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ABSTRACT

The objective of this paper was to examine what effect government subsidized day care by itself might have on the labor force participation of low income group mothers. The policy issue was as follows: will the provision of adequate day care services (in terms of cost and quality) to low income group mothers substantially increase their labor force participation (by removing a significant barrier to employment), thereby reducing their potential for the receipt of income transfer programs? Responding to this issue, the paper reviews existing research on the relationship of provision of day care services to labor force participation. The paper concludes that provision of day care by itself will not lead to vast numbers of low income mothers entering the labor force; an estimated ten percentage point increase in labor force participation might occur in response to day care. The reasons for this percentage point increase being not larger are cited as: (1) many mothers prefer to care for their own children; (2) many mothers do not see the provision of subsidized day care as substantially increasing their net wage; (3) the structure of welfare laws makes employment, in some cases, economically unsound; and, (4) employment increases the already heavy burdens of the mother. (Author/RJ)

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A STUDY OF DAY CARE'S EFFECT ON THE LABOR FORCE PARTICIPATION OF LOW-INCOME MOTHERS

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INTRODUCTION

The objective of the following paper is to examine what effect government subsidized day care, by itself, might have on the labor force participation of low-income mothers. As we view it, the policy issue is as follows:

> Will the provision of adequate day care services (in terms of cost and quality) to low-income mothers substantially increase their labor force participation (by "removing" a significant barrier to employment), thereby reducing their potential for the receipt of income transfer programs?

In order to respond to this issue, existing research on the relationship of the provision of day care services to labor force participation is reviewed.

The paper concludes that the provision of free and adequate day care services to low-income mothers will lead to an increase in labor force participation; in fact, a ten percentage point increase (from 32 to 42 percent) in participation is estimated. The paper also notes the possibility that the provision of subsidized day care may result in an increase in the number of hours worked by employed mothers but that it may not be cost-effective and may lead to an increase in unemployment rates. These

findings are not used to make policy decisions. It is left to the policy-maker to determine if the impact is sufficient to justify the costs associated with the support of subsidized day care.

In Congressional testimony dealing with the introduction of the Work Incentive Program (WIN) in 1967, Secretary of Health, Education, and Welfare, John Gardner, testified that the lack of adequate day care was the major reason that women did not work. Further, Gardner argued that the failure of work and training projects could be traced to the lack of such services.[1] In 1970, HEW Secretary Robert Finch said, "The failure of day care in great part has contributed to the failure of the WIN program."[2] More recently, in a major publication on work in the United States the Department of Health, Education, and Welfare noted:

> ...They /AFDC mothers/ do not take jobs because there are not suitable child care facilities, or because costs associated with having a job and paying for child care often leave them with less money than they would be receiving on welfare. These women do not need to be coerced into the labor force; they need the freedom to join it: adequate day care facilities and a decent job at a living wage.[3]

Such beliefs have pervaded much of the thinking regarding the provision of child care services to low-income mothers.[4] Although a number of studies have touched on the relationship of the provision of day care to labor force participation, to our knowledge no concerted attempt,

with the possible exception of the Gary Income Maintenance Experiment, has been made to found these beliefs on empirical knowledge. The purpose of this paper, then, is to draw together existing research on the relationship of the provision of day care services[5] to labor force participation and to provide an estimate of its impact. Simply stated, we are examining what effect government subsidized day care, by itself, might have on the labor force participation[6] of low-income mothers.

It should be understood from the outset that this paper will not deal with several significant questions as yet unanswered with respect to the provision of day care services. Specifically:

(1) A programmatic definition of "adequate day care" is not attempted. In the context of this paper, adequate day care is defined as what is satisfactory, in terms of cost and quality, to the parent(s).

(2) It does not attempt to deal with the value of developmental day care as a method of reducing problems of preschoolers from low-income families.

(3) The paper does not attempt to define eligibility requirements for the receipt of services. It is assumed that all mothers in families with incomes below the poverty line are eligible for services.

To the extent that the data employed in the paper bear on these issues, it will be noted. Explicit consideration, however, will be omitted.

THE HISTORICAL PERSPECTIVE

Recent Congressional proposals, the Women's Liberation Movement, and the proposed Equal Rights Amendment to the Constitution have all served, in part, to focus public attention on the role of women in the family and in the workplace, both of which are tied to the need for day care services. While the concept at times appears to be touted as a new savior for low-income mothers, it is not an issue peculiar to the 1970s.

Two relatively distinct day care movements have emerged in the United States. One resulted in the establishment of nursery schools and kindergartens. The other resulted in publicly and philanthropically supported day care programs for the children of working mothers and the poor. The primary purpose of the former was to provide an enriched learning and recreational experience for middle- and upper-class children. The objective of the latter was to care for children while mothers attempted to supplement, or singularly provide, family income. Nursery schools and kindergartens are an established part of the American educational system. Day care for children of working mothers is a cyclical issue, currently approaching its apex again.

Historically in the United States, public support for day care programs has been provided to meet national needs. Tax-supported efforts have been related to conditions within the larger society: day care programs were funded by the Federal government during both world wars when women were needed in the labor force; during the Depression, when employment was needed for teachers and service workers; and when it was seemed desirable to provide employment for husbandless mothers. With rising welfare caseloads and spiraling program costs, it may be cost-effective to again provide day care services to low-income mothers if such provision will lead to their entering the labor force.

The availability of the low-income mother to enter the labor force is potentially important not only in controlling welfare costs but also in raising families out of poverty. In fact, data from the Current Population Survey (CPS: 1970) show that earnings of the wife have been an important factor in lifting family income above the poverty line. In 1970, about 3.6 million of the approximately 40 million families in the United States were in poverty. If the wife's income were to be excluded from the total family income, the number of families in poverty would rise by over 36 percent, or by over 1.3 million families. In contrast, if all public assistance transfers were to be excluded from total family income, the number of families in poverty would rise by only about 8 percent.

Historically, day care is precedented. In addition, there is a rising consciousness of the potential of women in the workplace, perhaps most significantly as supplementors of meager family incomes.

MOVEMENT OF MOTHERS INTO THE LABOR FORCE

Economic literature suggests that two distinct sets of factors affect the probability of employment. The first set includes those factors that influence the decision to seek employment. The second set includes those that determine whether or not work (if sought) will actually be found. The factors that affect the decision to work are primarily individual and family influences (such as economic incentives and pressures and family constraints); those that determine the outcomes of employment search are primarily labor market variables (such as unemployment and vacancy rates by occupation.)[7] Our concern in this paper is with the first set of factors. That is, we focus on the supply side of the question.

The primary deterrent to the supply of labor is assumed to be family constraints, which day care is intended to ameliorate.[8]

Trend of Movement of Mothers into the Labor Force

In the two decades between 1950 and 1970, the labor force participation rates for all women increased by nine percentage points, from 33 to 42 percent (table 1).[9] Over the same two decades, the participation rate for mothers rose from 22 to 40 percent, an increase of eighteen percentage points. In only ten years, from 1960 to 1970, the participation rate of mothers with

TABLE 1

LABOR FORCE PARTICIPATION OF WOMEN BY PRESENCE AND AGE OF CHILDREN (In Percentages)

Year	All Women	All Women With Children	All Women with Children Under Six
1950	33	22	NA
1955	35	NA	NA
1960	37	28	19
1965	38	32	23
1966	39	33	24
1967	40	35	27
1968	41	37	28
1969	42	39	29
1970	43	40	30

SOURCES: Manpower Report of the President (G.P.O.:Washington, D. C., 1972), p. 158; and Elizabeth Waldman and Kathryn Gover, "Marital and Family Characteristics of the Labor Force," Monthly Labor Review, April, 1972, p. 7.

NOTES: NA is used throughout report to mean data not readily available. Women with children are defined in this instance as married women, husband present, with children under 18 years of age (or 6 years where specified). In general, this is not the definition employed in this paper. The general definition is all women with children under 18 years of age. Trend data for the latter group was not readily available.

preschool aged children grew by eleven percentage points, from 19 to 30 percent. Clearly, in terms of women with children, labor force participation has increased.

Current Status of Mothers in the Labor Force

In 1970, about 53 percent of the children under six years old belonged to twenty-five to thirty-four year old mothers. Only about 2 percent of the children under six belonged to a mother aged forty-five to fifty-four. It is reasonable to assume that this trend would continue and that only a small number and proportion of children under six would belong to women aged 55 or older. Therefore, the remainder of this paper deals with mothers under this age.

The participation of mothers in the labor force varies not only with age but also with poverty status and education. Generally, mothers in poverty are less likely to be in the labor force than are nonpoor mothers--32 percent compared to 44 percent (table 2).[11] Mothers in families receiving public assistance are even less likely than mothers in poverty to be in the labor force, having a participation rate of about 29 percent.[12] The more years of education a mothers has, the more likely she is to be in the labor force. The participation rate for mothers with under eight years of education is 38 percent, compared to 44 percent for mothers with twelve years or more education.

TABLE 2

LABOR FORCE PARTICIPATION OF MOTHERS BY AGE, EDUCATION, POVERTY STATUS, AND PRESENCE OF CHILDREN

	Labor Force Participation			
	Total	Poor	Receive Public Assistance	Nonpoor
Total	43	32	29	44
Age:				
Under 20 years	28	23	24	30
youngest child:				
0-2	28	22	24	30
0-5	28	23	24	26
6 and older	NA	NA	NA	NA
20 to 24 years	34	29	19	35
youngest child:				
0-2	31	28	15	31
0-5	34	29	19	35
6 and older	47	23	28	51
25 to 34 years	38	31	28	38
youngest child:				
0-2	24	20	19	25
0-5	31	25	26	32
6 and older	55	52	35	55
35 to 54 years	49	34	32	50
youngest child:				
0-2	24	22	26	25
0-5	31	25	25	32
6 and older	53	37	35	54
Education:				
0 to 8 years	38	24	21	42
youngest child:				
0-2	20	14	14	23
0-5	25	17	16	30
6 and older	45	30	24	48
9 to 11 years	41	29	24	44
youngest child:				
0-2	25	21	17	26
0-5	30	23	20	34
6 and older	49	36	29	51
12 years or more	44	36	29	51
youngest child:				
0-2	27	25	23	28
0-5	32	29	32	34
6 and older	55	47	47	57

SOURCE: Current Population Survey, March Supplement, 1970; see Appendix A.

NOTES: Poor is defined as having family income below the applicable OEO poverty guideline.

The presence of children also has an impact on the labor force participation of mothers. The lowest participation rates within the given educational and age ranges are found among mothers with children under three years of age and the highest among mothers with children over fifteen years of age. The relationship holds regardless of poverty status.

The above paragraphs are descriptive of mothers presently in the labor force. Before turning from such descriptions to an explanation of the expected impact of day care on labor force participation, a parenthetical note is in order. First, in considering demographic characteristics, it should be remembered that characteristics such as age and education explain labor force participation, but that it is largely labor force participation which determines income and poverty status. Having noted this, the paper turns to consideration of the primary question: If the Federal government desired to aid mothers with young children to enter the labor force and excape poverty, how significant a factor would day care be?

Estimation of the Maximum Impact of Day Care on the Labor Force Participation of Mothers of Young Children

In order to determine the maximum impact of the provision of free and adequate day care services to mothers of young children, a broad assumption must be examined; namely, that mothers with children under six years of age will, if free and adequate day care is provided, enter the labor force

at a rate identical with that of similar mothers with children six years of age or older. There are at least two logical reasons for accepting this assumption:

(1) The age of the youngest child in a family is significantly related to the labor force participation of the mother. (This point is demonstrated at a number of junctures in this paper.)

(2) To estimate the effect of free and adequate day care services, the most reasonable parallel seems to be to view the program as having a similar effect to public schools as far as "care-taking" functions are concerned. This also takes into account the fact that the age of the child may itself be a significant factor.

While there are some reasons for being skeptical of this assumption, it is not clear whether its acceptance whould lead to an over- or underestimation of the labor force participation of mothers with children under six years old. On the one han , mothers might not enter the labor force solely because they do not believe in working while their children are young. In such cases, mothers would not enter the labor force regardless of incentives. On the other hand, the assumption might lead to an underestimate of labor force participation because the base comparison (i.e., mothers of school aged children) is constrained by the absence of after school care. That is, day care might have a larger impact on labor force participation than the availability of schools because schools limit the mother's hours of employment to the hours school is in session.

Under the assumption, the availability of free and adequate day care services might be expected to raise the labor force participation of mothers by ten percentage points, from 43 percent to 53 percent. (Computations are derived from data in Appendix A.) The labor force participation rate of mothers with children under six years of age could be expected to increase from 32 to 53 percent. This could bring over 2.9 million more mothers into the labor force. In a similar manner, the labor force participation of all mothers in poverty could be estimated to increase by about eight percentage points, from 32 percent to 40 percent. The eight percentage point increase would occur primarily because the entrance of low-income mothers with children under six years of age could increase from 26 percent to 40 percent. This could amount to about 224,000 low-income mothers entering the labor force.

The labor force participation rate of mothers in families receiving public assistance, as noted above, is 29 percent. Under the assumption employed, the rate of participation of mothers receiving payments could be expected to rise to around 35 percent. The rate for mothers with young children could be expected to rise by eleven percentage points, from 24 to 35 percent. This could bring an additional 88,000 public assistance recipients into the labor force. A substantial number of these mothers might be single heads of household. About 30 percent of the public assistance recipient households are headed by single mothers; and being a single head of household is an important factor in labor force participation (Appendix C).

Although it is not definitive, there is reason to believe the assumption overstates the impact of day care. It may be that mothers of young children do not want to enter the labor force, regardless of incentives, precisely because their children are young. Or it may be that the mother of a preschool aged child feels pressure from her peers to remain at home with her child (although such perceived pressures may be diminishing for younger mothers). On the other hand, it is possible that mothers of school aged children do not seek employment because child care is not available during nonschool hours--which would lead to an underestimate of the effect of providing day care. The next section will further explore the possibility that the estimates of this section do, in fact, overestimate the effect of providing day care to mothers of young children.

