program were calculated to serve as the baseline. Then the number of days the parent was absent for 12 months after enrolment were determined and the change in number of days calculated. Parent-employees with newborns were eliminated because of maternity leaves before the birth of the child. Parent-employees who did not work at the hospitals for 12 months before or after their child was enrolled were deleted. Also deleted were parent-employees for whom no absentee data were available for the time period needed (e.g., floats). The number remaining in the analysis was 30. Table 2 is a summary of the changes in the number of days absent in the year before and after their child began an E.H.W.C.C.S. program.

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For the total group, there was an increase in the number of days parent-employees were absent. The only group that was absent fewer days after their children began an E.H.W.C.C.S. program was the Royal Alexandra parent-

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employees. None of the differences was statistically significant.

The above data were total days absent and did not consider the reason for the absences. In other words, the parent's increased absences could be due to his or her more frequent illness while the number of absences due to child-related reasons decreased. Therefore, in order to get a more accurate picture of the effect of the employer-supported child care programs, these data were analyzed further in terms of the number of absences due only to child-related reasons. The parents were asked during an interview what percentage of their absences was due to child-related responsibilities. Nearly all of these parents responded either "All," or "None." The parent-employees who had none of their absences due to their children were eliminated from further analysis. Table 3 is a summary of the changes in the number of days parent-employees were absent due solely to child-related responsibilities in the year before and year after their children were enrolled in an E.H.W.C.C.S. program.

When the reason for the absences was controlled, there was less change in the number of days absent than there was in the previous analysis. None of the differences reported on Table 3 were statistically significant. Therefore, for these parents, their children's participation in an employer-supported child care had no statistically significant effect on their number of days absent due to child-related responsibilities. In addition to the statistical analysis described above, current and past parent-employees were asked if they thought the number of times they had been absent due to child-related reasons had changed since they enrolled their child in an E.H.W.C.C.S. program. Of 42 respondents, 88% said there had been no change.

All of the supervisory personnel (n = 11) who supervised a parent-employee using an E.H.W.C.C.S. program reported that there were no differences in the absences from work of these employees compared to other employees. None of the five supervisors who reported having an employee in their
department begin an E.H.W.C.C.S. program during their period
of supervision noticed any change in that employee's number
of days absent. The perceptions of the parent-employees and
the supervisors support the statistical analysis that showed
no significant change in the number of days absent due to
child-related reasons before and after beginning an
E.H.W.C.C.S. program.

Similar analyses of the tardiness of parent-employees
compared to other hospital employees showed the same pattern
of results as for absenteeism. The parent-employees
generally had a lower average tardiness rate than did other
hospital employees or non-hospital parents using the child
care programs. Parent-employees (82%) reported no change in
their patterns of tardiness since enrolling their children in
the E.H.W.C.C.S. child care programs. The supervisors
concurred and stated that there was no difference in
tardiness between parent-employees and other employees.

Recruitment - Recruitment and retention of health
professionals has been a primary motivation behind the
development of many hospital employer-supported child care
programs. The rationale has been that in a competitive
market, an employer supported child care program may make one
employer more attractive than the others without such a
program and that child care can be used to not only attract
new workers but also returning workers. A 1980 survey of
nursing manpower in Alberta reported that day care would be a
necessary condition for 245 nurses (16.2% of the sample) to
return to work (Alberta Hospital Association, 1980). The
report recommended an examination of practical means for
providing child care for nurses.

Kadlec Hospital in Richland, WA credits its hospital-
based day care centre with helping to attract and retain
staff. From September 1980 to March 1981, 11% of the new
employees said the day-care centre influenced their decision
to work at the hospital (Hospital's day care, 1982).
Presbyterian Hospital in Charlotte, NC reported that its day
care centre helped recruitment and that nurses returned to
work sooner after the birth of a child (Burke and Robinson,
1983). In Canada, the provision of day care at Riverdale
Hospital in Toronto was credited with helping to recruit
"about 150 employees within six months" (Bureau of Municipal
In discussing recruitment and retention of employees it is important to place such discussion in the context of the economy at that time. There is more need for incentives for recruitment of employees in times of economic expansion than during recession. The economic slow-down in the past two years was a confounding variable in analyzing the recruitment and retention effects of the E.H.W.C.C.S. programs. For example, shortly after these programs began, the vacancy rate for R.N.s in Alberta was 2.6; in March 1984, it was 2.1. During this same time period, the number of unemployment claimants rose from 152 in September 1982 to 430 in March 1984 (Alberta Health Disciplines Committee, personal communication, 1984). In April 1984, there were 964 job seekers in medical and health areas and only 22 jobs listed (Edmonton Journal, April 23, 1984).

Hospital employees were asked to answer the question "If you had a preschool child, how important would it be to you to have a child care facility available at or near your place of work?" Of the 408 respondents, 61% said it would be very important, 24% said somewhat important and 15% said not important. Hospital employees were also asked "If you had a preschool child, would the availability of a child care facility at or near your place of work be a condition for your accepting employment or looking for new employment at a hospital?" The 408 respondents were almost equally divided between yes (36%), no (34%) and don't know (30%). It seems that while availability of child care was very important in being able to work, most employees in this study did not perceive it as a precondition for employment. The directors of the E.H.W.C.C.S. programs and members of the hospital personnel departments commented that most parents seemed to look for the job first and then the child care. There had been a few cases where a parent could not accept a job because child care could not be arranged.

When 41 current and past users of the E.H.W.C.C.S. programs were asked if they thought these programs helped recruit new employees, 66% responded affirmatively, 10% negatively and 24% didn't know. A higher percentage of past users (83%) than current users (61%) perceived a positive effect. There was no difference in the response pattern due to hospital of employment, type of child care program used or number of years of employment. One parent commented "I wouldn't be able to work without day care." One supervisor wrote "The availability of the service is valuable in attracting potential employees to the Glenrose even if in the
final analysis they choose not to use the service. It is my perception that Staff view the E.H.W.C.C.S. very positively!!'

During September through November, new employees attending orientation were asked about the number of their children eligible for an E.H.W.C.C.S. program, their own awareness of the program and if they were using the program. Of the 125 new employees attending orientation, 5% had children under age 13, 6% were aware of the program and only one person was using the program. This parent selected the program because of the recommendation of a colleague at another hospital and because of the location. Thus, out of these 125 employees there was only one for whom the E.H.W.C.C.S. program played a role in beginning work at the hospital. When the hiring patterns of the hospitals' peak hiring months of June - October and least hiring months of December - March were compared to the yearly enrolment patterns of the E.H.W.C.C.S. programs, no strong relationship could be found.

Retention/Turnover - Canada has a high labour turnover rate (Crane, 1980). In industries with a high turnover rate among women employees, child care responsibilities can be a major factor (Purnell, 1977). Personal/family responsibilities were the third most frequently given reason by women for leaving their previous jobs (Canadian Advisory Council, 1983). Recent surveys of nurses in Alberta, B.C. and Texas, reported similar results (Alberta Hospital Association, 1980; Registered Nurses' Association of British Columbia, 1980; and Wandelt, Pierce and Widdowson, 1981). According to the staff of the personnel departments of the three hospitals in this study, the most frequently given reason for terminations was "family reasons"; e.g., maternity leave, staying home to raise a family, spouse transferred, etc.

