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RELATIONSHIPS BETWEEN ATTITUDES TOWARD CHILDREN,
KNOWLEDGE OF CHILD DEVELOPMENT CONTENT,
AND DESIGNATED VARIABLES

THESIS

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CHAPTER I

INTRODUCTION

Purpose of Study

Investigation of the United States census figures of 1960 indicates that, in 1959, approximately 240,000 adolescents of high school age were married (8). One out of every eight babies born in the United States in 1960 had a mother who was in her teens (7). As research by Symonds (16), Baldwin (1), Hattwick (9), and Shoben (15) indicates the importance of parental attitudes and family environment in determining the behavior and attitudes of the child, it seems uncommonly important that high school adolescents achieve desirable attitudes toward children and family life.

Since in 1959 over one and one-half million adolescents were enrolled in high school homemaking programs in the United States (8) and since one of the major areas of emphasis in the homemaking program is child care and family relationships (18), the homemaking teacher is afforded a unique opportunity for contributing to the adolescents' attitudes toward children and family life.

The teaching of understandings and techniques concerning the care of children is certainly an important part of the homemaking teacher's job, but research by Bettelheim (2)

has pointed out that the underlying attitudes of parents often influence how well they put their knowledge into practice.

According to Cronbach (5), attitude learning is based on an emotional relationship between the teacher and the pupil and is often based on identification with the teacher as a model. Thus, it may be advisable to examine the attitudes toward children and the understanding of child development content exhibited by college students who are preparing to teach homemaking at the secondary level; therefore, the purposes of this study are to:

1. Identify some of the competencies peculiarly related to the successful teaching of child development in the secondary homemaking programs in Texas.

2. Investigate the child development content ordinarily involved in the secondary homemaking programs in Texas.

3. Examine the attitudes of college home economics education majors toward children and family life.

4. Assess the college home economics education majors' knowledge and understanding of content materials which are ordinarily offered through child development units in secondary homemaking programs in Texas.

5. Examine any possible relationships between attitudes toward children and (a) college classification,

(b) number of college child development courses completed, (c) age, (d) marital status, (e) educational level of the subjects' parents, and (f) knowledge of child development content materials.

6. Examine possible relationships between knowledge of child development content and (a) college classification, (b) number of college child development courses completed, (c) age, (d) marital status, (e) educational level of the subjects' parents, and (f) attitudes toward children.

Statement of Problem

Is there any significant correlation between one's attitudes toward children and one's knowledge of child development content; and do such factors as (a) college classification, (b) number of college child development courses completed, (c) age, (d) marital status, and (e) educational level of one's parents appear to hold any significant implications for either one's attitudes toward children or one's knowledge of child development content?

In order to explore the problem, it seemed necessary to answer the following questions:

1. What are the competencies which appear to be related to the successful teaching of child development in the secondary homemaking programs of Texas?

2. Are there any valid instruments which (a) measure attitudes toward children and family life, (b) are suitable

for administration to a group, and (c) are appropriate for use with both parents and nonparents?

3. Have adequate measurements been published which test knowledge and understanding of child development content which is usually included in the secondary homemaking program?

4. How should acceptable educational measurements be constructed?

5. What is the status of home economics education majors' attitudes toward children and family life?

6. How great is the degree of knowledge of child development content expressed by home economics education majors?

7. Does previous research concerning the nature of attitudes and factors which contribute to attitude modification and change reveal data which would hold peculiar significance for this study?

8. Are there any relationships between knowledge of child development content and (a) college classification, (b) number of child development college courses completed, (c) age, (d) marital status, and (e) educational level of the subjects' parents?

9. What are the relationships between attitudes toward children and (a) college classification, (b) number of college child development courses completed, (c) age, (d) marital

status, and (e) educational level of the subjects' parents?

10. Is there a correlation between an individual's knowledge of child development content and his attitudes toward children?

Limitations

This investigation is limited to observation and treatment of data acquired from (a) a group of thirty-five professional home economists, (b) a five-member jury, and (c) ninety-three homemaking education majors' responses to the "Parent Attitude Research Instrument" (PARI) (13) (see Appendix) and the "Child Development Competency Inventory" (CDCI) (see Chapter III). The data from the professional home economists and the jury were collected during the period of time from December, 1960, to March, 1961; and the data from the home economics education majors were collected between March 27, 1961, to May 10, 1961.

The factors considered in the study were:

1. Composite ratings on twenty-three attitudes toward children as measured by the "Parent Attitude Research Instrument" (PARI) (13), namely: (a) encouraging verbalization, (b) fostering dependency, (c) seclusion of the mother, (d) breaking the will, (e) martyrdom, (f) fear of harming the baby, (g) marital conflict, (h) strictness, (i) irritability, (j) excluding outside influences, (k) deification,

(l) suppression of aggression, (m) rejection of the home-making role, (n) equilateralism, (o) approval of activity, (p) avoidance of communication, (q) inconsiderateness of husband, (r) suppression of sexuality, (s) ascendancy of the mother, (t) intrusiveness, (u) comradeship and sharing, (v) acceleration of development, and (w) dependency of the mother.