Attitudinal Data and Public Opinion Polls

Information on the attitudes of the general public with regard to the provision of day care services has been collected in national and statewide public opinion polls. In addition, at least four important attitudinal surveys regarding mothers' intent to employ adequate day care services may be cited. These surveys are:

(1) The Current Population Survey;

(2) The Day Care Survey--1970, conducted by Westat Research Corporation;

(3) A study related to the Vermont Family Assistance Plan; and

(4) The National AFDC Study.

These major surveys are reviewed briefly in the following pages; public opinion poll results (Harris, Gallup, Roper, and Minnesota Poll) are used to illustrate and substantiate the survey findings.

Before turning to the surveys, it is necessary to note that they cover different subpopulations of women in the United States. For example, the Current Population Survey (CPS) covers a ratating sample of about 50,000 families per month. The families are randomly selected from some 450 designated sites in order to allow generalization to the total national population. The National AFDC Study, on the other hand, covers only families in the total population receiving AFDC payments. Table 3, presented below, briefly outlines the characteristics of the studies.

Summary of Results

The policy maker, as distinct from the researcher, may not feel it is necessary to delve into the specific surveys. For this reason, we summarize the findings at the outset.

The responses to surveys and polls provide, at best, a mixed bag of data.

--Based on the Day Care Survey--1970, it might be estimated that the labor force participation for the study population (children nine years old or younger; family income less than $8,000 per year) would climb by twenty-five percentage points, from 29 to 54 percent, if free day care was provided. This would bring an estimated 1.8 million additional mothers into the labor force, an increase from 2 million to 3.8 million.

TABLE 3

SURVEY POPULATION COMPARISON TABLE

Survey Name	Date of Survey	Sample Population Size	Characteristics of the Sample Population
Current Population tion Survey	1970	50,000	Reflects the total national population
Westat Day Care Survey	1970	1,812	Households with children under nine; family income under $8,000 per year
Vermont Family Assistance Plan Study	1970	21,800	Low-income households; emphasis on low-income mothers who are not working
National AFDC Study	1968	11,000	AFDC recipient households

SOURCE: Texts of the study reports.

However, the results may be biased upward. It is possible that respondents viewed the survey as a "referendum" on day care, and therefore, provided the socially acceptable answer (i.e., they would seek employment if day care were available.)

--On the other hand, the Current Population Survey, which is certainly not viewed as a day care survey, provides data from which it might be estimated that the increase in labor force participation as the result of the provision of day care would be around two percentage points for all low-income mothers with children under six and about two and one-half percentage points for similar mothers receiving public assistance payments.

--The Vermont Family Assistance Plan Study and the National AFDC Study provide intermediate estimates, 10 and 8 percent respectively.

--The public opinion polls indicate that a majority, over 60 percent in all polls, of the respondents "favored" the abstract concept of day care, but that only 24 percent would "certainly" or "probably" look for employment if day care services were available. If only one-half of those stating they would "probably" look for employment would, in fact, do so, the percentage who would look for employment would fall to 16 percent.

The studies, of course, are not directly comparable because of the differences in study population, the nature of the questions asked, and the like. They are, however, informative in their magnitudes.

It is interesting to note that the studies consistently show that among mothers who stated they were willing to work or who stated they were planning to enter the labor force in the near future, day care became

a paramount issue. The Current Population Survey indicates that over 70 percent of those willing to work viewed day care or family responsibilities as a barrier to entering the labor force when there were children under six. Seventy-one percent of the mothers in the Day Care Survey who were looking for work or planning to go to work within the next year cited problems finding satisfactory day care. Thus, the population of mothers who indicate they are willing to work may provide the most important target population for day care services.

With the exception of the consistent findings for the subgroup planning to enter the labor force, the mixed nature of the attitudinal data make it unwise to draw conclusions concerning the impact of day care on the labor force participation of low-income mothers at this point. The mixed results may arise from a basic problem with attitudinal surveys: it is not necessary for the respondent to act on his answer to the survey question. Behavioral studies concerning or related to the provision of day care finesse this problem and may aid in developing sound conclusions--results of such studies are provided in the next section. However, with the researcher in mind, we turn now to a more detailed discussion of the four attitudinal surveys.

Current Population Survey

The Current Population Survey (CPS) is conducted each month by the Bureau of Census for the Department of Labor. The data employed in this paper are

extracted from the March Supplement of the 1970 CPS (income year 1969).[13] The March Supplement contains questions which may be specifically related to the labor force participation of mothers and to their willingness to seek employment. Among those who indicated they were willing to work, but who were not in the labor force at the time of the survey, the problems in arranging child care or family responsibilities, cited as reasons for not entering the labor force, are enumerated.

In 1970 there were approximately 30.2 million mothers with children of their own residing in the home. About 13.1 million mothers were in the labor force (a labor force participation rate of 43 percent). Of these mothers, 4.3 million had children under six years old. Of the 17.1 million mothers who were not in the labor force, 9.4 million had children under six. Less than 2 percent of mothers not in the labor force with children under six, or 150,000 mothers, were willing to enter the labor force. Of the 150,000 mothers who were willing to enter the labor force but were not in the labor force during the survey week, 30 percent cited problems in arranging child care and 46 percent cited "family responsibilities" as the reasons for nonparticipation. It might be anticipated that between 80,000 (assuming child care would not induce more than 50 percent of those citing "family responsibilities" to enter the labor force) and 114,000 mothers of all incomes with children under six would enter the labor force if free and adequate day care services were made available. The latter estimate would increase the participation rate for the subpopulation from 32 percent

to slightly under 33 percent. (Data referred to in this section are presented in Appendix A.)

About 1.9 million of the 17.1 million mothers not in the labor force were in poverty. Slightly over 1.2 million of these mothers had children under six years of age. Nearly 4 percent of the latter group expressed a willingness to enter the labor force (approximately twice as high a percentage as for all mothers and over two and one-half times as high as for nonpoor mothers). Of the 42,000 mothers who indicated they were willing to week employment, 41 percent noted that the inability to arrange child care was keeping them from doing so. This percentage is almost twice as high as for nonpoor mothers, 41 percent compared to 25 percent. Another 32 percent indicated family responsibilities were a barrier to entrance. Thus, up to 31,000 low-income mothers (73 percent times 42,000) of the 1.2 million mothers of young children in poverty might be expected to enter the labor force if free and adequate day care services were made available. Assuming only one-half of those citing "family responsibilities" would enter the labor force upon the provision of child care, the 31,000 expected entrants would be reduced to 24,000 entrants. Yet assuming 31,000 additional mothers entered the labor market, the participation rate for poor mothers would rise by only about two percentage points, from 26 to 28 percent. Even if it is assumed that these mothers would find employment and earn enough for their families to escape poverty, it appears from these findings that the provision of day care would not significantly reduce poverty.

During 1969 about 1.6 million families in which there was a mother present received public assistance payments. Some 71 percent, or 1.1 million mothers, were not in the labor force. Of the mothers not in the labor force nearly 5 percent, or 52,000, stated they were willing to go to work. Approximately 35,000 of these mothers had children under six years of age; and as many as 24,000--36 percent who cited an inability to arrange child care and 42 percent who cited "family responsibilities"--might be expected to enter the labor force upon the provision of free and adequate day care services. It is very interesting to note that this number was made up almost entirely of mothers receiving public assistance whose family incomes still fell below the poverty line after accounting for the receipt of assistance payments. No mothers interviewed who received public assistance payments, but whose family income (including payments) was the above poverty level, cited the inability to arrange child care as a barrier to seeking employment.

In summary, the CPS indicates that the most women (over 95 percent) currently outside of the labor force simply are not interested in seeking employment. Among those who are not in the labor force, but who are willing to work, inability to arrange child care and perceived responsibilities to the family provide formidable barriers to entry. However, as the number of prospective labor force entrants is small, the impact of providing child care services should not be expected to significantly increase labor force participation for mothers of all incomes or for women in poverty. The

increase in employment seeking among mothers receiving public assistance payments might be slightly greater.

Before turning to the remaining surveys, it should be noted that the CPS data acts to further dispel the conception that poor mothers are less willing to work than are nonpoor mothers. Mothers receiving public assistance payments express the highest willingness to work among mothers who are not in the labor force; mothers in poverty second; and nonpoor mothers last.

Lower labor force participation rates among poor mothers and public assistance recipients may indicate a lack of opportunity or job-seeking skills, as suggested by Goodwin, rather than a lack of motivation.[14] It must also be noted, however, that even if those willing to work are added to those in the labor force within each of the groups mentioned above, the low-income mothers and public assistance recipients still would not have as high a participation rate as do mothers in nonpoor families.

Westat Research Corporation Day Care Survey - 1970

The Westat Research Corporation, under contract with the Office of Economic Opportunity, carried out a national probability sample during 1970 of about 1,800 households with children nine years of age or younger and family incomes under $8,000 per year. The study estimated that there were 35 million individuals in over 7 million such households. It further estimated that 5.4 million

of the mothers in these families were not working at the time of the survey. Significant findings of the study provided data on existing day care programs, the availability of day care services, and the nature and extent of the need for such services. It is the latter data with which the following paragraphs are primarily concerned.

The reader is warned that there is a basic incongruity, apart from the study population, between the Current Population Survey data and that of the Westat survey. The CPS defines labor force participants as those who are working or looking for work. The Day Care Survey defines participants as only those who are working, disregarding those who are looking for work. Adjustments to fit the more widely used CPS definition are made to account for this discrepancy where it is possible to do so.[15] In general, the change is small, under five percentage points. Where adjustments to match the CPS definition cannot be made, the statistic is denoted by the "unadjusted."

The study asked a number of questions of 1,450 nonworking mothers, 140 of whom were seeking employment; since this was a national probability sample, study population number may be weighted up to reflect national population estimtes. When asked to cite particular reasons for not working (two reasons were recorded) 29 percent of the subpopulation responded with a single response, "prefer not to work while child(ren) is young." Another 4 percent of the subpopulation cited this as a partial reason. In other words, one out of three mothers in the sample population--a weighted population of over

1.65 million mothers--had reservations about working while her children were young. These findings support the implicit hypothesis that young children rather than day care, are a deterrent to mothers seeking employment. (Data are contained in Appendix B.)

Another 34 percent of the nonworking mothers in the study population indicated they were not interested in working (10 percent); they did not believe they could find a job (4 percent); they had no particular reason for not working (4 percent); or they gave some unstructured response (16 percent). These mothers appear to be unmotivated in terms of entering the labor force, at least at the time of the survey. Incorporating these responses with those mothers who prefer not to work while their children are young, it appears that approximately 67 percent of the nonworking mothers, a weighted count of about 3.6 million mothers, were not prone to enter the labor force in 1970. A striking aspect of this estimate is that it indicates about 33 percent of the sample showed some willingness to work, whereas the Current Population Survey estimate was under 5 percent.

In response to the question, "If satisfactory day care at a price you could afford was available, do you think you would go to work?" 39 percent of the nonlabor force participants replied affirmatively. Another 6 percent gave a qualified response. Considering only single response affirmatives, the weighted number of mothers who would be expected to enter the job market would exceed 1.8 million. There are several interesting elements in this estimation.

(1) The provision of day care would apparently lead 27 percent of the nonworking mothers who had not worked since having children to reenter the labor force.

(2) Assuming the estimate of mothers not prone to enter the labor force is accurate, the estimate of the response to the provision of day care suggests that some mothers not previously prone to enter the labor force would change their position upon the provision of day care.

(3) The affirmative responses include 89 percent of the nonworking mothers who indicated they had problems finding satisfactory day care and 80 percent who felt they previously could not make enough money while working to afford day care; a consistency among responses for those mothers interviewed is thus indicated.

Again, it should be noted that this estimate is much more optimistic than the estimate developed from the Current Population Survey.

The provision of child care services, it could be intuitively postulated, might have the greatest impact in terms of employment on those who were previously employed. Previously employed mothers, therefore, might also be the most likely to reenter the labor force (on the assumption that they can once again find employment). The Westat data reflects on this theme. Among nonworking mothers who have worked since having children, but who were

not working at the time of the survey, 17 percent (unadjusted) cited their problems with finding satisfactory child care as a reason for not working; another 11 percent (unadjusted) cited their experience of not making enough money to afford satisfactory day care for their child.(Since multiple responses occurred in about 25 percent of the cases and since they were not controlled in this instance, there may be some confounding of the above figures.) Presumably, free and adequate day care services would have kept such mothers in the labor force. In comparison, among mothers who have not worked since having children, only 7 and 5 percent (unadjusted), respectively, cited day care problems or inability to earn enough money.

The Day Care Survey also tends to show that the closer the nonworking mother comes to entering the labor force, the more important day care becomes in that decision. Of the mothers in the study population who indicated they had trouble finding satisfactory day care, fully 65 percent were looking for work or planning to go to work within the next year. Among those nonworking mothers who perceived they could not make enough money while working to afford day care for their children, about 67 percent were seeking employment at the time of the survey or planning to do so within the next year.

In summary, the Westat findings are more optimistic about the impact of day care on labor force participation than are those of the Current Population Survey. The Westat data argues that the increase in labor force participation of the study population will be around 25 percent (29 to 54 percent) as a

result of the provision of free and adequate day care services. Labor force participants would increase, based on weighted counts, from 2 million mothers to nearly 3.8 million, an increase of 1.8 million mothers.

The Vermont Family Assistance Plan Study

The Vermont Family Assistance Plan study was executed 1970 by Mathematica, Inc. and the Family Assistance Planning Group, State of Vermont, under a contract with the Department of Health, Education, and Welfare. The study population consisted of about 21,800 low-income families with children under fifteen years of age. All were eligible or near-eligible Family Assistance Plan recipients under the 1970 Nixon Administration proposal. The study was designed to produce preliminary planning documents to assist both state and Federal governments in the development of the proposed Family Assistance Plan.

Low-income mothers in the home constitited the largest segment of the study population. Only about 6,600 or 30 percent of the low-income mothers were employed. Assuming there were no low-income mothers looking for work, the 30 percent labor force participation is well below that for all women in Vermont (40 percent). About 15,200 mothers in the study population were in the home (excluding the approximately 1,000 mothers who were employed in the home). These mothers cared for about 46,200 children under fifteen years of age. It is with this population that the remainder of this section is primarily concerned.