In 1981, Health Sciences Centre in Winnipeg reported a turnover rate of 2% per month compared with a national average of 8%; this was credited, at least in part, to their employer-supported child care program (Jamieson, 1981). Huntington Hospital in Pasadena reported a 5% vacancy rate for nurses compared to a 20% rate for California (Lewis and Sloane, 1982). Kadlec Hospital in Richland, WA decreased its average turnover rate from 3.3% to 2.5% during the centre's first six months of operation. At Sioux Valley Hospital in
Sioux Falls, SD, turnover decreased 65% monthly or 7.8% annually since the establishment of the child care service. In 1982, the parent users' turnover rate was 24% compared to 33% for the rest of the hospital; this represents a savings of $159,600 annually (Burud, Aschbacher and McCroskey, 1984). Doctor's Hospital in Milwaukee reported an 88% retention rate over a one year period for those workers who were attracted to the hospital because of the child care facility (Nailen, 1972).

The net effect of hires vs. terminations was calculated for each of the three hospitals on a monthly basis for one calendar year. When these data were compared to the yearly enrolment patterns of the E.H.W.C.C.S. programs, no significant relationship was found. The turnover trends of the hospitals were not reflected in the pattern of enrolment for the E.H.W.C.C.S. or vice versa. Again, any analysis of turnover of employees for the period 1982-1985 was confounded by the recessionary state of the economy.

From July-December 1982, only two children of parent-employees left the day care centre program but their parents remained hospital-employees. In 1983, of the 20 children of parent-employees who left the program, five of the parents (25%) left employment at the hospital. In 1984, 3 parent-employees out of 15 (20%) whose children left the program left employment at the hospital; the other 80% continued to be employed by one of the three hospitals. During the period February-August 1984, 27 children in the family day homes terminated because their parents lost their jobs. The 41 parent-employees interviewed had worked for their respective hospitals a median of six years (range 1-13 years), and therefore, it might be considered that the hospitals have an investment in many of these experienced workers and therefore their retention might be seen as beneficial.

In order to assess if child care had caused problems in the past, hospital-employees were asked if they had ever had to quit a job or taken a leave of absence (other than maternity leaves) because of child care responsibilities. Sixteen percent (16%) of the 406 respondents indicated they had. Of the 28 parent-employees who were asked the same question during the interview, three (11%) said they had or "almost had to" quit a past job. These statistics seem to support other studies that indicated that job turnover can be caused by problems with child care for some employees.
Past and current parent-employees using an E.H.W.C.C.S. program (n = 41) were asked if they thought these programs helped the hospitals retain employees. Overall, 83% of the respondents said yes, 5% said no and 12% didn't know. When these responses were analyzed by past and current users, a higher percentage of past users agreed (92% agreed, none disagreed) than did current users (79% agreed, 7% disagreed). There was no difference in response patterns due to hospital of employment or union.

When these same respondents (n = 41) were asked how important their current child care arrangements were to their own continuing employment, 66% indicated they were very important, 20% somewhat important, 12% not important and 2% didn't know. Two parent-employees' comments were (a) "I'm a supervisor and have people staying because of day care availability; otherwise they'd have to leave the hospital", and (b) "If I hadn't found the family day home I'd have had to quit".

None of the supervisory personnel who supervise a parent-employee using an E.H.W.C.C.S. program reported any differences in the turnover/retention rates for these employees as compared to hospital-employees in general. One nursing supervisor wrote "Our high turnover is not due to child care arrangements." Therefore, although the E.H.W.C.C.S. programs had helped some hospital-employees to continue working, the numbers were too small to draw any definitive conclusions. In addition, the recession confounded the analysis of recruitment or retention effect during this time period.

Stress, Child Care and Morale/Attitude - In the past few years there has been an increase in the number of articles in both the professional journals and popular press on the effects of stress due to the conflict between work and family life. This stress can affect employee productivity, attitude, job satisfaction, retention, absenteeism, etc. In an Alberta survey of nurses, 356 comments by respondents were related to working conditions: "shift work, long hours, weekends, on call, short notice, holidays, overtime, all take their toll of the nurse and affect the family" (Alberta Hospital Association, 1980, p. 269). Employer-supported child care has been seen as one way of helping to reduce the stress associated with finding and keeping high quality child care.
In order to assess if child care arrangements were affecting hospital-employees and parent-employees on-the-job, parents with children under age 13 were asked if they had had any difficulties in ten different areas related to child care. Of the hospital-employee respondents, 72% indicated they had experienced some difficulty in the past year. Of the 33 parent-employees, 45% indicated difficulties. Table 4 is a summary and comparison of their responses.

Insert Table 4 About Here

Stress was the most frequently indicated response for the total group of hospital-employees. For parent-employees the most frequently reported child care difficulty was working overtime. The E.H.W.C.C.S. child care programs would probably not help with this difficulty because the day care centre closes at 5:45 p.m. which limits the overtime of parent-employees working days (e.g., 9 - 5). In addition, several users of the programs stated that they couldn't afford to work overtime, because the extra child care hours needed for overtime work would push them into the next fee category.

In areas of difficulty where an employer-supported child care centre might be thought to be helpful (e.g., stress, concentration, returning to work after the birth of a child, working part-time or full-time), the differences in responses between hospital-employees and parent-employees were statistically significant. In other words, the E.H.W.C.C.S. program users were statistically less likely to experience difficulty at work due to child care than hospital-employees in general. This finding has implications for employee productivity. Employees who have lower stress levels, greater concentration, work their desired hours and number of hours, and return to work after the birth of a child are likely to be more productive efficient workers than other employees who are having problems in these areas.

Parent-employees who were using the E.H.W.C.C.S. programs were asked if they had ever felt worried about their child while working. Of the 28 respondents, 71% said no, 11% said yes, and 18% said they did occasionally at the beginning but not now. There was no difference in pattern of response due to type of program used or hospital of employment.
Current and past parent-employee users of E.H.W.C.C.S. programs were asked if having a child in an E.H.W.C.C.S. program had any effect on their attitude towards their job or the hospital. Of the 35 respondents, 54% replied negatively and 46% positively. Two respondents specifically mentioned that the E.H.W.C.C.S. program was good for the public image of the hospital. Another respondent commented that having the E.H.W.C.C.S. programs made her aware of the hospitals' lack of interest in the child care needs of employees.

Other comments by parent-employees on the effects of the E.H.W.C.C.S. programs on their attitudes or morale included:

- Having my child in the out-of-school program has given me peace of mind.
- I am more secure because I know the day care is well-regulated and well-run.
- I still worry occasionally about playground safety.
- I work because I have to but I feel guilty and wonder if others can care as well.
- My child is so happy there [at the day care centre] that it reduces my stress.

