

Gender Differences in Child Development Knowledge of Rural Parent and Non-Parent Adults

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Differences between rural parents' and non-parents' knowledge about child development was examined. The responses of 249 men and women with and without children were compared. Questionnaire data about child development indicated that adults' knowledge in general was limited. Women and parents with children scored higher on the child development measures than men, with or without children. Implications and directions for parent education are discussed.

INTRODUCTION

Basic knowledge of child development milestones has been suggested to be a prerequisite for appropriate understanding of and interactions with children. When parents lack basic knowledge, their expectations toward children are often unrealistic, which in turn may contribute to detrimental effects in children. In fact, relationships have been found between parents' unrealistic expectations of children and child abuse [1, 16]. Consequently, there continues to be concern among early childhood and family life educators over the child development knowledge base of parents as well as parents-to-be [12, 13, 14].

A majority of the studies concerning knowledge of child development have focused on adolescents and young adults. For example, research has found that urban adolescents have inadequate knowledge of child health and development [13], and knowledge of normal development in children is both over and underestimated by older adolescent females [12].

Other researchers have looked at the knowledge base of fairly specific population groups such as married adolescents [3], black grandmothers and black adolescent mothers [14], black and white mothers of various socioeconomic status [15], and parents of clinic and non-clinic referred children [11]. Overall, these studies suggest that those individuals who lacked knowledge had unrealistic expectations of their children.

A great deal of the research has focused on female adolescent and older females' knowledge of child development. Research focusing on males' (both nonparents and parents) child development information is less abundant. Some of the findings concerning males have indicated that there is a considerable body of knowledge that fathers do not have [8], and urban adolescent males are less knowledgeable than their female counterparts [13].

Because previous studies have mainly focused on adolescent and young adult females in urban areas, the present

study involved a sample of rural men and women who were both parents and non-parents to determine their knowledge of child development. It was of further interest to determine whether such factors as age, number of children, socioeconomic status (SES), and number of child and family related courses taken were related to knowledge of child development.

Rural adults are typically more isolated from sources where they might acquire knowledge of child development such as neighbors, social service agencies, parenting groups, and educational programs. Therefore, the intent of this research was to study a population of individuals who often lack available services and contacts and at the same time express a need for such contacts. This study was designed to add to an understanding of the knowledge base of a population of individuals often neglected in the literature because of their relative inaccessibility as subjects.

Based on the review of the literature, the following hypotheses were tested: (1) Rural adults have a general lack of knowledge of child development; (2) Rural females are more knowledgeable of child development than rural males; and (3) Rural parents are more knowledgeable than rural non-parents of child development.

METHOD

Subjects

The sample of rural adults was randomly selected from a list provided by the extension agents of farm and ranch families in Montana. A questionnaire which was pretested on a group of adults was sent to each of the identified households. The return rate after follow-up mailings was 63%. Respondents were 98 males who ranged in age from 18-57 years (\bar{x} =30.7) and 151 females who ranged in age from 17-63 years (\bar{x} =33.4). Fifty-nine males and 98 females were parents, and 39 males and 53

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females were non-parents. Parents had from one to five children.

Method

An instrument measuring adults' knowledge of child development was developed for this study. An initial set of 30 items in each of four areas (psychosocial, physical, cognitive, and prenatal development) was reduced to approximately 25 per area upon examination by social scientists for content validity. From these lists, random sets of 13 items in each of the psychosocial, physical, and cognitive development areas, and a set of 10 items on prenatal development was selected. The internal consistency reliability coefficients on the four areas respectively were .83, .81, .86, and .82. Participants were instructed to read each statement and mark their response either true or false. In addition, subjects were requested to fill out a general information form regarding age, marital status, socioeconomic status, number of courses in child development taken, number of children, and whether knowledge concerning child development was important.

The items for the survey were taken from a variety of standardized tests and sources such as the Bayley Scales of Infant Development [2]; Denver Developmental Screening Test [6]; A Child Is Born [10], and Your Baby and Child [9]. The score on the survey was determined by the number of correct responses and was interpreted as an index of child development knowledge.

RESULTS

Descriptive statistics for the sample of men and women were first analyzed. Child development scores for men without children (N=39) ranged from 12-36 with a mean of 25.9 and standard deviation of 6.9. Men with children (N=59) had scores which ranged from 17-38 with a mean of 27.9 and standard deviation of 6.4. Women without children (N=53) had scores which ranged from 19-41 with a mean of 30.9 and standard deviation of 6.1. Women with children (N=98) had scores which ranged from 22-44 points with a mean of 33.8 and standard deviation of 5.9.