The subpopulation of mothers in the home has some experience with the problems involved in arranging child care. Nearly one out of four of these mothers has made child care arrangements in the past in order to take employment. However, only 19 percent of the mothers in the home felt that the lack of child care services was an obstacle to employment outside the home. Fourteen percent indicated they might look for a job outside their home if child care services were readily available. (While the two responses do not necessarily come from the same mothers, the Westat data cited above gives good reason to believe that the positive respondents are substantially the same mothers in both cases, p. 26.) It is interesting to note that whereas the data from the Westat study seem to indicate that the provision of day care services will motivate mothers to enter the labor force, the Vermont study indicates that such services will not motivate many.

Although the mothers in the study appeared reluctant to seek employment outside the home, they were apparently not reluctant to work within the confines of their homes. Thirty-nine percent expressed an interest in taking care of other children for pay, if it were possible for them to receive training and other assistance in setting up child care centers in their homes. This finding might be interpreted as a desire of mothers to remain in their own homes with their children or as an expression of the futility these mothers see in seeking employment. The interpretations are not mutually exclusive.

The National AFDC Study

The National AFDC Study was first carried out by the Bureau of Social Science

Research in 1968. The study, involving approximately a 1 percent sample of the AFDC caseload at the time, included about 11,600 AFDC mothers. The 1969 and the 1971 AFDC studies, conducted by the National Center for Social Statistics, are not employed here because they do not include the day-care-specific data of the 1968 study.

At the time of the study, 53 percent of the mothers in the sample were not working or looking for work; 42 percent were not working and had children under eight years of age (about 4,900 mothers in the sample population); and 30 percent wanted a job but were not in the labor force and had a child under eight years of age (about 3,500 mothers). The study concludes, in part, that 19 percent of the nonworking mothers with children under eight years of age would enter the labor force if free and adequate day care services were available. The 19 percent corresponds to a weighted count of about 93,000 actual AFDC mothers entering the labor force.

As was noted above, about 3,500 mothers in the sample population who were not in the labor force and who had children under eight desired employment. It can be assumed that all the mothers in the sample population who would be expected to enter the labor force upon receipt of day care would come from this group (19 percent of 4,900 mothers or a weighted count of 93,000). Cut this way, 27 percent of the mothers with young children who were willing to work would enter the labor force in response to the provision of day care services.

Public Opinion Polls

It has often been noted by political scientists that in answering opinion poll questions, respondents may answer an abstract question in the affirmative but answer a specific question on the same subject in the negative.[16] This appears to be the case for public opinion polls regarding the provision of day care services. Three national polls (Harris, 1970; Gallup, 1969; and Roper, 1971) and one statewide poll (Minnesota Poll, 1969) indicate that somewhat over 60 percent (64,64,61 and 73 percent, respectively) of the respondents "favored" day care (i.e., favor establishing more centers, etc.) Only 24 percent of the Harris respondents (1970), however, indicated they would "certainly" or "probably" look for employment if there were quality day care available. If only one-half of those who said they would "probably" seek employment did, in fact, do so, the percentage who would be expected to seek employment would fall to 16 percent. Interestingly, a 1943 Gallup query regarding the utilization of free day care services in order for the respondent mother to be able to work in a war plant elicited similar responses, 29 percent replying affirmatively. It must be remembered, however, that the sample populations are not identical. To this extent, the polls are not comparable.

Summary

The results of the attitudinal surveys and the public opinion polls are summarized at the outset of this section. Briefly recapitulating, the

survey estimates that labor force participation might climb by as much as twenty-five percentage points in response to the provision of day care. On the other hand, the CPS estimates that the labor force participation of low-income mothers of young children will increase by only two percentage points at the maximum. The Vermont Family Assistance Plan Study and the National AFDC Study estimate increases in the neighborhood of 10 percent. The diversity of the estimates suggest that another dimension should be included, namely, behavioral studies. The advantage of such studies is that they require the participant to act on the day care preference whereas the attitudinal studies do not.

Behavioral Studies

Two behavioral studies are cited below which impact on the policy issue. The studies are: The Gary Income Maintenance Experiment and the Ohio State University Center for Human Resource Research longitudinal study of the labor market experiences of individuals in four age groups (often referred to as the Parnes Study).[17] The Gary Experiment, at least in its experimental design, goes to the heart of the policy issue. The Parnes panel study definitively illustrates the impact of the presence of young children on the labor force participation of mothers.

The Gary Income Maintenance Experiment

The Gary, Indiana experiment, one of four funded by the Federal government,

is designed to yield data on potential behavioral responses to alternative income maintenance programs. The experiment tests the behavioral effects of a negative income tax plan combined with day care and other social services. The hypothesis is that the introduction of a properly structured income maintenance program will obviate the desirability of the transfer of resources to the poor in the form of in-kind services. Although the major findings are not expected to become available until late in 1973 and although administrative changes have slowed progress, interim data are available.

The day care component of the experiment involves about 700 guaranteed slots in five day care centers and a number of licensed homes. Services provided include infant care, full-time care for three to five year olds, part-time care for three to five year olds, and after school care for six to twelve year olds. The services are provided to eligible families residing in the model city area and are subsidized in varying amounts (35, 60, 80, or 100 percent). The full cost of various forms of care range from fifteen dollars to twenty-three dollars per child per week, with separate arrangements developed for transportation, and 80 percent of the sample must either be employed, looking for work, or in job training. Families living outside of the model city serve as controls and receive neither subsidies nor guaranteed day care slots.

The day care portion of the experiment commenced in June 1971. Table 4

below shows the utilization of day care services as of November 1972; but it should be remembered that the tables reflect interim data rather than findings of the experiment.

TABLE 4

ENROLLMENT BY CELL IN SUBSIDIZED DAY CARE IN THE GARY INCOME MAINTENANCE EXPERIMENT

	Work Related (80%)		Free Access	
Subsidy Level	Families Enrolled Per Cell	Total Eligible Families	Families Enrolled Per Cell	Total Eligible Families
100	4 (10%)*	40	2 (20%)*	10
80	10 (13)	78	4 (21)	19
60	13 (7)	179	8 (18)	45
35	16 (6)	264	3 (5)	66
TOTAL	43 (8)	561	17 (12)	140

SOURCE: Department of Health, Education, and Welfare.

NOTES: *Percent of total eligible families.

The immediately striking fact is that only sixty out of 700 eligible families, under 9 percent, utilized the experiment's day care services. Solely twelve percent, six out of fifty eligible families, of the families subsidized at 100 percent employed available day care services. Perhaps most interesting, only two out of ten families with free access to fully

subsidized day care exercised that option nearly one and one-half years after the initiation of the service. The best conclusion that can be drawn from the data is that mothers do not use subsidized day care in order to enter the labor force.

Several arguments might be raised against the above conclusion. It might be argued the interim findings represent poor communication of the availability of services. Eligible families, however, have been made aware of the availability of day care via notification of eligibility. Or, it might be argued that there has been poor recruitment. This is plausible. However, the low rate of increased enrollment, fifteen families in the six months from June to November, and the concern the Department of Health, Education and Welfare has indicated by attempting to ascertain why the services are not being used, point to continued low response. In addition, if HEW determines that very little child care is being used at all, it will extend its efforts further and conduct an extensive analysis of the nonutilization of child care. Even if neither of these arguments are finally upheld, the Gary project demonstrates that we should not anticipate an immediate (one or two years) impact from the provision of day care.

In the final development of day care policy, the low-income members of the experiment's control group must also be accounted for. That is, the members of the control group would become eligible for subsidized day care services if the services were extended beyond the experimental stage.

Inclusion of this population would most likely not lead to increased utilization and could, in fact, lead to lower utilization relative to the experimental results.

The Seattle-Denver Income Maintenance Experiment focuses on the degree to which public programs designed to facilitate employment of the poor and near poor will influence the work effort responses of participants in an income maintenance program. But because day care services for working mothers are a supplement to the program, this experiment is less relevant to our paper than that of the Gary experiment. Nevertheless, the responses of mothers to totally subsidized day care are reported. It was found that approximately 30 percent of the sample of about 1,400 low-income working mothers used the day care service although this number does not indicate how many mothers entered the labor force as a result of the provision of day care.

In summary, the Gary data shows a 9 percent utilization rate for day care services. The rate remains in this general range (12 percent) even when day care is fully subsidized. The Seattle-Denver data indicates somewhat higher utilization, but primarily by already employed mothers. The experiments hint, at least in the short run, that mothers will not strongly utilize subsidized day care in order to enter the labor force.

The Parnes Study

The Parnes Study, being prepared at the Ohio State University's Center for

Human Resource Research under a contract with the Department of Labor, is a longitudinal study of the labor market behavior of four subsets of the United States population men 44 to 59 years of age, women 30 to 44 years of age, and young men and women 14 to 24 years of age. We are particularly interested in the subset of women 30 to 44 years of age; the unavailability of the second wave of interview data for women 14 to 24 years of age leads us to exclude this subpopulation.

At present, two reports on women aged 30 to 44 years are available. The initial report concerns baseline data gathered in 1967. The second report summarizes some of the findings of the second round of interviews conducted during the early summer of 1969. The study group consists of 5,083 women who were 30 to 44 years of age when initially interviewed in mid-1967. By the time of the completion of the 1969 interviews, the original sample had shrunk by a little over 7 percent.

Study data indicates that a change in the age composition of children in a household over a two year period has an effect on the labor force participation of women, Among white women who were married in both 1967 and 1969, those who did not have children under six years of age in 1967, but who acquired children in that age category by the time of the 1969 survey, reduced their labor force participation by eleven percentage points, from 43 percent to 32 percent (table 5). Both black and white married women who

TABLE 5

CHANGES IN THE LABOR FORCE PARTICIPATION RATE BETWEEN 1967 AND 1969, BY CHANGE IN THE AGE COMPOSITION OF CHILDREN LIVING AT HOME IN 1967 AND 1969 AND BY COLOR: RESPONDENTS MARRIED IN BOTH YEARS

Comparative Ages of Children	Population	Survey Week Participation Rate		
	Total Number (in thousands)	1967	1969	Percent Change
White				
No child under 6, 1967; child under 6, 1967;	256	42.6	31.6	-11.0
Child under 6; 1967; none, 1969	1,530	32.3	39.7	+ 7.4
No change[a]	9,312	44.3	47.4	3.1
child under 6 both years	335	17.9	23.8	5.9
All other[b]	952	46.5	54.3	7.8
Total or average	12,051	42.9	46.6	3.7
Black				
No child under 6, 1967; child under 6, 1969	26	c	c	c
Child under 6, 1967; none, 1969	125	51.2	58.4	7.2
No change[a]	788	65.2	65.9	.7
child under 6 both years	22	c	c	c
All other[b]	68	60.3	55.9	- 4.4
Total or average	1,007	---	---	---

SOURCE: Sookon Kim, Roger D. Roderick, and John R. Shea, Dual Careers: A Longitudinal Study of the Labor Market Experiences of Women, Center for Human Research, vol. 2 (Columbus: Ohio State University), p. 24.

NOTES: [a]Includes those with no children both years, no child under 18 years age both years, children 6 to 17 years of age both years, with children under 6 and 6 to 17 both years, and with children under six only years.

[b]This is a residual category for which no a priori expectations were made as to the change in population over the years.

[c]Percentage not shown where the base represents fewer than 30,000 cases.

in 1967 had children under six years of age, but no such children in 1969, increased their participation by over seven percentage points, from over 32 to just under 40 percent for whites and from about 51 percent to around 58 percent for blacks. That such changes were not due to changes in the marketplace is indicated by the fact that the labor force participation rate for women with no change in the age categories of their children over the years remained relatively constant.[18] Thus, the longitudinal measures clearly demonstrate the validity of the hypothesis which previously has been tested on a cross-sectional basis--namely, that the presence of children under six years has an influence on the labor force participation of women.

The Parnes data provide an indication of the short-run effect that an expansion of child care services might have on the labor force behavior of women in the study cohort. In the initial survey, respondents were asked how they felt about mothers working outside of the house when they had children between the ages of six and twelve years under hypothesized circumstances.[19] On the basis of their reactions, the respondents were classified as "permissive," "ambivalent," or "opposed." It was determined from the initial survey that the participation rate for white women with a "permissive" attitude was about twenty-five percentage points (58 percent compared to 33 percent) higher than for women with an "opposed" attitude. In the case of black women, the analogous difference in participation rates was 12 percent (70 compared to 58 percent). A subsequent multivariate

analysis also found this attitude measure to have a significant independent relationship to the probability that a married woman was in the labor force.[20]

In general, the 1969 survey results substantiate 1967 data. This indicates a cause-effect relationship which could not be determined solely from the 1967 cross-sectional data. That is, the attitude of a mother toward working when a child is present in the household is related to that mother's employment behavior. Among those who were in the labor force during the 1967 survey week, a statistically significant larger percentage of white women who were "opposed" than those who were "ambivalent" left the labor force between 1967 and 1969 (table 6). A similar difference is evident between the "ambivalent" and "permissive" groups, at least for white women. This monotonic relationship between the percentages dropping out of the labor force is somewhat weaker among black women, but continues to exist.

The 1967 findings also described a strong relationship between the number of weeks a woman spent in the labor force and the attitude of her husband toward the respondent's working. In explaining the change in the labor force participation rate over the two year period, this relationship holds only for whites.