All of the 11 supervisory personnel who supervised parent-employees using an E.H.W.C.C.S. program reported that there was no difference in the parent-employees' attitude towards their job or the hospital when compared to other employees in their department. Of the five responding supervisors who reported an employee in their department beginning an E.H.W.C.C.S. program during their period of supervision, none thought there had been any change in the employees' attitudes toward their job or the hospital.

Job Performance and Productivity - Increased productivity is often listed as one of the potential benefits of employer-supported child care. Of all the possible benefits, it is probably the most difficult to assess reliably. It is particularly difficult to measure productivity in health care organizations (Herzog, 1985). In a factory with an employer-supported child care program, one could measure the number of widgets produced by parent workers before and after beginning the child care program.
The nature of health care does not permit such simplistic analysis. In addition, the definition of productivity itself is open for debate. In a survey of unions and management, Katzell and Yankelovic (1975) reported that a majority of the respondents agreed that productivity could mean quality of output, quantity of output, overall efficiency, effectiveness, and could include factors such as absenteeism, turnover, employee loyalty, morale, or job satisfaction. Therefore, improvement in any of these areas could be seen as improvement in overall productivity. In the national survey of organizations with employer-supported child care programs, 49% of the total respondents (50% of the health care respondents) reported that child care had a positive impact on productivity. Twelve percent (12%) rated child care in the top 20% of all the employee benefits they offered in terms of impact on productivity and 41% rated it in the top 40% (Burud, Aschbacher and McCroskey, 1984).

During the interview, 12 past parent users of the E.H.W.C.C.S. program were asked if they had noticed any change in their efficiency in doing their job when their child first began in E.H.W.C.C.S. program. A majority of the respondents (58%) reported a change. All of these respondents were using the day care centre. When asked about this change, all reported they were less worried, more secure or relaxed and therefore better able to concentrate on their work. When the past-users were asked if their efficiency on the job had changed since their child was no longer in an E.H.W.C.C.S. program, 100% said there had been no change. Therefore, it appeared that any overall change in job efficiency, as perceived by the parent-employees, had lasted. However, this should be interpreted with caution due to the small number of respondents and because all of the 11 supervisory personnel, who have parent-employees in their departments, reported that there was no difference in the efficiency of parent-employees compared to hospital employees in general.

Parent-employees who had used the E.H.W.C.C.S. program were asked if they had had to take time off work to find child care. Of the 24 respondents, only one had had to take-off time. The majority of the respondents (71%) reported that it took less than a week to organize their child care arrangements. Thus, the use of an employer-supported child care program could save employees time they might normally have to spend looking for care arrangements.
The Effects on the Employees

Employer-supported child care can affect the employee and the family. The families are the consumers of the E.H.W.C.C.S. programs. In a sense, they served as formative evaluators in that if the parents were not satisfied with the program, they could have removed their children from the program. Indeed, parent satisfaction has been shown to be "one very important indicator of the success of child care programs in meeting family needs" (Burud, Achbacher, and McCroskey, 1984, p. 173).

Employee Awareness of the E.H.W.C.C.S. Programs

Parents of young children needing child care often obtain information from a variety of sources. Typically, there does not seem to be one standard source of information. Parent-employees were asked how they first heard about the E.H.W.C.C.S. program. The general awareness level of all hospital employees and their source(s) of information were also investigated.

In a survey of all employees at the three hospitals, 61% of the respondents indicated they were aware of the E.H.W.C.C.S. programs. As the majority of hospital employees, whether they have young children or not, were aware of the programs, it seemed as though the publicity about these child care programs had been effective. However, one respondent wrote that the first she/he had heard of the E.H.W.C.C.S. programs was from answering the questionnaire.

The first source of information about the E.H.W.C.C.S. programs for a majority of both parent-employees (93%) and hospital employees (91%) was a source directly associated with the hospitals (i.e., co-worker, poster/brochure, orientation session or union). Less than 1% of the total group reported the media as a first source of information. Thus, in this case, time and money spent on television, radio and newspaper publicity did not seem to be effective as a means of informing potential users about the programs. However, media might be useful for promoting the hospitals' public image in the community or for helping to recruit family day home providers. For parent-users who were not working at the three hospitals, the most frequent sources were poster/brochure (26%), friend who was not a hospital employee (22.5%), a co-worker (22.5%) or social worker/public health nurse/family physician (16%). When first source of information was analyzed by program, it was found that for
the users of the day care centre 32% reported poster/brochure and 28% co-worker. The family day home users' first source was co-workers (50%) and then poster/brochure (28%).

**Reasons for Beginning and Leaving the E.H.W.C.C.S. Programs**

The responses of 73 current and past users of the E.H.W.C.C.S. programs to the question on why they enrolled their children in an E.H.W.C.C.S. program rather than another program are summarized in Table 5.

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The current parent-employees using the E.H.W.C.C.S. and hospital employees with preschool children who were not using the programs were asked to identify the most important factors in selecting child care for their children. The top five factors judged most important by the hospital employees (n = 183) were:

1. Dependability of care
2. Safe and clean facility
3. Quality of the program
4. a. Staff qualifications
   b. Staff-child ratio
5. Hours of operation

Current parent-employees (n = 37) top five factors were:

1. Quality of the program
2. Staff qualifications
3. Dependability of care
4. Safe and clean facility
5. Hours of operation

Overall, the most important types of factors in selecting and enrolling their children in a child care program were (a) quality of the program, (b) quality of the staff, and (c) dependability of care for the hours needed. Other studies of employer-supported child care (e.g., Burud, Aschbacher and McCroskey, 1984; Nellum, 1970) and child care in general (e.g., Ruopp et al., 1975) reported similar findings.
Another factor that is often suggested as being important in selecting child care is the travel time from home to the child care program. Parent-employees who were current or recent users of the E.H.W.C.C.S. \((n = 32)\) spent an average of 32 minutes a day travelling from home to the program and home again. The day care centre/out-of-school care parent-employees \((n = 19)\) spent an average of 28 minutes a day. The family day home parent-employees spent a daily average of 39 minutes. It has been reported that parents are unlikely to use child care located more than 30 minutes (i.e., 60 minutes a day) from their home (Weber and Tulloss, 1979). The E.H.W.C.C.S. parent-employees fit this pattern as only two parents spent more than 60 minutes in daily travel time.

The location of the child care program seems to be an important consideration for parents with young children (Swartz, 1972; Timmins, 1982). Location was given as a reason for enrolment for 26% of the day care centre/out-of-school care users and 10% of the family day home users. Also, other child care available closer to home was the most frequently given reason \((34\%)\) for current hospital-employees not using an E.H.W.C.C.S. program. The majority of these employees rated as very important a location near home \((63\%)\) or school \((50\%)\) but only 28% rated a location near work as very important in choosing child care. Current parent-employees using an E.H.W.C.C.S. program did not have a definite preference for a location near work over a location near home or school.