The socioeconomic status of subjects was determined by the Hollingshead [7] four factor index. Results for the total sample indicated the following general levels: (1) major business, 23.2%; (2) medium business, 35.6%; (3) skilled workers, 28.3%; (4) semiskilled workers, 7.5%; and (5) unskilled workers, 5.4%.

When the child development knowledge score was correlated with the adult variables for the total sample, significant correlations were found. This included positive relationships between the knowledge score and age ($r=.29$; $p < .05$); number of children ($r=.31$, $p < .01$); SES ($r=.26$, $p < .05$); and number of courses taken ($r=.41$, $p < .01$).

Utilizing the preceding information, a 2x2 analysis of covariance was computed to examine the differences between sexes and parent/nonparent status of child

development knowledge using age, SES, and number of courses taken as covariates. This design compares gender and parent group status (children/no children) while controlling for the effects of potentially confounding variables. Significant main effects for sex and parental status on child development knowledge scores were found. Females knew significantly more about child development than males. Those individuals with children knew more about child development than those without. No interaction effect was found. The covariates of age, SES, and number of courses were all significant ($p < .05$) (see Table 1).

TABLE 1

Results of Analysis of Covariance of Knowledge of Child Development Scores for Parents and Non-parents

| Source | df | F |
|---------------------|----|--------|
| Covariates | | |
| Age | 1 | 3.96* |
| SES | 1 | 4.04* |
| Number of courses | 1 | 5.74** |
| Main Effects | | |
| Sex | 1 | 7.39** |
| Parent Status | 1 | 8.76** |
| Interactions | | |
| Sex x Parent Status | 1 | 1.32 |

* $p < .05$

** $p < .01$

DISCUSSION

The average rural adult got 61.4% of the 49 knowledge items correct. On a traditional scale of 100% this is generally considered a poor score. This suggests that these adults in general lacked considerable basic knowledge in the domains of physical, psychosocial, cognitive, and prenatal development. These results are consistent with findings by Shaner, Peterson, and Roscoe [12] and Showers and Johnson [13].

As expected, there were significant positive relationships between knowledge, age, number of children, SES, and number of courses taken. It appears that these factors alter adults' knowledge of child development. The older adults generally had more children and had taken more courses in child development. In turn, the adults' socioeconomic status may have influenced the number of courses taken. In any event, each of these factors presumably contributes to the knowledge base of adults. Stevens [14] noted similar findings among black adolescent girls with and without children. The preceding results support hypothesis one, which states that rural adults have a general lack of knowledge of child development.

The significant main effect of sex confirms hypothesis two that rural females are more knowledgeable about

child development than rural males. This parallels previous research [13] that suggests urban male adults are less knowledgeable about child development than females. Although all the male subjects indicated that it is important to be informed about child development, they appear not to be. The poorer performance of males deserves the attention of professionals in the field. Because many of these adults, especially males, are not receiving adequate information, it appears that child development and parenting courses need to be integrated in the curriculum at the high school level in rural areas and be required for both men and women. This echoes Earhart's [4] suggestion for requiring these courses as a means of preparing adults to become "effective family members and parents" (p. 39).

The findings that adults with children were more knowledgeable about child development than those without children, confirms hypothesis three. Having and caring for children influenced both females' and males' knowledge of child development. Although it is not clear which specific aspects contribute to a greater knowledge base, the results of Epstein's [5] study suggested that skillful observation of children's behavior may be an important factor.

The data clearly indicate that these adults do not have a great deal of knowledge about child development norms, and that males without children are the least knowledgeable of the four groups. The findings concerning males are consistent with results by Kliman & Vukelich [8] and Showers and Johnson [13]. A major concern here is that a lack of knowledge of child development has been related to unrealistic expectations of child growth and development [1, 16].

Although many parents do learn through experience, it appears that many adults could benefit from acquiring knowledge and skills to assist in more responsible parenting. To a large degree, the child's psychological, cognitive, and physical competence is dependent upon developmentally appropriate parental expectations. A lack of this knowledge seems to be an important contributing factor which may hinder the way parents relate to and interact with their children.

These findings also suggest that a need exists for the development of child development and parenting programs in more rural and isolated areas. This is going to require creative and collaborative efforts among professionals concerned about the well-being of families. This may potentially involve developing telecommunication programs, video and resource lending libraries, as well as on-site programs in local communities. Such services and opportunities have the potential to meet an extremely important preventive health need for rural parents and children, and potential parents.

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