The implications of the Parnes study with regard to day care are not absolutely clear, but the following conclusions can be drawn. Because the appearance of young children limits the participation of mothers in the

TABLE 6

CHANGES IN THE LABOR FORCE STATUS BETWEEN 1967 AND 1969, BY 1967 LABOR FORCE STATUS, ATTITUDE IN 1967 TOWARD THE PROPRIETY OF MOTHERS WORKING, CHANGE IN CATEGORIES OF CHILDREN, AND COLOR: RESPONDENTS MARRIED IN BOTH YEARS

Change in Age Categories of Children and Attitude Toward Propriety of Mother Working	Total in Labor Force, 1967 (in thousands)	Percent Who Dropped Out of Labor Force by 1969	Total out of Labor Force, 1967 (in thousands)	Percent Who Entered the Labor Force in 1969
White				
Child under 6, 1967; none, 1969				
Permissive	158	15	150	25
Ambivalent	222	21	459	22
Opposed	108	22	423	18
Total or average	493	19	1,037	20
No change in child age categories				
Permissive	1,296	14	832	20
Ambivalent	1,648	14	1,105	21
Opposed	1,171	22	1,240	16
Total or average	4,124	16	5,188	19
Total[a]				
Permissive	1,592	13	1,094	22
Ambivalent	2,151	16	2,828	21
Opposed	1,412	22	2,937	16
Total or average	5,170	17	6,882	19
Black				
No change in child age categories				
Permissive	209	15	73	32
Ambivalent	163	18	119	33
Opposed	142	18	82	35
Total or average	514	17	274	33
Total[b]				
Permissive	254	14	92	29
Ambivalent	219	18	172	30
Opposed	162	19	108	37
Total or average	635	16	372	32

SOURCE: Dual Careers, Volume 2, p. 42

NOTES: [a] Includes respondents who had no children under 6 in 1967, some in 1969; no children either year; and those with no change in age categories of children.

[b] Includes respondents with any change in age categories and those with no children either year.

labor force (decreasing as they grow older), one would assume that the impact of day care would be to negate children as a deterrent to employment. However, social values and practices, as displayed in the attitudes toward employment of mothers, reduces the potential impact of day care. Therefore, we suggest that the Parnes data indicate--in the absence of a sharp shift in social values and practices--readily accessible child care services would probably not increase the labor force participation of thirty to forty-four year old mothers as much as the absence of a young child from the home implies.

Interestingly, the findings appear to show that among white women in this cohort, the increase in labor force activity coinciding with the youngest child reaching the age of six is associated only with respondents whose husbands held white collar jobs. Thus, at least among married white women, the increased availability of child care services (assuming services were available to all income groups) would probably have its greatest impact on the participation of those in relatively well-to-do families.

Summary

The Gary Income Maintenance Experiment and the Parnes Study provide behavioral results indicating that the attitudinal results are overstated, at least in some instances. When faced with the opportunity to use day care facilities (presumably of adequate quality as they are licensed by the states) in order to enter the labor force, few eligible families

responded. While it is hypothesized that the effect of "removing" young children from the home would be to greatly increase labor force participation, it was shown that attitudes toward mothers working, even a mother of a school-aged child, tended to limit their entry into the labor force. Given these results, and the previous attitudinal data, we can turn to an estimation of the impact of day care on the labor force participation of low-income mothers.

Conclusions

Looking at the results of the attitudinal surveys, public opinion polls, and the behavioral studies, one concludes that the provision of free and adequate day care services to low-income mothers, indeed to all mothers, will serve to increase labor force participation somewhat. However, the provision of free, quality day care will not increase the labor force participation of low-income mothers by the vast amount often assumed. The reason for this is apparently quite simple: most mothers not now working outside the home are not interested in working! Let us quickly note that we agree with Leonard Goodwin's thesis (i.e., that low-income persons are no less motivated to work than are the relatively better off).[21] It simply appears to be a fact that the majority of mothers, of all incomes, are not interested in entering the labor force, especially if they have children at home.

The increase in the labor force participation of low-income mothers as a

result of the provision of free and adequate day care services will probably not exceed ten percentage points (an increase from the present rate of 32 percent to 42 percent). This would total about 280,000 additional low-income mothers in the labor force. It is reasonable to assume a majority of these mothers would have children under six (an increase of thirteen percentage points in the labor force participation of this subgroup, to 39 percent, would account for 75 percent of the increase of low-income mothers in the labor force). This estimate is substantially lower than that of the Westat Day Care Survey, for reasons explained above. It is also substantially higher than that of the Current Population Survey. This occurs because the estimates of the CPS involve only those who indicate a willingness to seek employment; as the survey is not primarily concerned with day care, we assume that many mothers when asked the day care question in a different manner would have responded more positively. The 10 percent estimate is very much like the estimates of the behavioral assumption model (ten percentage point increase), the Vermont FAP Study (10 percent, from 30 to 40 percent), the National AFDC Study (8 percent, from 47 to 55 percent), the Gary Experiment utilization rates, and the longitudinal data of the Parnes Study. While the Vermont FAP Study and the National AFDC Study are attitudinal studies and presumably susceptible to the same biases attributed to the previous attitudinal studies, they are used as indicators here because they deal specifically with the population of interest to this paper.

In an attempt to confirm this estimate, a regression analysis of the CPS data were employed. The regression, employing labor force participation as a dependent variable and utilizing twenty-four explanatory variables, indicated that the impact of having a child under six years of age was to reduce the labor force participation of mothers receiving public assistance payments by about 9 percent. Although the equation was significant at the one percent level, it explains only about 16 percent of the variance (Appendix C). Thus there is little difference between the regression analysis and the previous estimation.

REASONS FOR LACK OF LABOR FORCE RESPONSE

It is not the purpose of this paper to judge what is a "sufficient" impact of the provision of child care services to warrant legislation for additional services. The indicators of response employed above, however, are not so encouraging as many would have predicted. Nor do the indicators point to the lack of day care being so damaging to Federal programs as earlier quotes might predict. Therefore, it is appropriate to examine reasons why the response rate is not greater.

Day care effects the supply of mothers to the labor market. That is, the availability of day care centers and homes frees the mothers of young children to enter the labor force. In this paper, we are primarily concerned with this supply response. Nevertheless, as supply is a function of demand for labor, it is useful to digress for a moment. Bowen and Finegan have shown that the demand for married women with small children to enter the labor force is strongly related to their response. In areas with an industry demand conducive to female employment, labor force participation of mothers with small children (regardless of the mother's age) is higher than in areas where demand is relatively lower.[22] The apparent conclusion is that in the absence of demand for females labor, labor force participation will lag. The provision of day care services probably will not substantially

influence this demand. This point is briefly dealt with in the concluding section.

Returning to the supply side of the dichotomy, there are several factors which have been shown to impact on the labor force participation of low-income females. These include lack of information about the market, the husband's attitude toward the wife's working, the husband's occupation and earnings, and discrimination against women. These problems certainly are common to low-income mothers of young children. They are not, however, problems that day care purports to alleviate. Rather, four specific reasons for the lack of response to day care, by itself, are suggested:

(1) Mothers of young children have a generally low desire to enter the labor force.

(2) The wage-subsidy effect of the provision of day care is low for low-income women.

(3) The structure of public assistance laws provides a disincentive to seeking employment.

(4) The additional role of working mother to the mother's other roles provides too great a strain on the mother.

While such effects might act independently or in concern, their interaction is not discussed. The important fact appears to be that they act or interact to reduce the potential impact of subsidized day care on the labor force participation rate of low-income mothers.

Desire to Enter the Labor Force While Children are Present

This subject was covered at some length in the Current Population Survey section of the Attitudinal Findings. The point we wish to stress here is that only a relatively low percentage, under 5 percent of mothers not in the labor force expressed a desire to seek employment. For all subgroupings of mothers with young children the percentage out of the labor force was at least twice as high as the percentage in the labor force. More specifically, about 69 percent of all mothers with children under six years old were not in the labor force; only about 2 percent of these mothers expressed a willingness to work. In a similar manner, 74 percent of the low-income mothers with a child under six years old and 68 percent of the nonpoor mothers with a child under six were not in the labor force. Of these mothers, 4 percent and 1 percent, respectively, expressed a willingness to seek employment. Mothers receiving public assistance payments were less likely to be in the labor force (76 percent outside) than were other mothers of young children, but more likely (5 percent) to express a willingness to enter the labor market. Thus, among mothers of young children, it is quite apparent that there is not a strong desire to seek employment.

Wage-Subsidy Effect

At least three regression estimates of labor market behavior resulting

from the wage-subsidy effect of subsidized day care have been made. They are: the Institute for Interdisciplinary Studies AFDC Model, the Auerbach Corporation Model, and the IIS CPS Estimate, which proved to be inadequate and is referred to only briefly below.[23]

An attempt was made by the Institute for Interdisciplinary Studies to determine if the AFDC population would be sensitive to the wage-subsidy effect of subsidized day care. The data base was the 1968 National AFDC Study; the dependent variable employed was labor force status--i.e., whether the respondent was working full-time, part-time, or not at all; eleven independent discrete variables were selected as predictors of labor force status.

With relation to the wage-subsidy effect, of interest is the measurement of the separate effect of the independent variables on work behavior. The strongest association between a predictor variable and the level of labor force participation was the wage in the longest job held (table 7). The equation suggests that with each $.25 increase in hourly wage, one could expect a concommitant 4.2 percent increase in labor force participation among the welfare-relevant population. If the AFDC mother views the impact of subsidized day care as giving her an additional $4.00 per day, because she no longer has to pay that much for child care, the model predicts about a 4 percent increase in labor force participation.[24]

TABLE 7

RESULTS OF MULTIPLE REGRESSION OF EMPLOYMENT PARTICIPATION ON CHARACTERISTICS OF AFDC CASES: ALL CASES IN THE AFDC SURVEY (ACTIVE AND NOT)

Variables	Mean	Regression Coefficient	Computed t-value
Welfare Status	.59513	-0.62149	-35.39301
Husband Working	.15803	-0.15466	- 4.69222
Age	.76901	.06232	2.72687
Education	2.57024	.05210	7.89134
Husband Absent	.59215	.16267	5.87864
Married	.15378	.16895	1.99858
Race	.61321	.16642	9.77560
Wage in Longest Job Held	2.23280	.08494	16.75623
Children 6-15 Years Old	.61895	-0.13913	- 7.82680
Children 6-15 Years Old	.74412	.18736	5.34473
Children 6-18 Years Old	.29023	.06006	3.33608
Dependent	.56514	.83967	
Intercept		.35239	
Multiple Correlation		.42993	
Std. Error Estimate		.75855	

SOURCE: Sally Kilmer, Judith Frost, and Gary Fatland, Child Care Programs: Estimation of Impacts and Evaluation of Alternative Federal Strategies. final report, pt. 2 (Minneapolis, Minnesota: Institute for Interdisciplinary Studies, 1971).

While the results of the regression indicate that the AFDC population may respond to a wage incentive, before the results can be used to estimate a labor force response to day care, it must be established that this population would, in fact, consider subsidized day care as a "wage-subsidy." Since several studies have shown that the amount paid for private day care decreases as family income decreases, the AFDC population probably pays the smallest amount of any group for private day care--very likely, nothing at all. For example, the Westat Study indicates that twenty-two out of twenty-seven families with incomes under $2,000 utilizing day care facilities pay nothing at all for care. A family with less than $2,000 per year in income is probably eligible for AFDC, and it is unlikely that this population would consider a subsidized day care program to be a wage subsidy. It is equally unlikely that it would respond to the provision of day care by increasing labor force participation.

The Auerbach Corporation model tends to confirm the hypothesis that the wage-subsidy impact of day care will not be large for the low-income population. Auerbach developed a wage-subsidy model based on data from the Survey of Economic Opportunity to estimate the labor force response of the urban (FAP) Family Assistance Plan-eligible population to the provision of day care. The wage-subsidy was viewed as the amount a family would no longer have to expend on day care. An estimate of this subsidy was based on a study of current hourly day care expenses for families, performed by the Center

for Human Resource Research at Ohio State University, and assumed that each eligible family would place two children in day care.[25]

The results of the Auerbach model indicated that the increase in labor force activity as a result of the wage subsidy effect of day care would not be large. For female heads of household who were out of the labor force and had preschool-aged children, an estimated 8 percent would enter the labor force in response to day care. For FAP-eligible mothers, with husband present, having children under six years old, an estimated 18 percent would enter the labor force. Thus, it was estimated that a total of about 13 percent of the FAP-eligible population might be expected to enter the labor force in response to day care.

The Auerbach model employs very liberal assumptions. For example, it assumes that low-income families are paying in the neighborhood of $1,000 to $1,500 per year for child care. Westat and other studies (e.g., Windows on Day Care) show that the average charge for families with incomes under $4,000 is about $5 per week. For two children in a center fifty-two weeks a year, the charge to a low-income family would be about $525, or one-half to one-third that employed in the Auerbach model. In addition, it is a well-known fact that child care cost per child decreases at a rapid rate as the number of children increases.[26] It thus appears reasonable to assume that the Auerbach figures are inflated.

The Institute for Interdisciplinary Studies CPS estimates proved to be unsuitable for use in estimating the wage-subsidy effect on day care because the regression equation failed to yield a suitable relationship between the dependent variable, labor force participation, and wage rates for use in simulation. Despite this IIS goes on to state that if any prediction were to be made from the results of the model, it would be that mothers would probably respond to the increased net wage (due to the subsidization of child care costs) by working fewer hours.

Structure of the Public Assistance Laws

Concern for the employment of welfare beneficiaries has been a continuing theme of national public assistance policy over the past decade. Primary attention has focused on the Aid to Families with Dependent Children (AFDC) program, which is considered by Irvin Garfinkel and Larry Orr in Welfare Policy and the Employment Rates of AFDC Mothers[27].