In the survey of all hospital employees, parents of preschool-aged children who were not currently enrolled in a E.H.W.C.C.S. program were asked why they were using other arrangements. The respondents' \((n = 129)\) most frequently given reasons \((total = 145)\) for using other arrangements were:

1. Closer to home = 34%
2. Less costly = 17%
3. a. Spouse at home = 7%
   b. Prefer care in home = 7%
4. Better able to cover hours needed = 6%
5. a. Prefer care by relatives = 5%
   b. Had care arrangements before E.H.W.C.C.S. began = 5%
   c. Didn't know about E.H.W.C.C.S. = 5%
The major reasons for choosing a different child care program rather than an E.H.W.C.C.S. program related to personal or family preferences for location or in-home care or for financial reasons (current arrangements less costly or spouse at home). Weber and Tulloss (1979) reported the same reasons for not enrolling children in a similar program in Vermont.

Based on data from interviews and from the day care centre files, the five most frequent reasons for leaving the day care centre program were (n = 37):

1. Problem with fees (dislike of fee structure or amount, non-payment) = 19%
2. Changed to weekends, evenings or nights (most went to family day homes) = 16%
3. Child went to kindergarten or grade 1 = 13.5%
4. Moved/changed jobs = 11%
5. a. Maternity leave = 8%
   b. Spouse now unemployed = 8%

Many of these responses related to changes in the family such as moving, maternity leave, unemployment, or the child beginning elementary school. Only one of the above reasons reflected any dissatisfaction with the E.H.W.C.C.S. programs themselves.

Based on data provided by the director of the family day home program and interviews, the most frequent reasons for leaving the family day home program were (n = 138):

1. Parent lost his/her job = 27.5%
2. Parent moved = 16%
3. Changed to another type of care (e.g., nanny, day care centre) = 13%
4. Provider terminated = 9%

(The other responses were scattered and no one category had more than 5% of the total responses.)

One way to measure parental satisfaction was to ask the parent-employees if the program used by their child had met their needs and expectations. When 43 current and past parent-employees were interviewed and asked if the E.H.W.C.C.S. programs had met their needs and expectations, 91% responded affirmatively, 9% said somewhat, and no one responded negatively. There were no significant differences
in the pattern of responses between programs, current and past users, or between hospitals.

During interviews, 43 current and past parent-employees using the E.H.W.C.C.S. programs were asked how satisfied they were with the quality of their child's program. Not one respondent said they were not satisfied: 58% were very satisfied, 33% were satisfied, and 9% were somewhat satisfied. The dissatisfaction mentioned was mild and spread across the three E.H.W.C.C.S. programs. Three parents' comments were: (a) "A God send, best day care in Western Canada." (b) "I've been very lucky having a good day home since my child was six months old." and (c) "Up until a couple of months ago I was very satisfied; my provider is better with younger children."

Another way to assess overall satisfaction with the E.H.W.C.C.S. programs was to ask the parents "If you were to do it all over again now, would you choose the same care arrangements?" Of a random sample of 28 parent-employees, 96% stated that they would choose the same arrangements. No one said they definitely would not and 4% said maybe. Other studies of employer-supported child care have also reported very high percentages of satisfied parent-users (Burke and Robinson, 1983; University Research Corporation, 1982). A study by McCroskey reported that parents using "employer-supported child care were much more satisfied than other parents" (Burud, Aschbacher and McCroskey, 1984).

Because satisfaction with the staff is an essential component of parents' overall satisfaction with a child care program, the 43 current and past users of the three E.H.W.C.C.S. programs were asked how satisfied they were with the staff of their child's program. Only one person (2%) was not very satisfied; 19% were fairly satisfied; and 79% were very satisfied. All but three of the day care centre users said they were very satisfied with the staff. Overall, day care centre users were more satisfied with the staff than were the users of the other programs. This may be due to the staff at the day care centre having had more training in early childhood education than the family day home providers. All of the day care centre staff had some early childhood education training and this has been found to be a characteristic of high quality programs (Ruopp et al., 1979).
Parents' Likes and Dislikes About the Programs

During an interview, current and past parent-employees were asked what they liked best and least about the E.H.W.C.C.S. program their child attended. Table 6 is a summary of the responses by 40 respondents. Parent-employees in all three hospitals liked best the staff and the organization of the program. When asked what they liked least about the program the most frequent response was "Nothing." The second most frequently mentioned factor was "fees." Similar results have been reported in other studies of employer-supported child care (Swartz, 1972; Timmins, 1982).

Another measure of user satisfaction with a child care program is if the parents have recommended the program to other potential users. Of the 61 parent-users, 90% had recommended it to others. Of the 10% who hadn't, some had not had an opportunity to do so. All of the parent-employees from Royal Alexandra, Norwood Extended Care, and Glenrose had recommended the programs. Most frequently, they recommended the program to co-workers (54%), then non-hospital employees (39%) and friends/neighbours (7%). Of the 44 respondents who could recall to how many people they had recommended the programs, 59% had recommended them to more than three other potential users. This high level of "word of mouth" recommendation was also reported by an E.H.W.C.C.S. program director and was supported by the data on the employees' sources of information about the program.

Current and past users (n = 43) of the child care program were asked to suggest changes that could improve the programs. Of the 30 respondents who made suggestions, 13% wanted increased communication with parents (e.g., reports, interviews, regular feedback), longer hours, more equipment for the children. Seven percent suggested improving staff-child ratios, hourly fees, more space and less "institutional" furniture. Many of the suggested improvements had financial implications which would result in
increased fees; e.g., longer hours and lower staff-child ratio require additional staff.

**Changes in Parents or Family**

Parent-employees were asked if they noticed any changes in themselves or the family since their child began an E.H.W.C.C.S. program. Twenty-nine respondents perceived the following changes:

1. Not worried about the child while at the program = 36%
2. Parent(s) learned to trust someone else to care for child; were more comfortable and relaxed about staff/provider care = 29%
3. More positive attitude towards day care = 14%
4. a. Own parenting skills had improved = 7%
   b. Guilty and depressed because child in out-of-home care = 7%
5. a. Asked for advice on child development = 3.5%
   b. Had to rush from work to pick up child = 3.5%

The changes mentioned by most respondents were attitudinal or affective changes. Similar attitudes were mentioned by parent-employees when discussing the effects of employer-supported child care on their morale.

**The Effects on the Children**

In Alberta, 59.1% of the women in the labour force have preschool-aged children (Statistics Canada, 1982). Therefore it is important to assess the effect of employer-supported child care on the children in addition to looking at the effects on employers and employees. Because baseline data were not collected when the children began the E.H.W.C.C.S. programs, pre-post comparisons were not possible. Given the young ages of the children, structured interviews were not planned because of the unreliability of these data.

**Profile of the Children of Hospital Employees Currently Enrolled in E.H.W.C.C.S. Programs Between July 1984 and May 1985**

In the day care centre and family day home programs, the majority of the children of parent-employees were boys. Two-thirds of these children in the day care centre and family day home programs were only children which is typical
of recent population trends toward smaller families. This high percentage of only children may have been one reason for parents enrolling the children in an outside-the-home child care program; i.e., the desire for increased socialization opportunities with the children's peers. There was no statistically significant difference between the day care centre and family day home programs in terms of the percentage of one or two-parent families (83% vs. 69%).

The parent-employees worked at one of the three hospitals for an average of six to 10 years. The out-of-school program users worked the longest average time; however, it seems likely that the parents of school-aged children would probably be older and therefore in the workforce longer. However, it is interesting that the family day home users who had younger children (x = 21 months) had worked at the hospitals longer than the day care centre parents whose children are older (x = 48 months). The fact that the parent-employees seemed to have worked for a few years before the birth of their children may be part of the general trend of women delaying having children until their late twenties or thirties and therefore being able to develop prior work experience. This, in turn, has implications for the possible use of employer-supported child care programs as one way of facilitating the continuation or return of experienced workers after the birth of their children.

The children in the day care centre program had been enrolled for a significantly greater number of months i.e., 5 months) than the family day home children.* This may have been due in part to the younger age of the family day care children; i.e., half of them are under two years of age. The majority of the day care centre children (95%) had previous centre experience while the majority of the family day home children (52%) had not centre or day home experience.

More than four-fifths of the parent-employees in the E.H.W.C.C.S. programs were mothers. This was not surprising as it reflected the high percentage of females employed by hospitals and is the usual pattern in hospital-employer supported child care programs. However, Winnipeg's Health Sciences' program, one of the earliest employer-supported child care programs in Canada, reported almost equal use of the day care centre by fathers and mothers (Mayfield, 1985a).

* $t (53) = 2.49$, $p < .05$
The Children's Initial Reactions to the Programs

A common concern of parents enrolling their child in a child care program is how well the child will adjust and will there be any problems. The parents who were currently using the E.H.W.C.C.S. programs and the parents who had used them in the past were asked if their child had had any problems beginning the program. Of the 58 respondents, 85% said there was no problem. Of the 15% who reported some difficulty in adjustment, the most frequently given reasons were: (a) it was the child's first experience away from home and mother, (b) the child was apprehensive because of a previous unsatisfactory child care placement, and (c) reasons related specifically to individual children, e.g., had difficulty getting up in the morning, was frightened of large institutional buildings, etc.

The figure of 15% of the children being reluctant or upset when beginning a child care program was not unusual and staff were accustomed to this and have been trained to meet these children's needs. Several mothers commented that they appreciated the staff's help and admired the way they handled the children. These mothers credited the staff with playing a significant part in making the beginning of their child's care experience a positive one. Some of the comments were:

- The staff seemed to make an effort to ease my child into the new circumstances.
- She was made to feel comfortable and accepted by the workers and children.
- He had a bit of trouble in the beginning but nothing serious.
- My younger child had problems because of a previous bad day care experience.

Children's Likes and Dislikes About the E.H.W.C.C.S. Programs

During the interview of parent-employees currently using the E.H.W.C.C.S. programs, the parents were asked if their child ever talked about the program. (Parents of infants were not asked this question.) Of the 26 respondents, 25 answered affirmatively. The children most frequently talked about the other children (39%), the activities (35%), the staff (22%) and the meals/snacks (4%). Parent-employees were then asked what their child liked most and least about his/her child care program. The responses of the 37
interviews are reported in Table 7. (Parents of infants were not able to provide this type of information.)

Insert Table 7 About Here

During one on-site visit, the researcher was helping a group of children of mixed ages get dressed for outdoor play when one child remarked that she liked birthday parties at day care (they had just finished eating birthday cake for a snack). In response to the researcher's follow-up question "What else do you like about the day care?", the children in the group most frequently answered "playing with the other kids" and then by naming specific activities (e.g., going places, outdoor play on the play equipment, the bicycles, etc.). While this was neither planned nor part of the research design, the episode did verify the parents' perceptions of what their children liked about the programs.

A majority of parent respondents reported specifically that there was nothing their child disliked. The most frequent dislikes of children were common to child care programs: not wanting to take a nap, disliking a particular food (usually a vegetable), having to wait for or share a favourite toy, and being reprimanded for misbehaving although most mothers were quick to state that both they and the child understood what the misbehaviour was and why the child was disciplined. Of the 40 respondents, a statistically higher percentage* of family day home users (37.5%) indicated separation as a problem than did day care centre users (3%). This difference may have been due to the younger age of the day home children and that fewer of them had had a previous child care experience. There was no difference in the pattern of responses of children's likes and dislikes between

Changes in the Children Since Beginning the E.H.W.C.C.S. Programs

Parents with children currently enrolled in the programs were asked, "Have you noticed any difference in your child since he or she began attending a E.H.W.C.C.S. child care

\[ \chi^2 (38) = 2.89, \ p < .01 \] current and past users of the programs.
program?" Of the 54 respondents, 65% answered affirmatively. When the responses were analyzed by program, there was a statistically significant difference in the response pattern:* 75% of the day care parents answered affirmatively as compared to 43% of the family day home parents. Other studies of employer-supported child care programs (Buruc, Aschbacher, & McCroskey, 1984; Timmins, 1982) have also reported the majority of parents seeing positive changes in their children.

When asked to describe how their child had changed, the most frequently mentioned changes were: improved socialization skills (39%), the child's language had improved, especially vocabulary and speech (19%), and the child had become more independent or assertive (17%). The remaining 15 responses were scattered among nine types of changes. These three most frequent changes were the same for day care centre/out-of-school and family day home children. All these changes are commonly reported by parents of preschool children enrolled in early childhood programs.

Some of the parents' comments included:

- She learned how to share and how to enjoy playing with other children.
- She has become more social and less shy.
- His increased ability and awareness to do things "all by myself".
- His vocabulary has increased quite a bit.

Current and Future Child Care Needs of the Employees

The employees' current need for child care, their actual and preferred child care arrangements and the need for such care in the near future were examined. Included were analyses of the enrolment patterns and waiting lists of the E.H.W.C.C.S. programs and the need for child care on a part-time basis and during the evening and night shifts.

Past Enrolment Patterns of E.H.W.C.C.S. Programs

The enrolment patterns since July 1982 for the three E.H.W.C.C.S. programs are summarized graphically in Figure 2.

\[ t(52) = 2.15, p < .05 \]
The day care centre and family day home programs had shown an overall pattern of steady growth. The temporary and seasonal decline in enrolment over the summer months is typical of child care programs including employer-supported ones (Weber and Tulloss, 1979). Summer is the traditional vacation time for families; also, some parents do not work during the summers and thus their children do not require child care. The temporary decrease in November 1984 could not be explained by either the staff or the researcher.

The out-of-school program had not shown a growth pattern similar to the other programs. However, the program had been in existence for less than a year; and it typically takes Canadian employer-supported child care programs 12-24 months to reach full enrolment on a continuous basis (Mayfield, 1985a). One factor that may have slowed the growth of this program to its licensed capacity of 27 children was a subsidy freeze for out-of-school programs that had been in effect since November 1984.