The study related in the report by Garfinkel and Orr was designed to estimate the effects of the various AFDC policy parameters on the employment rate of AFDC mothers. The technique employed was multiple regression analysis of cross-sectional state aggregates for November and December 1967. The employment rate (i.e., the ratio of working mothers to all mothers in the programs) was selected as the sole dependent variable. The estimated coefficients and tests of significance for several alternative regression

TABLE 8

ALTERNATIVE REGRESSION MODELS: ESTIMATED COEFFICIENTS (AND T-STATISTICS)

Independent Variables	Model 1	Model 2	Model 3	Model 4	Mean of Independent Variables
Constant	.37	.76	.75	.67	
AVDED	.000762 (1.47)	.000942 (2.41)	.000985 (2.59)	.001067 (2.83)	60.45
GUAR	-.000958 (-3.35)	-.000502 (-2.18)	-.000493 (-2.28)	-.000564 (-2.69)	194.48
SA	.000743 (3.06)	.001167 (5.94)	.001161 (6.12)	.001070 (6.28)	34.84
TAX	-.088829 (-.94)	-.206461 (-3.07)	-.235599 (-3.38)	-.204482 (-3.15)	.96
LSMSA		-.001053 (-2.56)	-.001117 (-2.83)	-.001373 (-3.79)	15.61
NEGRO		.000956 (3.05)	.000837 (2.73)	.000916 (3.07)	35.22
ED8		-.001377 (-1.50)	-.001779 (-2.01)	-.001283 (-1.54)	35.89
KIDS6		-.002601 (-1.74)	-.002113 (-1.47)	-.002652 (-1.88)	58.18
UNEMP		-.029709 (-3.30)	-.026232 (-3.02)	-.033573 (-4.62)	3.93
WAGE		-.032674 (-1.19)	-.029891 (-1.14)		2.77
VOC R			.003317 (1.96)	.002657 (1.62)	9.01
TRAIN			-.001396 (-.93)		21.12
WTEST			.018079 (1.13)	.023058 (1.47)	.40
R^2	.567	.810	.833	.830	
SEE	.071	.047	.044	.044	

SOURCE: Irwin Garfinkel and Larry Orr, Welfare Policy and the Employment Rate of AFDC Mothers, Discussion Papers of the Institute for Research on Poverty (Madison, Wisconsin: University of Wisconsin, 1972), pp. 9-10.

TABLE 8

Continued Notes

NOTES:

Independent Variables -

AVED.....average deductions from gross income

GUAR.....guarantee

SA.....set-aside

TAX.....tax rate

LSMSA....large standard metropolitan statistical area (over 400,000)

NEGRO....percent Negro

ED8.....eight years of education or less

KIDS6....children under six years of age

UNEMP....state unemployment rate

WAGE.....state average earnings of production workers in manufacturing

VOC R....received vocational rehabilitation in the last two years

TRAIN....received work training in the last two years

WTEST....states having work test requirement

Data Sources--

Assistance Payments Administration, "Characteristics of State Public Assistance Plans Under the Social Security Act," Public Assistance Report 50 (HEW, 1967), mimeo.

Department of Labor, Employment and Earnings, States and Areas, 1939-1970 (U.S. Government Printing Office, 1970).

Department of Labor, Manpower Report of the President, 1970 (U.S. Government Printing Office, 1970).

National Center for Social Statistics, "Findings of the 1967 AFDC Study: Data by State and Census Division," NCSS Report AFDC-3, pts. 1-2 (HEW, 1967), mimeo.

National Center for Social Statistics, "Old Age Assistance and Aid to Families with Dependent Children: Tables on Percent of Basic Needs Met for Specified Types of Cases," NCSS Report D-2 (HEW, 1967), mimeo.

models are shown in table 8. While the explanatory power of models 2,3, and 4 are quite good, the authors noted a marked sensitivity of some of the coefficients to the specification of the model. There is no way of being certain that the inclusion of other, omitted variables would not alter the outcome somewhat. Therefore, the estimates should be viewed with some degree of caution.

If the results of the study are at all realistic, they indicate that manipulations of policy parameters (guarantees, tax rates, set asides, and deductions for work-related expenses) are not likely to get most AFDC mothers into the labor force. If the government provides some degree of financial security to enable single heads of household to devote their time and energy to rearing their children, most of them will do precisely that. The government should not expect availability of day care services to alter this pattern, especially in light of the wage-subsidy impact noted above.

It is interesting to note that Garfinkel and Orr find that the presence of a child under six years of age in an AFDC family tends to reduce the employment rates of mothers. This is consistent with other findings reported in this paper.

The Overloaded Role Theory

A "role theory" suggests that an individual, say the nonworking mother,

might be best viewed as an operator within a set of roles. The mother's roles might include mother, head of household (about 11 percent of the households in the United States are female headed; 37 percent of the households in poverty are headed by females; and 30 percent of public assistance households have female heads), housekeeper, and, in the case of the low-income mother, often welfare client. When the mother enters the labor force, she takes on yet another role. The "overloaded role theory," suggested by Dorothy Herberg and Audrey Smith, suggests that when a woman has to take on too many roles, she cannot function properly in the society.[28] She then may decide to drop or omit one or more roles, the most practical being employment.

The role perspective provides a view of child care beyond the simplistic notion often taken. Rather than attributing nonparticipation in the labor force to lack of child care, with the concommitant solution of providing additional resources for child care, it is attributed to the overloading of the mother's roles in life. That is, the additional role of the mother as a member of the labor force contributes to the process of cumulative burdening of the role system.

While increasing the supply of child care may be beneficial in general, it is not, in the context of roles theory, a solution to the problems of low-income mothers. Since even in the presence of day care the mother

is switching her role from that of day-time mother to that of day-time employee by entering the labor force, providing additional day care services would not reduce the mother's role burdens. She has not exchanged roles because she remains a mother. In fact, she has taken on a new aspect of her role as mother--planning substitute care for her child.

We must be careful to avoid considering the roles of low-income mothers within middle class constructs. For poor mothers, the role of mother probably takes more time daily to complete than it does for nonpoor mothers. For example, the nonpoor mother very likely has a washer and dryer for doing laundry in her home (or apartment). Very likely the low-income mother must bundle up her clothes, carry them to a laundermat, perhaps wait for a machine, and return home. As a consequence, less time is available to the low-income mother for use in her role as employee (assuming it is desirable that she keep up with housework).

An apparent contradiction to the "overloaded role theory" arises when one considers that the labor force participation rates for single heads of household are higher than those of other mothers. The explanation appears to be that the need for family income requires, in this instance, that the employment role exceed all others.

In light of the role burdens of the mother, it is not surprising that labor force participation, especially of low-income mothers, has traditionally been low. Increasing participation is probably a tribute to female coping

skills rather than an indicator of weakness in the theory. However, a program which, at best, does not decrease the roles of mothers should not be expected to impact on the labor force participation of mothers. Day care is such a program.

Summary

In the previous pages we have attempted to explain the rather low, in comparison to the anticipated, impact of the provision of day care on the labor force participation of mothers. The question considered has been, Why is the labor force response no greater? The responses offered have included the following: because mothers of young children have a generally low desire to enter the labor force; because the wage-subsidy effect of the provision of day care is low; because of the structure of public assistance, i.e., AFDC, laws; and because the additional roles of working mother added to the mother's other roles provides too great a strain on many women.

OPEN QUESTIONS

The text of this paper leaves open several questions related to the labor force response to the provision of child care. Three of the most interesting, in our view, are touched on in this section. Briefly stated, the issues are:

(1) Even if the provision of day care does not impact heavily on present nonlabor force participants, it may impact on women already in the labor force by enabling them to work more hours. The question then becomes: Will the provision of free and adequate day care services increase the labor force supply (as distinct from the labor force participation) of mothers?

(2) There are certain costs associated with the provision of child care. The Federal government is currently engaged in an effort to make effective use of limited resources. In a gross form how might we begin to estimate the cost-effectiveness of the provision of day care services?

(3) Day care will increase the labor force participation

of mothers. What are the prospects for these mothers upon entering the labor force?

Labor Supply

There are three dimensions of labor supply employed by economists. The one most frequently studied, and the measure employed in this paper, is a dichotomous measure of whether a person is in or out of the labor force during some referenced period. It is not an efficient measure of labor supply to the extent that it fails to indicate the individual's extent of participation (i.e., number of hours). A second frequently used measure of labor supply is the number of weeks in the labor force during a period of one year. The variation of this measure is sensitive to seasonal factors, and yet information concerning activities during a year has to be recalled, which tends to produce some error in measurement. A third measure is the number of hours of labor supplied to the market during the reference week. Unlike the measure of the number of weeks in the labor force, this measure suffers a seasonal bias. However, the problem of recall is substantially reduced. Sookon Kim, in a report entitled Cross-Substitution Between the Husband and Wife of Labor Supplied by Married Women, uses the number of hours supplied to estimate labor force responses of women.[29] Extrapolating from this paper, the labor supply responses to day care may be commented on.

Regression results in the Kim study indicate, among other things, that regardless of race, child care responsibility, measured in terms of the number of children in a household and their age structure, is the most powerful deterrent to the number of hours supplied by a mother to the market place. An implication which might be drawn from this is that mothers who are currently in the labor force would work more hours if free and adequate day care services were made available. That is, the availability of day care would statistically "remove" the effect of children in reducing labor supply. It should be noted that this conclusion results from an analysis of data which included imputted hours of participation for unemployed and partially employed mothers. On the other hand, the IIS estimate from the CPS data indicates that an "income effect" may take place, thereby reducing the number of hours worked and mitigating the impact of day care (although this model, we must remember, failed to yield a suitable realtionship between the department variable and wage rates for use in simulation).

Cost-Effectiveness

Policy makers must be concerned with weighing the costs of implementing a subsidized day care program against a limited amount of resources. One way of doing this is to focus on the budgetary costs of maintaining a family on welfare vis-a-vis the cost of day care and employment programs, which are probably essential to making mothers without marketable skills viable

in the labor market. The gross form of the cost-effectiveness model would necessarily define the eligible population and services to be provided under a day care-employment training program, and cost out the structure. An analysis might then be employed by which the budgetary cost of the income maintenance program alone would be estimated, as well as the cost of the income maintenance plus day care plus the training program. The latter program involves savings in income maintenance since labor force participation among recipients causes their wages to be increased assuming they are employed following training). On the other hand, additional training and day care arrangements must be funded. The decision rule for the model would be to employ day care and training programs if the savings in income maintenance would be greater than the costs for the two programs.

It is not presently clear whether day care is cost effective. The intuitive reaction would be that it is not.[30] That is, mothers responding to the provision of the services would still have a difficult time finding employment and, even if they found a job, making enough to rise above the relevant income test (or earning enough to substantially reduce payments). Until this issue is resolved, we would urge that policy-makers regard the costs of day care in the preceding framework.

Employment Prospects

If some 280,000 additional low-income mothers enter the labor force, will they be able to find employment? Most low-income mothers, we must assume,

will be without substantial job skills. Unemployment among unskilled workers continues to be severe. New jobs have not been developing to take in unskilled labor.

The establishment of a government subsidized program of day care services has the advantage that it creates jobs. It has been estimated that a typical Federal day care center program would probably utilize about 160,000 day care staff per one billion dollars expended.[31] The cost of providing day care services to 280,000 mothers would be a little under $500 million.[32] Assuming, then, the program would cost in the neighborhood of $500 million, about 80,000 day care staff jobs would be generated. It is also possible that day care expenditures would give rise to a multiplier effect in the private sector, producing up to 340,000 additional jobs.[33] Thus, in the most optimistic case, if the Federal government were to spend $500 million on day care program, it would generate around 114,000 employment opportunities. If each of the 280,000 potential labor force entrants were to enter the labor force and if there were no significant expansion of job opportunities above those created by day care, the number of unemployed would rise by 166,000 women. The unemployment rate for all women might then be expected to increase by over three percentage points, from 13.3 to 16.5 percent, based on 1970 CPS figures.

SUMMARY

This paper has been narrow in scope. That is, it has considered only the labor force impact of day care. Should the question be turned around to reflect the need for day care in the presence of a guaranteed employment program, the results could be quite different. Within the scope of the paper, however, we believe our conclusions to be valid.

In the introduction to the paper, we cited Administration officials and scholars who have argued that what low-income women need in order to enter the labor force is "adequate day care and a decent job at a living wage." We have shown here that the provision of day care, by itself, will not lead vast numbers of low-income mothers to enter the labor force. It is estimated that a ten percentage point increase in labor force participation, from 32 to 42 percent, might occur in response to day care. This would amount to about 280,000 additional mothers in the labor force. This number is not larger, we hypothesize, because: (1) many mothers prefer to care for their own children; (2) many mothers do not see the provision of subsidized day care as substantially increasing their net wage; (3) the structure of welfare laws makes employment, in some cases, economically unsound; and (4) employment increases the already heavy burdens of the mother.

Although these questions have not pursued deeply, it appears that day care may not be cost effective and that its upshot might be to increase unemployment. However, it might also tend to increase the number of hours supplied to the labor market by those already employed. These issues deserve further investigation and are of considerable importance to policy-makers.

NOTES

1. Joel F. Handler and Ellen Jane Hollingsworth, Work and Aid to Families With Dependent Children (Madison, Wisconsin: The University of Wisconsin, Institute for Research on Poverty, 1969), p. 6.

2. Sar Levitan, Martin Rein, and David Marwick, Work and Welfare Go Together (Baltimore: Johns Hopkins University Press, 1972), p. 91. See also: U. S., Congress, House, Committee on Ways and Means, Hearing on Social Security and Welfare Proposals, 91st Cong., 1st sess., 1969, p. 367.

3. Work in America: Report of a Special Task Force to the Secretary of Health, Education, and Welfare (Cambridge, Mass.: MIT Press, 1973).

4. "Low-income mothers" are defined as mothers in those families (either husband present or female headed) whose family income falls below the poverty line as defined by OEO. The term is used interchangeably with poor mothers.

5. The terms "child care" and "day care" are used interchangeably throughout the paper. They are not distinguished as being custodial or developmental in nature.

6. The Current Population Survey definitions are used to specify "labor force participation" and "labor force participation rate." Labor force participation is defined as working or looking for work. The labor force participation rate is the ratio of the number working plus the number looking for work to the total population.

7. See, for example, Sally Kilmer, Judith Frost and Gary Fatland, AFDC Employment and Referral Guidelines, final report (1972); and Child Care Programs: Estimation of Impacts and Evaluation of Alternative Federal Strategies, pt. 2, vol. 1 (Minneapolis, Minn.: Institute for Interdisciplinary Studies, 1971).

8. Economic incentives, in the form of the wage-subsidy effect of day care, are considered at a later point. The discussion at that point indicates that such an effect is rather low when considering day care. Family economic pressures are assumed to be constant and severe, as each family of prime interest falls below the OEO defined poverty level.

9. It should be recognized that the growth in labor force participation has taken place in spite of discrimination, at least in terms of wages and salaries, against women in the market place. For nonfarm employed, average female hourly earnings were 60 percent of male earnings in 1959. Adjusted for race, schooling, age, and city size, the proportion showed little change. See Victor R. Fuchs, "Differences in Hourly Earnings Between Men and Women," Monthly Labor Review, May, 1971. Earnings data for 1971 indicates that the male-female earnings gap did not narrow much during the intervening 12 years. The median weekly earnings of women working full-time in 1971 was only $100, while the median for male full-time workers was $162. Expressed in relative terms, the weekly earnings of the average female full-time worker corresponded to about 62 percent of those of the average man working full-time. See Paul O. Flaim and Nicholas I. Peters, "Usual Weekly Earnings of American Workers," Monthly Labor Review, March, 1972.

10. In 1970 there were approximately 13.7 million children under 6 years old in the United States population. Of these, 3 percent belonged to mothers 19 years old or younger; 23 percent to mothers 20 to 24; 53 percent to mothers 25 to 34; 19 percent to mothers 35 to 44; and 2 percent to mothers 45 to 54 years old. Source: Current Population Survey, Special Tabulations.

11. The one exception is mothers under 20 with a child 3 to 5 years old. In this case, the participation rate for poverty mothers is 50 percent as compared to 21 percent for nonpoor mothers. The sample size is small (4,000 compared to 119,000 with children 0-5 years old).

12. Public assistance refers to Aid to Families with Dependent Children, Aid to the Blind, Aid to the Permanently and Totally Disabled, and General Assistance. AFDC recipients make up about 75 percent of this group.

13. Although more recent CPS data is available, the 1970 survey is employed here for two reasons: (1) it is more consistent with the time frame of the other surveys cited and (2) the 1970 tapes available to OEO appear, in terms of reconciliation with published data, to be the best available data source.

14. Leonard Goodwin, Do The Poor Want to Work? (Washington, D.C.: The Brookings Institution, 1972).

15. The adjustment is made by dividing responses to desired questions by those "looking for work now," "planning to work within the next year," and "not looking for work and not planning to go to work" (question 8 for nonworking mothers). Those "looking for work" were then added to those working and the sum divided by the total sample population to produce an adjusted labor force participation rate. For examples, see Appendix B.

16. See, for example, Charles W. Roll, Jr. and Albert H. Cantril, Polls: Their Use and Misuse in Politics (New York: Basic Books, Inc., 1972); or Leo Bogart, Silent Politics: Polls and the Awareness of Public Opinion (New York: John Wiley and Sons, Inc., 1972).

17. The Seattle-Denver Income Maintenance Experiment and data from the University of Michigan's Institute for Social Research "Panel Study of Income Dynamics" were both considered for comment in this section. The Seattle-Denver Experiment is mentioned only briefly. It is not dealt with at length because, although the experiment has a substantial day care component, day care is considered to be a control factor in the experiment rather than a policy variable. The "Panel Study on Income Dynamics" poses a number of interesting questions regarding the labor force participation of mothers. The study is not outlined here because certain merged data tapes are not yet available and because data needed to link the study to this paper are not contained on available tapes.

18. The best measure of constancy in the marketplace would have been mothers with children under 6 years old in both years. Unfortunately, this figure was not statistically significant.

19. The questions were asked of all women (those with children under 6; children 6-17, etc.) not just of women with children 6 to 12 years. In general, the percentages specified are the average for all women responding.

20. Sookon Kim, "Determinants of Labor Force Participation of Married Women" (Ph.D. diss., University of Minnesota, 1971), pp. 79 and 80.

21. Goodwin, Do the Poor Want to Work?

22. William Bowen and T. A. Finegan, The Economics of Labor Force Participation (Princeton, N. J.: Princeton University Press, 1969), p. 174.

23. A summary of all three estimates may be found in Sally Kilmer, Judith Frost, and Gary Fatland, Child Care Programs: Estimation of Impacts and Evaluation of Alternative Federal Strategies, pt. 2, vol. 1 (Minneapolis, Minn.: Institute for Interdisciplinary Studies, 1971), pp. 180-203.

24. It should be noted that the constrained dollar (i.e., the dollar limited to subsidized day care) is probably "worth" less to the low-income mother than would be an unconstrained dollar (i.e., an additional dollar of earning to use as the mother chooses).

25. The dollar amounts assumed to be saved in private day care costs per family were almost exclusively in the $1,000 to $1,500 range. The estimated wage subsidy income and substitution labor supply elasticities were assumed to be 0.5 for heads of households and 9.9 for wives. An income coefficient of -0.1 was assumed for both age groups of female workers. See IIS, Child Care Programs, p. 202.

26. Seth Low and Pearl Spindler, Child Care Arrangements of Working Mothers in the United States, Children's Bureau of the Department of Health, Education, and Welfare and Women's Bureau of the Department of Labor (Washington, D.C.: Government Printing Office, 1968), p. 106.

27. Irwin Garfinkel and Larry L. Orr, Welfare Policy and the Employment of AFDC Mothers, Institute for Research on Poverty (Madison: University of Wisconsin, 1972).

28. Dorothy Herberg and Audrey Smith, Child Care in the Work Incentive Program (Chicago: The University of Chicago School of Social Service Administration, 1962).

29. Sookon Kim, Cross-Substitution Between Husband and Wife as One of the Factors Determining the Number of Hours Supplied by Married Women, Center for Human Resource Research (Columbus: Ohio State University, 1972). The data for this report is taken from the Parnes Study.

30. A draft of a paper by Ralph Husby, Assistant Professor of Economics at the University of Illinois, entitled, "Cost Effectiveness of Day Care for Families on Public Assistance," purports to confirm this intuitive notion.

31. W. R. Prosser, Day Care in the Seventies: Some Thoughts, (Washington, D. C.: OEO, Office of Planning, Research, and Evaluation, 1972).

32. This figure is arrived at by multiplying $822 per year (the average cost of a day care center program as determined by the Westat study) times 280,000 families times two children per family. The figure arrived at is about $460 million.

33. The multiplier effect would occur only if the $500 million is "new" money added to the economy. It is probably more reasonable to assume that the money would be "transferred" from other spending priorities, producing no, or a small, multiplier effect. The multiplier effect is explained in the report by W. R. Prosser.

APPENDIX A

The data in this Appendix is derived from special computer runs of Current Population Survey Tapes. Definitions for mothers in and those out of the labor force are those of the CPS.

LABOR FORCE PARTICIPATION OF MOTHERS UNDER 55 YEARS OF AGE: BY AGE OF YOUNGEST CHILD (In Thousands)

	All Families					Families in Poverty				
	In the Labor Force	Not in the Labor Force	Total	Willing to Work		In the Labor Force	Not in the Labor Force	Total	Willing to Work	
				CACC	Family Respon.				CACC	Family Respon.
TOTAL	13,050	17,125	293	50	140	891	1,915	68	18	25
Youngest child under 3 years old	2,133	5,895	93	28	44	233	777	25	11	12
Youngest child, 3-5 years old	2,184	3,473	54	16	23	188	428	20	7	3
Youngest child, under 6 years old	4,317	9,368	148	44	68	421	1,205	45	18	14
Youngest child, 6-9 years old	2,703	3,063	71	11	38	215	328	9	NA	5
Youngest child, 10-15 years old	3,498	2,941	58	NA	24	187	275	11	NA	4
Youngest child, over 15 years old	2,532	1,756	22	NA	10	68	98	3	NA	1
Youngest child, 6 years and older	8,733	7,760	151	11	72	470	711	23	NA	10

SOURCE: Current Population Survey, March Supplement, 1970

NOTES: NA - Used throughout Appendix A tables to indicate inadequate sample size to predict from CPS sample to the total population.
CACC - Used throughout Appendix A tables to stand for "cannot arrange child care."

LABOR FORCE PARTICIPATION OF MOTHERS UNDER 55 YEARS OF AGE: BY AGE OF YOUNGEST CHILD (In Percent)

	All Families					Families in Poverty				
	In the Labor Force	Not in the Labor Force	Total	Willing to Work		In the Labor Force	Not in the Labor Force	Total	Willing to Work	
				CACC	Family Respon.				CACC	Family Respon.
TOTAL	43	57	2	19	48	32	68	4	27	36
Youngest child under 3 years old	27	73	2	30	47	23	77	3	45	46
Youngest child, 3-5 years old	39	61	2	30	43	31	69	4	36	14
Youngest child, under 6 years old	32	68	2	30	46	26	74	4	41	32
Youngest child, 6-9 years old	47	53	2	16	54	39	61	4	NA	55
Youngest child, 10-15 years old	54	46	2	NA	42	41	60	4	NA	34
Youngest child, over 15 years old	59	41	1	NA	53	40	60	3	NA	50
Youngest child, 6 years or older	53	47	2	7	48	40	60	3	NA	43

SOURCE: Current Population Survey, March Supplement, 1970.

LABOR FORCE PARTICIPATION OF MOTHERS UNDER 55 YEARS OF AGE: BY OWN YEARS OF EDUCATION, AGE OF YOUNGEST CHILD, AND POVERTY STATUS (In Thousands)

	All Families					Families in Poverty				
	In the Labor Force	Not in the Labor Force	Total	Willing to Work		In the Labor Force	Not in the Labor Force	Total	Willing to Work	
				CACC	Family Respon.				CACC	Family Respon.
TOTAL	13,050	17,125	293	50	140	891	1,915	68	18	25
0-8 years education	1,255	2,080	54	13	14	190	610	24	5	8
youngest child:										
0-2	116	473	10	5	3	30	182	4	4	3
3-5	163	366	11	7	3	34	131	8	1	1
0-5	280	839	21	12	5	64	313	12	5	4
6 and older	975	1,205	33	NA	9	126	298	13	NA	4
0-11 years education	3,848	5,568	128	33	49	508	1,229	51	15	16
youngest child:										
0-2	528	1,637	42	14	16	125	452	19	8	8
3-5	652	1,099	22	15	7	114	296	13	7	1
0-5	1,185	2,741	64	29	23	178	609	32	15	10
6 and older	2,658	2,822	65	4	26	269	481	19	NA	6
12 years or more education	9,207	11,568	165	19	92	383	687	17	3	8
youngest child:										
0-2	1,600	4,258	51	14	28	108	325	6	3	3
3-5	1,532	2,374	32	1	17	75	132	7	NA	1
0-5	3,132	6,627	84	15	45	182	456	13	3	4
6 and older	6,074	4,935	82	4	47	200	230	4	NA	4

SOURCE: Current Population Survey, March Supplement, 1970.

LABOR FORCE PARTICIPATION OF MOTHERS UNDER 55 YEARS OF AGE: BY OWN AGE, AGE OF YOUNGEST CHILD, AND POVERTY STATUS (In Percent)

	All Families					Families in Poverty				
	In the Labor Force	Not in the Labor Force	Total	Willing to Work		In the Labor Force	Not in the Labor Force	Total	Willing to Work	
				CACC	Family Respon.				CACC	Family Respon.
TOTAL	43	57	2	19	48	32	68	4	27	36
Under 20 years youngest child:	28	72	3	20	62	23	77	NA	NA	NA
0-2	28	72	3	20	62	22	78	NA	NA	NA
3-5	29	71	NA	NA	NA	50	50	NA	NA	NA
0-5	28	72	3	20	62	23	77	NA	NA	NA
6 and older	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
20 to 24 years youngest child:	34	66	3	31	51	29	71	8	39	41
0-2	31	69	3	36	55	28	72	7	46	54
3-5	46	54	5	20	35	32	68	14	21	NA
0-5	34	66	3	32	50	29	71	8	41	38
6 and older	47	53	12	NA	100	23	77	42	NA	100
25 to 34 years youngest child:	38	62	1	23	37	31	69	3	37	27
0-2	24	76	1	31	37	20	80	3	44	31
3-5	39	61	1	21	38	33	67	4	37	14
0-5	31	69	1	27	37	25	75	3	40	21
6 and older	55	45	2	14	38	52	48	2	NA	100
35 to 54 years youngest child:	49	51	2	8	52	34	66	3	6	39
0-2	24	76	1	19	63	22	79	NA	NA	NA
3-5	36	64	1	31	67	27	73	1	48	53
0-5	31	69	1	27	66	25	75	1	48	53
6 and older	53	47	2	5	50	37	63	4	NA	37

SOURCE: Current Population Survey, March Supplement, 1970.

LABOR FORCE PARTICIPATION OF MOTHERS UNDER 55 YEARS OF AGE: BY OWN AGE, AGE OF YOUNGEST CHILD, AND POVERTY STATUS (In Thousands)

	All Families					Families in Poverty				
	In the Labor Force	Not in the Labor Force	Total	Willing to Work		In the Labor Force	Not in the Labor Force	Total	Willing to Work	
				CACC	Family Respon.				CACC	Family Respon.
TOTAL	13,050	17,125	293	50	140	891	1,915	68	18	25
Under 20 years:	119	302	7	1	5	20	70	NA	NA	NA
youngest child										
0-2	115	291	7	1	5	19	67	NA	NA	NA
3-5	4	10	NA	NA	NA	1	1	NA	NA	NA
0-5	119	301	7	1	5	20	68	NA	NA	NA
6 and older	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
20 to 24 years:	1,098	2,120	62	20	32	113	280	24	9	10
youngest child:										
0-2	782	1,749	45	16	25	91	228	16	7	9
3-5	285	335	17	3	6	20	44	7	2	NA
0-5	1,067	2,084	62	20	30	111	272	23	9	9
6 and older	31	36	1	NA	1	3	9	1	NA	1
25 to 34 years:	3,719	6,211	77	18	29	307	374	21	8	6
youngest child:										
0-2	997	3,102	29	9	11	93	361	9	4	3
3-5	1,226	1,885	25	5	9	102	206	10	4	1
0-5	2,223	4,987	54	14	20	192	567	19	8	4
6 and older	1,496	1,224	24	3	9	118	107	1	NA	1
35 to 54 years:	8,114	8,493	145	12	75	448	890	23	1	9
youngest child:										
0-2	240	754	7	1	5	33	120	NA	NA	NA
3-5	688	1,243	12	4	8	66	177	3	1	1
0-5	908	1,997	19	5	13	99	297	3	1	1
6 and older	7,185	6,496	126	7	63	349	593	20	NA	8

SOURCE: Current Population Survey, March Supplement, 1970.