Current Child Care Needs of Hospital-Employees

Hospital-employees with children under age 13 were asked if they were currently working rotating shifts. Of the 182 respondents, 22.5% were working rotating shifts and 77.5% were not. Those respondents who were not working rotating shifts were asked to indicate the times of the day they needed care for each of their children. The current child care needs of these 185 hospital-employee respondents were primarily for times during the day including before and after school. The second greatest need is for weekends and the third for the evening shift. Only 7.5% of the responses were for overnight care. As expected, once the children had begun school at age five or six, the need for before and after school care increased.

A previous needs assessment in September 1980 found the child care needs of hospital-employees to be days only (n = 67) then days and evenings (34), then evenings only (18) and lastly nights (7). A later needs assessment done by the
E.H.W.C.C.S. in September 1981 reported the need for child care during days (n = 47), then evenings (16), then weekends (11) and lastly nights (1). In summary, since 1980 the pattern of child care needs reported by hospital-employees has been for day time care, then evening and weekend care, with little stated need for night care of children. A recent needs assessment of employees at the University of Alberta Hospitals found the need was primarily for day-time child care with only 6% of the respondents indicating a need for night shift care.

In terms of the ages of the children of current hospital-employees, the largest number of children were in the age group of 6-12 years, then 0-23 months, then 3-5 years, and lastly 24-35 months. It is interesting that this was the same pattern reported in the September 1980 needs assessment.

Current Child Care Arrangements of Hospital-Employees - Hospital-employees were asked to indicate what their current child care arrangements were for each of their children under age 13 (multiple responses were possible). The most frequent child care arrangements were:

1. Spouse cared for the child (37%)
2. Child went to neighbour or relative (35%)
3. Day care centre (20%)
4. Someone came to home (15%)
5. Family day home (14%)

The majority of the respondents used multiple care arrangements (e.g., day care centre and neighbour or relative). Some of the respondents indicated that they typically used four and five different types of care. Children under 36 months of age were most frequently cared for by a spouse; those 36-60 months in a day care centre and a spouse for children between 6 and 12 years of age. Although spouse or relatives/neighbours were the most common current child care arrangements, hospital-employees as a group used several types of arrangements and individual employees often used multiple arrangements for one child.

Preferred Child Care Arrangements - In order to determine the preferred child care arrangements, hospital employees with children under age 13 were asked "If you could use any type of child care you wanted, which of the following child care arrangements would you use for your child(ren):"
(Multiple responses were possible.) Their top preferences were:

1. Spouse (25%)
2. Someone came to the home (24%)
3. Day care centre (19%)
4. Neighbour/relative (18%)
5. Live-in nanny (14%)

The increased preference for in-home care over current child care arrangements might have been a realistic option for many employees given the number of two-parent families and a level of family income that would facilitate these preferences.

The 1980 needs assessment asked hospital-employees what type of child care they would use if they had a choice. Their most frequent responses were:

1. Day care centre (n = 75)
2. At own home (n = 37)
3. Taken to another home (n = 20)

These responses are similar, although in a different order, to those of the 1985 assessment. The difference in response options between the two assessments limits further comparison.

The current parent-employees using the E.H.W.C.C.S. programs were asked if they could have any kind of child care they wanted, what would they use. The first choice of current parent-employees (n = 31) was a day care centre, then family day home or a nanny. This was a somewhat different pattern of responses than was found for hospital-employees and may have been due to the high level of satisfaction of parent-employees with their current E.H.W.C.C.S. program arrangements.

A comparison of the overall current to preferred child care arrangements of hospital-employees showed general agreement except that the respondents would have preferred to use more in-home care and relied somewhat less on relatives and neighbours. This choice of more in-home child care could have been due to factors including convenience, dependability, or more parental control of the care-giving situation. Care by a spouse was the most frequent current arrangement, and to a lesser degree, the preferred arrangement.
Future Child Care Needs of Parent-Employees and Hospital-Employees

The assessment of the future child care needs of employees is often highly speculative and tentative. Many factors influence people's need for and decisions about child care and these can change over time (e.g., unemployment of a spouse, a move out of town by a relative, the birth of a child, etc.). In order to try and get some indication of future child care needs relevant to the E.H.W.C.C.S. programs, several sources were used including (a) projections from current needs, (b) the stated future needs of parent-employees, (c) current waiting lists for the E.H.W.C.C.S. programs, and (d) the possibility of future use of the programs by current non-users.

From examining the age distributions of the children of current hospital-employees, it appeared that there would be an increased need for before and after school care for children of hospital-employees working days. However, this need for out-of-school care in the next few years may not necessarily be reflected in increased enrolment in the E.H.W.C.C.S. out-of-school program. If the current care patterns for the 6-12 year olds continued, these children would most likely be cared for by parent, relative or neighbour, or a sibling rather than in an out-of-school program. If the current work patterns continued, the hospital-employees would need care primarily for days, then evenings and weekends, with little need for nighttime care.

Of the current parent-employees who indicated their child care needs for the next two or three years (n = 27), there was an equal division among (a) day care centre, (b) family day home, and (c) public school with out-of-school care. Of those whose children would not be old enough for kindergarten or grade 1, 100% of the day care centre users planned to stay with the centre program and 100% of the family day home parents planned to remain with this type of care. These results reflected the high degree of satisfaction of parent-employees with their current child care arrangements.

Another indication of the current and future need for programs is the number of people who wish to enrol their children but are unable to do so. (The existence of a waiting list can also be seen as an indication of the positive reputation of the programs.) The day care centre
program has had a waiting list since May 1984. As of May 10, 1985, there were 22 children on a waiting list for placement by September. Of these 22 children, 63% were children of hospital employees. Most of these children were aged two years and under. The family day home program has had a waiting list averaging 45 children from its earliest days. The greatest need was for infant care: 90% of the requests were for care for children under the age of 12 months. As of May 1985, there were 46 names on the waiting list (20% were children of hospital employees). Therefore, the waiting lists for both programs reflected the need for child care of children under three years of age, especially infants. The increase in the number of children on the waiting list for the day care centre and the consistently high number on the waiting list for the family day homes were positive indicators of the need for these programs.

A potential source of future users of the E.H.W.C.C.S. programs was the hospital-employees with children under age 13 who were currently using other child care arrangements. When these hospital-employees (n = 169) were asked if they would consider using the E.H.W.C.C.S. programs if they had to change their current child care arrangements, 41% responded affirmatively, 20% negatively, and 39% indicated they did not know. As only 20% of hospital-employees would not consider using an E.H.W.C.C.S. program, the remaining 80% could be potential users of the E.H.W.C.C.S. programs in the future. Other sources of potential users might be recently hired personnel and future hires.