LABOR FORCE PARTICIPATION OF MOTHERS UNDER 55 YEARS OF AGE: BY OWN YEARS OF EDUCATION, AGE OF YOUNGEST CHILD, AND POVERTY STATUS (In Percent)

	All Families					Families in Poverty				
	In the Labor Force	Not in the Labor Force	Total	Willing to Work		In the Labor Force	Not in the Labor Force	Total	Willing to Work	
				CACC	Family Respon.				CACC	Family Respon.
TOTAL	43	57	2	19	48	32	68	4	27	36
0-8 years education youngest child:	38	62	3	24	26	24	76	4	20	32
0-2	20	80	2	55	29	14	86	2	29	71
3-5	31	69	2	65	22	21	79	5	49	18
0-5	25	75	2	60	25	17	83	3	42	36
6 and older	45	55	3	NA	27	30	70	5	NA	28
0-11 years education youngest child:	41	59	2	25	37	29	71	4	30	32
0-2	24	76	3	33	38	21	79	4	44	45
3-5	37	63	2	67	31	28	72	4	55	11
0-5	30	70	2	45	36	23	77	4	48	31
6 and older	49	51	3	6	37	36	64	5	NA	33
12 years or more education: youngest child:	44	56	1	11	56	36	64	3	17	50
0-2	27	73	1	27	55	25	75	2	49	51
3-5	39	61	1	3	52	36	64	4	NA	21
0-5	32	68	1	17	54	29	71	3	23	35
6 and older	55	45	2	5	57	47	53	2	NA	100

SOURCE: Current Population Survey, March Supplement, 1970

APPENDIX B

Tables in this Appendix are based on special Tabulations of the Westat Day Care Survey Data

Introduction

Special tabulations showing combinations of responses were made for four questions in the Nonworking Mothers section of the Westat National Day Care Survey. The questions are listed below. Three sets of figures are given for each combination of responses: the first number reflects the sample size; the second number, the row percentage; and the third, the column percentage.

Questions

NW 3. Have you ever worked since you had children?

NW 8. Are you looking for work now, or planning to go to work within the next year?

NW 10. Some mothers feel they would rather not work while their children are young. Others would like to work but can't find jobs or have no place to leave their children. Is there one particular reason you are not working at this time?

NW 11. If satisfactory day care that you could afford were available do you think you would look for work?

QUESTION: If satisfactory day care that you could afford were available, do you think you would look for work?

QUESTION: Some mothers feel they would rather not work while their children are young. Others would like to work but can't find jobs or have no place to leave their children. Is there one particular reason you are not working at this time?

Responses	Total	Yes	No	Depends	Don't know	Clearly no, but were not asked
Total						
Sample size	1432	554	350	79	41	408
Row%	100	39	24	6	3	28
Column%	100	100	100	100	100	100
Prefer not to work while children are young						
Sample size	377	92	144	15	15	111
Row%	100	24	38	4	4	29
Column%	26	17	41	19	37	27
Problems finding satisfactory day care						
Sample size	92	82	4	2	0	4
Row%	100	89	4	2	0	4
Column%	6	15	1	3	0	1
Can't make enough money to afford day care						
Sample size	46	37	3	2	2	2
Row%	100	80	7	4		4
Column%	3	7	1	3	5	0
Can't find a job						
Sample size	111	81	4	3	0	23
Row%	100	73	4	3	0	21
Column%	8	15	1	4	0	6
Not interested in work						
Sample size	137	5	51	2	3	16
Row%	100	4	37	1	2	55
Column%	10	1	15	3	7	19
No particular reason						
Sample size	54	17	14	5	5	13
Row%	100	31	26	9	9	24
Column%	4	3	4	6	12	3
Other reason						
Sample size	216	70	49	30	5	62
Row%	100	32	23	14	2	29
Column%	15	13	14	38	12	15
Multiple responses (total)						
Sample size	183	132	24	6	7	14
Row%	100	72	13	3	5	8
Column%	13	24	4	8	12	3

SOURCE: Westat National Day Care Survey, 1970

NW 1 by NW 8

QUESTION: Are you looking for work now, or planning to go to work within the next year?

QUESTION: Some mothers feel they would rather not work while their children are young. Others would like to work but can't find jobs or have no place to leave their children. Is there one particular reason you are not working at this time?

Responses	Total	Looking for work now	Planning to go to work within the next year	Not looking for work and not planning to go to work within the next year.
Total				
Sample size	1432	137	346	949
Row%	100	10	24	66
Column%	100	100	100	100
Prefer not to work while children are young				
Sample size	377	4	50	323
Row%	100	1	13	86
Column%	26	3	14	34
Problems finding satisfactory day care				
Sample size	92	12	53	27
Row%	100	13	58	29
Column%	6	9	15	3
Can't make enough money to afford day care				
Sample size	46	4	18	24
Row%	100	9	39	52
Column%	3	3	5	3
Can't find a job				
Sample size	111	61	34	16
Row%	100	55	31	14
Column%	8	45	10	2
Not interested in work				
Sample size	137	0	2	135
Row%	100	0	1	99
Column%	10	0	1	14
No particular reason				
Sample size	54	3	16	35
Row%	100	6	30	64
Column%	4	2	5	4
Other reason				
Sample size	216	7	86	123
Row%	100	3	40	57
Column%	15	5	25	13
Multiple responses (total)				
Sample size	183	37	64	82
Row%	100	20	35	45
Column%	13	27	18	9

SOURCE: Westat National Day Care Survey, 1970.

NW 10 by NW 3

QUESTION: Have you ever worked since you had children?

QUESTION: Some mothers feel they would rather not work while their children are young. Others would like to work but can't find jobs or have no place to leave their children. Is there one particular reason you are not work at this time?

Responses	Total	Yes	No
Total			
Sample size	1857	995	902
Row%	100	51	49
Column%	100	100	100
Prefer not to work while children are young			
Sample size	597	230	367
Row%	100	39	61
Column%	32	24	41
Problems finding satisfactory day care			
Sample size	220	158	62
Row%	100	72	28
Column%	12	17	7
Can't make enough money to afford day care			
Sample size	145	102	43
Row%	100	70	30
Column%	8	11	5
Can't find a job			
Sample size	201	142	59
Row%	100	71	29
Column%	11	15	7
Not interested in work			
Sample size	271	87	184
Row%	100	32	68
Column%	15	9	20
No particular reason			
Sample size	78	33	45
Row%	100	42	58
Column%	4	3	5
Other reason			
Sample size	345	203	142
Row%	100	59	41
Column%	19	21	16

NOTE: Multiple responses were not tabulated separately. Sample size reflects individual employing the response, whether it was first or second reason given.

SOURCE: Westat National Day Care Survey, 1970

NW 11 by NW 3

QUESTION: If satisfactory day care that you could afford was available, do you think you would look for work?

QUESTION: Have you ever worked since you had children?

Responses	Total	Yes	No
Total			
Sample size	1417	732	685
Row%	100	52	48
Column%	100	100	100
Yes			
Sample size	548	361	187
Row%	100	66	34
Column%	39	49	27
No			
Sample size	347	153	194
Row%	100	44	56
Column%	24	21	28
Depends			
Sample size	79	45	34
Row%	100	57	43
Column%	6	6	5
Don't know			
Sample size	41	21	20
Row%	100	51	49
Column%	3	3	3
Clearly no, but were not asked			
Sample size	402	152	250
Row%	100	38	62
Column%	28	21	37

SOURCE: Westat National Day Care Survey, 1970

QUESTION: Are you looking for work now, or planning to go to work within the next year?

NW 8 by NW 3				NW 8 by NW 11					
QUESTION: Have you ever worked since you had children?				QUESTION: If satisfactory day care that you could afford was available, do you think you would look for work?					
Responses	Total	Yes	No	Total	Yes	No	Depends	Don't know	Clearly no, but were not asked
Looking for work now									
Sample size	139	105	34	124	110	0	1	0	23
Row%	100	76	24	100	82	0	1	0	17
Column%	9	14	5	9	20	0	1	0	6
Planning to go to work within the next year									
Sample size	354	261	93	347	261	36	19	5	24
Row%	100	74	26	100	76	10	6	1	7
Column%	24	34	13	24	48	10	24	12	6
Not looking for work or planning to go to work within the next year									
Sample size	994	402	592	939	177	312	59	36	355
Row%	100	40	60	100	19	33	6	4	38
Column%	67	52	82	66	32	90	75	88	88
Total									
Sample size	1487	768	719	1418	548	348	79	41	402
Row%	100	52	48	100	39	25	6	3	28
Column%	100	100	100	100	100	100	100	100	100

SOURCE: Westat National Day Care Survey

APPENDIX C

In an analysis of the labor market experience of any population subgroup, we initially recognize that a number of factors interact to produce the experience. The analyst is, therefore, typically less interested in describing one variable in isolation, than in describing the relationship between variables (i.e., how labor force participation is related to age). The most useful statistical technique for this purpose is regression, the process of estimating how two or more variables are related in an additive fashion.

The base-line data for the analysis are contained in the 1970 Current Population Survey, March Supplement. A total of fifty variables were employed in various estimating equations (Table A). In general, the variables included labor force participation (dummy variable), age of mother, age of youngest child, mother's years of education, time since mother last worked (later dropped because of the manner in which the CPS asked the question--i.e., only of nonworking individuals), family income, poverty status (dummy variable), marital status (dummy variable), whether single head of household (dummy variable), and region of residence (defined by OEO region). "Dummy variables" are those variables which are either "on" or "off". That is, a family is either defined as being in poverty or not in poverty and the variable is accordingly given either the value of "1" (for example, in poverty) or "0" (for example, not

in poverty) in the regression.

No estimate of the mother's wage rate was available. Thus her educational attainment was employed as a "proxy" for wage rate. This substitution was widely accepted previous to Cain's study*; however, it is now generally held that education alone is not an entirely satisfactory proxy because it does not account for (1) the post-school investment in human capital which is likely to influence current rate of pay; (2) the geographical differences in wage rate; and (3) wage differences in occupational assignments. Nevertheless, the problem is mitigated somewhat by the addition of regional variables.

Before turning directly to the regression results, the means of the variables should be noted. While simply descriptive in nature, they are informative. Some interesting findings are cited below:

(1) A little over 11 percent of the total population was nonwhite. About 42 percent of those who were nonwhite received public assistance payments at some time during income year 1969.

(2) The average age of mothers under fifty-five years of age was around thirty-five years and was about the same for both public assistance (P.A.) and nonpublic assistance recipients.

*Glen G. Cain; Married Women in the Labor Force (Chicago: University of Chicago Press, 1966).

(3) The mean age of the youngest child of mothers under fifty-five years of age in the total population was about seven years. The average age of the youngest child of nonrecipients was about the same; but, for P.A. recipients, it averaged closer to six years.

(4) The average education for all mothers under fifty-five was slightly above a high school education (12.6 years). The mean for nonrecipients was a little higher, 12.7 years. Public assistance recipients averaged only 10.6 years of formal education.

(5) The average family income for families with mothers under fifty-five years of age was around $10,700 in 1970. The mean family income for nonrecipients of public assistance was about $11,000, and for recipients only about $4,900. The average contribution of the mother to the income of nonrecipient families was $1,320 per year. As less than half of the mothers in nonrecipient families were employed, effectively each employed mother earned about $3,100 (17,280 mothers x $1,316 ÷ 17,280 x .4254 labor force participation rate). In the same manner, the public assistance recipient mother contributed an average of only

$415 per year to total family income, but the employed mother averaged $1,400 ($413 x 1,024 mothers ÷ .2949 labor force participation rate x 1,024).

(6) The public assistance recipient received about $1,715 per year from public assistance payments.

(7) About 10 percent of the population were poor. Around 7 percent of those families not receiving public assistance were in poverty. Over 57 percent of the public assistance (P.A.) recipients were poor, even after receiving the cash payments.

(8) Approximately 6 percent of the total population of mothers under fifty-five were single heads of household. About 5 percent of the mothers in nonrecipient households were single heads. In public assistance recipient households, over 30 percent of the mothers were single heads.

Having displayed the descriptive aspects of the data, we turn now to an explanation of the realtionships between the variables. (See Table B for all means.)

The Regression Equations

The general form of the regression equation is as follows:

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 \ldots\ldots + b_{n-1}x_{n-1} + b_nx_n + \epsilon$$

"y" is the dependent variable; "a" is a constant; "b" is a coefficient; "x" is an independent variable; and " ϵ " is an error term.

Four specific forms of the equation are dealt with here. The dependent variable in all four equations is labor force participation. All four equations employ twenty-four variables, excluding that for dependency, all but five of which represent geographic regions (table C). Two of the four estimates represent the nonpublic assistance recipient population, and the remaining two represent the public assistance recipient population. For both P.A. recipients and non-P.A. recipients, one equation estimates the impact of "age of youngest child" and the other, the impact of having a child under six years of age.

Hypotheses

A number of studies, many of which have been drawn on in the text of this paper, led us to have a priori expectations concerning the data. These expectations included:

(1) the hypothesis that being nonwhite would increase the labor force participation of mothers. A wide range of studies formed the base of this hypothesis.

(2) the anticipation that labor force participation would increase as the age of youngest child increased. This assumption was based on what seemed to appear from cross-sectional data.

(3) the expectation that labor force participation would increase as years of education increased. If this did not follow, a basic tenet of our educational system is in trouble.

(4) the expectation that as other family income (total family income less either mother's income, P.A. income, or both) rose, the labor force participation of mothers would decrease. This expected result assumed that the mother was a secondary worker, entering the labor force primarily to supplement meager (as viewed by the individual family) famil income. Other family income was employed rather than total family income because a number of studies have indicated that it is more significantly related to labor force participation. Earlier analysis performed with CPS data indicated that family income less both the wife's income and public

assistance income was a slightly better predictor of labor force participation. Therefore, such a variable is employed here.

(5) the hypothesis that being a single head of household would lead to increased labor force participation. This was based solely on economic reasoning.

(6) the expectation that the inclusion of geographical regions would influence labor force participation. We had no a priori anticipations as to the direction of the influence.

(7) the anticipation that the presence of a child under six years of age would tend to decrease the labor force participation of mothers. This was a central assumption in the text of our paper. The concommitant assumption was that the provision of day care services would make up the deficiency indicated by this coefficient in the regression.

Given these expectations, we now turn to the results.

Regression Results

The constant term in the regression equation is an indicator of the base-line value. That is, if all the independent variables are 0, the dependent variable takes on this constant term. The regression coefficients are the values which relate the independent variables to

the dependent variable in terms of their correlational impact (impact is qualified by correlational because there is no guarantee that the nature of the impact is causal). The beta (β) coefficients are standardized regression coefficients which take on values between -1 and 1; the further in either a negative or positive direction the beta coefficient from 0, the more significant its impact.

"Age of Youngest Child" Equation

The explanatory power of the two equations employing the continuous variable, "age of youngest child," was better for public assistance recipients than for nonrecipients. The equation for the former explained about 16.5 percent of the variance, while the nonrecipients' equation explained only around 12 percent of the variance. In both cases, the results were highly significant at the 99 percent level (table C). Interesting results are outlined and implications for day care, noted. (In order to keep the length of the discussion within perspective, individual variables are not considered at length).

The demographic-type variables (age, education, etc.) are all significant at the 99 percent level in both the recipients and nonrecipients equation and, with one expection, vary in the direction hypothesized. Family income, less public assistance and wife's income, in the recipients' equation does not vary as anticipated, for the coefficient is positive. That is, as other income increases, so does labor force participation among

mothers in families receiving public assistance. This does not occur for nonrecipients, where the coefficient is negative (-.00002). Moreover, in the recipients equation, a change of one standard unit produces nearly a 17 percent increase in participation. The magnitude of the beta coefficient is second only to that of the education variable. (The beta coefficient is negative and large for nonrecipients). The policy implication of this discovery is that low-income mothers may respond to increased income by seeking employment to better their economic position. Moreover, it appears to imply that if such increases are sought via government subsidies, they should be in the form of a wage rate subsidy, as several studies cited in the test have indicated the provision of free day care may not serve or be viewed as an income subsidy by low-income mothers.

We stated above that we had no a priori expectations concerning the impact of regional variables. In the regressions, the New York Region SMSAs were held constant. In almost all cases (and the negative cases are not statistically significant), the labor force participation rates outside the New York Region SMSAs were higher. In several cases, the beta coefficients are large and positive.

The implication of the regressions for the impact of the provision of day care are consistent with the text of the paper. The variable of

impact is "age of youngest child." The coefficient of this variable in both equations suggests that the provision of child care services (assuming they remove the employment impact of the presence of children) will not substantially alter the labor force participation of mothers. In the public assistance recipients equation, about a one percent increase in participation is associated with a one year increase in child's age. For nonrecipients, the associated increase is around 2.5 percent. In both equations, it is suggested that head of household is a better estimator of labor force participation. However, when considering only the standardized, or beta, coefficients, the impact of education and "other income" on public assistance recipients is clear. The beta coefficient of age of youngest child for nonrecipients is the largest in the regression, thus suggesting, in standardized terms, that the nonpoor mother might be more strongly affected by the provision of child care than by the other factors considered in the equation.

"Youngest Child Less Than Six" Equation

The explanatory power of the two regression equations utilizing the variable "youngest child less than six years old" was also better for the subpopulation of public assistance recipients than for that of nonrecipients. The equation for public assistance recipients explained about 16 percent of the variance, while that for nonrecipients explained about 11 percent. Again, the results were highly significant at the 99 percent level.

Our most important hypothesis, in terms of the text of this paper, is confirmed by the regressions. For both public assistance recipients and nonrecipients, the presence of a child under six decreases the labor force participation of the mother (table C). In further concurrence with the text, it is shown that (1) the impact of having a young child is greater on nonrecipient mothers than on recipient mothers and (2) the impact of the presence of a young child is estimated to reduce labor force participation by about 9 percent for public assistance recipient mothers. Taking the converse of these points, we would estimate (1) that day care might have its largest impact on nonpoor mothers, perhaps increasing their participation by over 20 percent (again assuming that day care serves to remove the employment impact of children) and (2) that day care might be expected to increase the labor force participation of public assistance recipient mothers by about 9 percent (the text estimated a 10 percent increase).

The subpopulation of public assistance recipients again produces a positive association of an increase in other income with increased labor force participation. As before, the coefficient is small (.00002), but highly significant. Moreover, the standard unit change is large, about 18.4 percent, larger in fact than for any other variable in the equation. Education has nearly as large a beta (β) coefficient. A suggestion which might arise from these findings is to increase cash payments to recipient families, probably through "cashing-out" in-kind assistance.

The subpopulation of nonrecipients conforms to our hypothesis regarding increased other family income. As with the recipients, the coefficient is negative (-.00002). The measure for the standard unit change is highly significant, large, and negative (-.16323). That is, a change of one standardized unit in other family income will produce a 16 percent decrease in the participation of nonrecipient mothers.

Conclusion

While implications of the regressions are not fully considered above, the variables of importance and reliable estimates were used in preparing the text. All are included here to aid in other, future research.

TABLE A

VARIABLES IN EMPLOYED IN REGRESSION EQUATIONS

1. Labor force participation
2. Race
3. Age
4. Age: 20 to 24 years
5. Age: 25 to 34 years
6. Age: 35 to 54 years
7. Age of youngest child
8. Youngest child: under 6
9. Youngest child: 6 to 7
10. Years of education
11. Education: 0 to 8 years
12. Education: 9-11 years
13. Education: 12 years
14. Last time worked (months)
15. Last time: under 12 months
16. Last time: 12 to 36 months
17. Last time: 37 to 60 months
18. Family income
19. Family income less wife's income
20. Family income less Public Assistance income
21. Family income less wife's and Public Assistance income
22. Public Assistance receipt
23. Poverty status
24. Not applicable
25. Square of variable no. 7
26. Cube of variable no. 7
27. Square of variable no. 10
28. Cube of variable no. 10
29. Single head of household
30. Boston/SMSA
31. Boston/non-SMSA
32. New York/SMSA
33. New York/non-SMSA
34. Philadelphia/SMSA
35. Philadelphia/non-SMSA
36. Atlanta/SMSA
37. Atlanta/non-SMSA
38. Dallas-Ft. Worth/SMSA
39. Dallas-Ft. Worth/non-SMSA
40. Kansas City/SMSA
41. Kansas City/non-SMSA
42. Chicago/SMSA
43. Chicago/non-SMSA
44. Denver/SMSA
45. Denver/non-SMSA
46. Seattle/SMSA
47. Seattle/non-SMSA
48. San Francisco/SMSA
49. San Francisco/non-SMSA
50. Marital status

SOURCE: Current Population Survey, March Supplement, 1970.

TABLE B

MEANS OF MULTIPLE REGRESSION EQUATIONS

	Variable	Mean: Public Assistance Recipients	Mean: Non-Public Assistance Recipients
1.	Labor force participation	.2949	.4254
2.	Race (percent black)	.4180	.0957
3.	Age	35.3906	35.3494
4.	Age: 20 to 24 years	.1016	.0954
5.	Age: 25 to 34 years	.3291	.3541
6.	Age: 35 to 54 years	.5215	.5233
7.	Age of youngest child	6.1504	6.6649
8.	Youngest child: under 6	.5391	.4903
9.	Youngest child: 6 to 7	.1270	.1083
10.	Years of education	10.5635	12.7288
11.	Education: 0 to 8 years	.3115	.0978
12.	Education: 9 to 11 years	.3770	.1943
13.	Education: 12 years	.2510	.4901
14.	Last time worked (months)	2.4102	3.1337
15.	Last time: under 12 months	.5693	.4707
16.	Last time: 12 to 36 months	.2217	.1667
17.	Last time: 37 to 60 months	.0508	.1017
18.	Family income	$4899.200	$11028.6200
19.	Family income less wife's income	$4486.060	$ 9712.2900
20.	Family income less Public Assistance income	$3184.160	$11028.6200
21.	Family income less wife's and Public Assistance income	$2785.700	$ 9712.2900
22.	Public Assistance receipt	1.0000	0.0000
23.	Poverty status	.5752	.0718
29.	Single head of household	.3027	.0496
50.	Marital status	NA	NA

SOURCE: Multiple regressions on Current Population, March Supplement, 1970, data. Public Assistance recipients' averages are based on 1,024 cases; nonrecipients' averages, based on 17,280 cases.

NOTE: The means are easily interpreted. For example, the mean age for mothers receiving public assistance was 35.39 years. Ten percent of these women were 20 to 24 years old. Only about 5 percent were under 20.

OEO Regional variables and variables raised to the second or third power are omitted.

TABLE C

REGRESSION COEFFICIENTS

I. "Age of Youngest Child" Variable

Variables	Public Assistance Recipients			Non-Public Assistance Recipients		
	Coefficients	Beta Coefficients	F-Statistic	Coefficients	Beta Coefficients	F-Statistic
2. Race	.10256	.11903	12.168	.16902	.10058	185.219
7. Age of youngest child	.01074	.12795	17.897	.02421	.25820	1210.050
10. Years of education	.03081	.18878	37.507	.02382	.11720	235.254
21. Family income less wife's and Public Assistance Income	.00002	.16989	29.011	-.00002	-.17446	464.149
29. Single head of household	.08255	.08317	7.607	.23370	.09823	178.101
30. Boston/SMSA	.00289	.00124	.002	.04555	.01577	3.980
31. Boston/non-SMSA	.08915	.02569	.726	.01947	.00459	.372
33. New York/non-SMSA	.12797	.03142	1.110	.04586	.01343	3.042
34. Philadelphia/SMSA	.03435	.02256	.431	-.02413	-.01365	2.294
35. Philadelphia/non-SMSA	.07137	.03275	1.066	-.01037	-.00439	.280
36. Atlanta/SMSA	.34031	.16235	25.427	.02138	.01068	1.520
37. Atlanta/non-SMSA	.26596	.15918	22.201	.07446	.04017	19.951
38. Dallas-Ft. Worth/SMSA	.28704	.12625	16.025	.02697	.01291	2.286
39. Dallas-Ft. Worth/non-SMSA	.27504	.12874	16.034	.00001	.00000	0.000
40. Kansas City/SMSA	.34951	.09208	9.298	.00116	.00037	.002
41. Kansas City/non-SMSA	.30156	.07679	6.552	.02996	.00936	1.442
42. Chicago/SMSA	.03208	.02342	.433	.02102	.01537	2.345
43. Chicago/non-SMSA	.22771	.09558	9.189	.06316	.03362	14.401
44. Denver/SMSA	-.02135	-.00357	.015	.09941	.02439	10.453
45. Denver/non-SMSA	.10664	.01927	.428	.04889	.01128	2.257
46. Seattle/SMSA	.01883	.00426	.021	.01667	.00411	.296
47. Seattle/non-SMSA	.37430	.09532	10.031	.05545	.01373	3.307
48. San Francisco/SMSA	.15386	.11007	9.640	.01685	.01006	1.195
49. San Francisco/non-SMSA	.21469	.07810	6.341	.01785	.00472	.386
Constant	-.35092			.07392		

R^2=.16460
Multiple R=40.571
Standard Error= .42197
F-Statistic= 8.20159

R^2=.11885
Multiple R= .34475
F- Statistic= 96.97650
Standard Error= .46443

TABLE C

REGRESSION COEFFICIENTS (cont.)

II. "Child Under Six" Variable

Variables	Public Assistance Recipients			Non-Public Assistance Recipients		
	Coefficients	Beta Coefficients	F-Statistic	Coefficients	Beta Coefficients	F-Statistic
2. Race	.10713	.11588	13.182	.17233	.10255	190.323
8. Youngest child: under 6 years	-.08925	-.09756	10.414	-.23181	-.23439	1000.753
10. Years of education	.02983	.18271	35.009	.02217	.10912	202.710
21. Family income less wife's and Public Assistance income	.00002	.18372	34.560	-.00002	-.16323	405.596
29. Single head of household	.08167	.08228	7.337	.24106	.10566	205.573
30. Boston/SMSA	-.00424	-.00182	.003	.04213	.01458	3.366
31. Boston/non-SMSA	.09009	.02596	.735	.02088	.00492	.423
33. New York/non-SMSA	.13321	.03271	1.195	.04166	.01220	2.482
34. Philadelphia/SMSA	.03667	.02415	.490	-.02210	-.01250	1.903
35. Philadelphia/non-SMSA	.08199	.03763	1.398	-.00970	-.00411	.243
36. Atlanta/SMSA	.35334	.16856	27.087	.01974	.00986	1.281
37. Atlanta/non-SMSA	.26874	.16084	22.496	.07626	.04114	20.693
38. Dallas-Ft. Worth/SMSA	.28627	.12591	15.815	.02969	.01422	2.740
39. Dallas-Ft. Worth/non-SMSA	.27598	.12913	16.000	-.00079	-.00029	.001
40. Kansas City/SMSA	.31379	.09043	8.905	-.00129	-.00041	.003
41. Kansas City/non-SMSA	.31854	.08112	7.273	.03132	.00979	1.557
42. Chicago/SMSA	.03538	.02583	.523	.01624	.01187	1.384
43. Chicago/non-SMSA	.22939	.09628	9.257	.06026	.03208	12.960
44. Denver/SMSA	-.03436	-.00575	.038	.09618	.02359	9.674
45. Denver/non-SMSA	.10617	.01928	.425	.04752	.01097	2.108
46. Seattle/SMSA	.02463	.00597	.040	.01112	.00274	.130
47. Seattle/non-SMSA	.37801	.09626	10.118	.05120	.01268	2.787
48. San Francisco/SMSA	.15879	.11360	10.194	.01429	.00853	.850
49. San Francisco/non-SMSA	.21406	.07787	6.254	.01470	.00389	.259
Constant	-.23545			.35947		

R^2= .15841
Multiple R= .39801
Standard Error= .42354
F-Statistic= 7.83495

R^2= .10875
Multiple R= .32997
Standard Error= .46709
F-Statistic= 87.72808

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