Summary and Conclusions

The results of this study did not support the contention that employer-supported child care will reduce absenteeism and tardiness and improve recruitment and retention of employees. There were no statistically significant effects on absenteeism and tardiness for parent-employees before and after beginning an E.H.W.C.C.S. program. Also there was no difference between the absence and tardiness patterns of hospital-employees and parent-employees. In addition, neither supervisors nor parent-employees themselves perceived any changes or differences in the latter's patterns of absenteeism or tardiness. As the absentee rates for the three hospitals in this study were not statistically different from the provincial average, it does not seem that absenteeism had been a problem.
For parents whose absences were due to their children being ill, having doctor's appointments, etc., the E.H.W.C.C.S. day care centre program could not, and was not designed to, accommodate these absences. Although a family day home may be able to care for a child who is not seriously ill (e.g., a child with a cold or recovering from the chicken pox) but who would not be permitted to attend a day care centre, there was little interest by parent-employees in "sick child care" outside their own home. Greater flexibility in arranging work times would be one way for employees to attend to children's medical, dental, or school appointments without being absent for the entire day.

The analysis of the effects of the E.H.W.C.C.S. programs on recruitment and retention were limited by the lack of baseline data for the period before the beginning of the programs. Assessment of the recruitment and retention effects were further complicated by the general effects of a recessionary economy with its increased unemployment and decreased employee mobility. Overall, the use or potential use of E.H.W.C.C.S. programs did not seem to have had any effect on recruitment. This may have been due to the parents' tendency to arrange for child care only after they had secured employment. However, parent-employees perceived that the E.H.W.C.C.S. programs had a positive effect on recruitment; hospital-employees, in general, saw child care as an important factor in the continuing employment of parents with preschool children. Assessment of the actual effect of these programs on recruitment should be done during a future period of economic expansion when there is more competition to hire health care professionals than there was at the time of this study.

Child care problems have been the cause of some hospital-employees quitting or taking leaves of absence (other than maternity leaves) in the past. Parent-employees perceived positive effects of the E.H.W.C.C.S. programs on their continuing employment at the hospitals. However, there was no statistical evidence to conclude that the E.H.W.C.C.S. programs had an effect on employee retention rates. As with recruitment, analysis of retention was confounded by the recessionary economy.

Statistically significant effects were found in employees' perceptions of lower stress levels, improved concentration on the job, working desired hours, being able to work part-time or full-time, scheduling vacation time, and
being able to return to work after the birth of a child when the difficulties due to child-related responsibilities of parent-employees were compared to other hospital-employees with children under age 13. These findings have implications for general productivity in that employees who are more satisfied with their jobs and not distracted by worries about their children have the potential to be more efficient and productive workers.

The parent-employees commented frequently during the interviews that the knowledge that their children were in dependable, high quality child care arrangements had greatly reduced their worry and distractibility on the job and they were able to now concentrate 100% on their work. These parents mentioned that these changes had made them better and happier employees and parents. Although changes in employee attitude or morale are difficult to measure quantitatively, qualitatively the parent-employees perceived positive effects due to their children attending an E.H.W.C.C.S. program.

The E.H.W.C.C.S. programs have provided a needed service for a segment of hospital-employees and their young children. As long as the demographics of hospital-employees and their families continue to be similar to the situation in this study, child care will be necessary for some employees. To meet the needs of hospital-employees for infant care now and to help employees continue or return to work in the future, information and referral help or additional family day homes may be required. Most parents seemed able to make arrangements within their own families or with neighbours to accommodate their needs for after-school care. Therefore, although the age distribution of children indicated a future need for this type of care, the development of formal after-school care programs may not be necessary.

There was a current and future need for part-time child care. This type of care can be difficult for both parents and programs to arrange, especially for casual workers or those working rotating shifts. There was little evidence of current or future need for overnight care. Out-of-home care did not seem to be a preference of parents needing evening or overnight child care. Most parents seemed to have made satisfactory, although perhaps multiple, care arrangements to cover their child care needs for these times. Many employees who worked permanent evenings or nights did so because another family member was available to care for the children. There was not a demonstrated need for overnight care,
especially centre-based care, among the employees of these three hospitals.

The employer-supported child care programs of the E.H.W.C.C.S. have successfully provided quality child care that has met the needs of the hospital-employees using these programs. As the only consortium employer-supported child care program in Canada, the E.H.W.C.C.S. can serve as a model for other interested groups. It is an example of different groups (e.g., hospitals, unions and associations) being able to plan and develop a program to meet the child care needs of hospital-employees. However, this does not mean that a replication of these programs in another hospital would produce the same effects. In planning for employer-supported child care for hospitals, it is essential to thoroughly, accurately, and efficiently assess the needs of the employer and the employees as well as the available resources. Also, it is important to consider carefully the various program delivery options: a day care centre and a family day home network are not the only options; and indeed, in many situations may not be the best options. An in-depth knowledge and review of the different options in light of the assessed needs and resources are necessary for optimum program selection and implementation.

Another component that needs to be included from the initial planning stages is an evaluation design which includes provisions for baseline data collection, multiple data sources, and both qualitative and quantitative methodologies. The evaluation design should be longitudinal in scope and include both formative and summative evaluation. The formative evaluation can provide feedback to program directors, staff and other participants and be valuable to them if information on factors such as parental satisfaction with the program, likes and dislikes, and suggestions for improvement is included. There is also a need to recognize that research on employer-supported child care programs does not lend itself to classical experimental designs and that it is not always possible or realistic to use comparison groups and equal cell sizes. However, the difficulties of doing field-based program evaluation should not be used as an excuse to omit an evaluation component from program development and planning. If informed judgments are to be made about the efficacy, desirability and feasibility of employer-supported child care, more research needs to be done.
References


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<td>interview review of recc questionnaires questionnaires</td>
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<td>interview questionnaire</td>
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<td>parent-employees supervisors</td>
<td>interview questionnaire</td>
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<td>parent-employees employees program directors</td>
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<td>personnel officers employees program directors</td>
<td>personnel reco questionnaires records interview</td>
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<td>parent-employees program directors</td>
<td>interview interview and records interview questionnaire</td>
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<td>file of the children</td>
<td></td>
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<tr>
<td>Current and future need for child</td>
<td>program directors parent-employees employees</td>
<td>interview interview and records interview questionnaire</td>
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<td>care</td>
<td></td>
<td></td>
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<tr>
<td>History and development of the child care programs</td>
<td>program directors board members former board members</td>
<td>interview and r interview interview</td>
</tr>
</tbody>
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Figure 1
Average Absentee Days Per Month
for Users of E.H.W.C.C.S. Programs

--- = Family day home
-- = Day care centre
     (parent employees)
*** = Day care centre
     (non-hospital parents)
Table 2

Summary of Changes in Parent-Employees' Days Absent Before and After Beginning an E.H.W.C.C.S. Program

<table>
<thead>
<tr>
<th>GROUP</th>
<th>DIRECTION OF CHANGE*</th>
<th>NUMBER OF PARENTS</th>
<th>% OF TOTAL PARENTS</th>
<th>MEAN NUMBER OF DAYS OF CHANGE</th>
</tr>
</thead>
</table>
| Total group  
(n = 30)                      | †                    | 17                | 57%                | 8                            |
|                              | ‡                    | 12                | 40%                | 4                            |
|                              | =                    | 1                 | 3%                 | -                            |
| Day Care Centre/  
(n = 17)                  | †                    | 8                 | 47%                | 4.5                          |
| Out-of-school  
(n = 17)              | ‡                    | 8                 | 47%                | 3.9                          |
| Family Day Homes  
(n = 13)                | †                    | 9                 | 69%                | 6                            |
|                              | ‡                    | 4                 | 31%                | 5                            |
| Glenrose/  
(n = 19)                   | †                    | 12                | 63%                | 9                            |
| Norwood  
(n = 19)                   | ‡                    | 6                 | 32%                | 5                            |
| Royal Alexandra  
(n = 11)                         | †                    | 5                 | 45%                | 6                            |
|                              | ‡                    | 6                 | 55%                | 4                            |

* † = parent-employee absent more days after child's enrolment
  ‡ = parent-employee absent fewer days after child's enrolment
  = = no change
Table 3
Summary of Changes in Parent-Employees'
Days Absent Due Only to Child Care
Reasons Before and After Beginning an E.H.W.C.C.S. Program

<table>
<thead>
<tr>
<th>GROUP</th>
<th>DIRECTION OF CHANGE*</th>
<th>NUMBER OF PARENTS</th>
<th>% OF TOTAL PARENTS</th>
<th>MEAN NUMBER OF DAYS OF CHANGE</th>
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</thead>
<tbody>
<tr>
<td>Total group (n = 15)</td>
<td>+</td>
<td>8</td>
<td>53%</td>
<td>6</td>
</tr>
<tr>
<td>Day Care Centre/0.t.-of-school (n = 3)</td>
<td>+</td>
<td>4</td>
<td>50%</td>
<td>6.5</td>
</tr>
<tr>
<td>Family Day Homes (n = 7)</td>
<td>+</td>
<td>4</td>
<td>57%</td>
<td>7</td>
</tr>
<tr>
<td>Glenrose/Norwood (n = 11)</td>
<td>+</td>
<td>6</td>
<td>54.5%</td>
<td>11</td>
</tr>
<tr>
<td>Royal Alexandra (n = 4)</td>
<td>+</td>
<td>2</td>
<td>50%</td>
<td>3</td>
</tr>
</tbody>
</table>

* t = parent-employee absent more days after child's enrollment
+ = parent-employee absent fewer days after child's enrollment
### A Comparison of the Effects of Child Care Arrangements on the Work of Hospital-Employees and Parent-Employees

<table>
<thead>
<tr>
<th>EFFECT</th>
<th>PERCENTAGE OF RESPONDENTS⁺</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HOSPITAL-EMPLOYEES (n = 184)</td>
</tr>
<tr>
<td>Level of stress</td>
<td>33%</td>
</tr>
<tr>
<td>Working overtime</td>
<td>32%</td>
</tr>
<tr>
<td>Working desired hours</td>
<td>32%</td>
</tr>
<tr>
<td>Working part-time or full-time</td>
<td>20%</td>
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<tr>
<td>Concentration on the job</td>
<td>20%</td>
</tr>
<tr>
<td>Scheduling vacation time</td>
<td>17%</td>
</tr>
<tr>
<td>Returning to work after child birth</td>
<td>12%</td>
</tr>
<tr>
<td>Taking training for job</td>
<td>10%</td>
</tr>
<tr>
<td>Promotions</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
</tr>
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⁺ Multiple responses were possible; therefore, total is more than 100%

* p < .05

** p < .01

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Table 5
Reasons for Enrolling Child in a E.H.W.C.C.S. Program

<table>
<thead>
<tr>
<th>Reason</th>
<th>Day Care Centre/Out-of-School Care</th>
<th>Family Day Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended</td>
<td>20%</td>
<td>30%</td>
</tr>
<tr>
<td>Location</td>
<td>26%</td>
<td>10%</td>
</tr>
<tr>
<td>Quality of staff/provider</td>
<td>13%</td>
<td>7%</td>
</tr>
<tr>
<td>Quality of the program</td>
<td>11%</td>
<td>3%</td>
</tr>
<tr>
<td>Flexible hours</td>
<td>9%</td>
<td>10%</td>
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<tr>
<td>Dependability of care</td>
<td>6%</td>
<td>7%</td>
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<tr>
<td>Screening of staff/provider</td>
<td>1%</td>
<td>17%</td>
</tr>
<tr>
<td>Multi-age grouping</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Fees</td>
<td>2%</td>
<td>3%</td>
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<tr>
<td>Special needs</td>
<td>3%</td>
<td>-</td>
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<tr>
<td>Other miscellaneous reasons</td>
<td>6%</td>
<td>10%</td>
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</table>

(Multiple responses possible) Total responses = 86 Total responses = 30
Table 6
What Parents Like About the E.H.W.C.C.S. Programs

<table>
<thead>
<tr>
<th>Responses</th>
<th>Day Care Centre/Out-of-School</th>
<th>Family Day Homes</th>
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</thead>
<tbody>
<tr>
<td>Organization of the program</td>
<td>22%</td>
<td>17%</td>
</tr>
<tr>
<td>Hours</td>
<td>18%</td>
<td>22%</td>
</tr>
<tr>
<td>Staff</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td>Meals</td>
<td>11%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Location</td>
<td>11%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Facilities and equipment</td>
<td>9%</td>
<td>5.5%</td>
</tr>
<tr>
<td>&quot;Quality control&quot; of supervised programs</td>
<td>5%</td>
<td>27.5%</td>
</tr>
<tr>
<td>Provisions for special needs</td>
<td>4%</td>
<td>-</td>
</tr>
<tr>
<td>Multi-age grouping</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>Fee structure</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>(Multiple responses were possible)</td>
<td>Total responses = 55</td>
<td>Total responses = 18</td>
</tr>
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</table>

Table 7
What Children Like About the E.H.W.C.C.S. Programs

<table>
<thead>
<tr>
<th>Responses</th>
<th>Day Care/Out-of-School</th>
<th>Family Day Homes</th>
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<tbody>
<tr>
<td>The other children</td>
<td>34%</td>
<td>54%</td>
</tr>
<tr>
<td>Field trips</td>
<td>20%</td>
<td>-</td>
</tr>
<tr>
<td>Indoor activities</td>
<td>18%</td>
<td>-</td>
</tr>
<tr>
<td>Staff members</td>
<td>16%</td>
<td>46%</td>
</tr>
<tr>
<td>Outdoor activities</td>
<td>7%</td>
<td>-</td>
</tr>
<tr>
<td>Snacks</td>
<td>5%</td>
<td>-</td>
</tr>
<tr>
<td>(Multiple responses possible)</td>
<td>Total responses = 44</td>
<td>Total responses = 13</td>
</tr>
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</table>

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Figure 2
Enrolments in E.H.W.C.C.S. Programs

- - - = Family day care
----- = Day care centre
***** = Out-of-school