2. Competencies which were judged to be essential for the successful teaching of child development in secondary homemaking programs in Texas.

In addition to limitations associated with scope and time, unacknowledged variables may have been introduced by the following:

1. It was necessary to develop a measurement for the purpose of obtaining data related to students' knowledge of child development content; and, although attempts were made to refine the "Child Development Competency Inventory" which was constructed, it is acknowledged that the CDCI is a non-standardized instrument.

2. The subjects to which the instruments were administered appeared to be more "conditioned" to tests than the group upon which the "Parent Attitude Research Instrument" (PARI) was standardized.

3. The PARI utilized some loosely phrased generalizations which included such words as "always," "never," and

"all." The construction also made it necessary for the student to take a positive or negative position on a structured, presupposed bias and provided no opportunity for the expression of ambivalent feelings.

4. Since it was impracticable to reach all the subjects in a group situation, the conditions under which some of the measurements were completed were impossible to control. Test conditions and instructions to students, however, were made as nearly consistent as possible by urging the students to finish the PARI in approximately twenty minutes (as was practiced in the group situations) and to avoid consultation with any resource persons or content while completing the CDCI or PARI.

Definition of Terms

Cronbach's definition of attitude, "the meanings that one associates with a certain object (or idea) and which influence his acceptance of it" (5, p. 326), was used in the frame of reference within which this study evolved.

For the purposes of this study, competency was used to mean the skills, knowledges, generalizations, and understandings acquired by the homemaking teacher in order to teach effectively.

CDCI was used as an abbreviation of "Child Development Competency Inventory," a measurement which was constructed for the purpose of measuring knowledge and understanding of

child development content which was judged to be ordinarily included in secondary homemaking programs (see Chapter III).

PARI was the identification used in prior studies to indicate the "Parent Attitude Research Instrument," a standardized instrument which Schaefer and Bell (13) developed for the purpose of measuring attitudes toward children and family life.

For this study it seemed necessary to make a distinction between the meanings of knowledge and understanding. According to Webster (19, p. 1373), knowledge is "an acquaintance with facts, the state of being aware of something or of possessing information." Webster's definition of understanding is "the power to render experience intelligible by bringing perceived particulars under appropriate concepts" (19, p. 3769). This latter definition is similar to Murphy's third level of perception, "integration or the articulation of the differentiated parts" (12, p. 342).

Plan of Procedure

Selection of Tools

The "Parent Attitude Research Instrument" (PARI) (see Appendix) was used to measure attitudes toward family life and children because it seemed to be the most adequate instrument available and because of its reported validity, ease of scoring, and economy. This particular instrument

was recommended for such purposes in research studies by Freedheim and Reichenberg-Hackett (6) and Costin (3, 4), and was used for testing attitudes of nonparents in studies reported by Marshall (10, 11) and Schaefer and Bell (14).

The PARI is made up of twenty-three five-item scales. Each of the scales is designed to measure an attitude which is theoretically relevant to personality development in children. The test items are modeled after the type of questions developed by Shoben (15) in his studies of parent attitudes. PARI items are statements of generalized opinions to which the subject is asked to strongly or mildly agree or disagree on a four-point scale. According to Schaefer and Bell (13), attempts were made to increase social acceptability of items by putting them in the form of generalizations, truisms, and cliches. Rapport items were also included; however, the scales which included the rapport items were not originally intended to be discriminatory. Schaefer and Bell found that scales which state approved attitudes toward child-rearing typically have very poor reliabilities, since there is a strong tendency for all people to agree.

Review of literature did not reveal a standardized instrument designed to measure one's understanding or knowledge of child development content; therefore, the "Child Development Competency Inventory" (CDCI) was constructed

for this purpose. In order to develop such a test the following procedures were used:

1. Current literature related to child development and child psychology was examined and analyzed.

2. After a review of the literature a detailed list of knowledges, understandings, and skills which appeared to be needed for the successful teaching of child development at the secondary level was compiled.

3. This list of competencies, together with a letter of transmittal, was mailed to a group of professional home economists. The group of home economists consisted of the Texas State Supervisor of Home and Family Life Education, each of the ten white and three Negro area supervisors, and forty-four homemaking teachers from Area V of Texas (17, p. 28) who were selected by their supervisor as being very capable in the teaching of child development.

The instructions asked the recipient to check those qualities she believed to be necessary for the successful teaching of child development in the secondary homemaking program and asked her to list any additional suggestions. Of those contacted, the state supervisor, nine of the thirteen area supervisors, and twenty-five of the forty-four teachers responded to the checksheet.

4. In order to determine which of the items were checked by a significant number of respondents, the responses

were statistically treated. Items which were judged to be unimportant were deleted and any necessary items were added.

5. Authoritative sources in child development and child psychology were consulted in relation to each of the items judged to be significant (see Bibliography, Chapter III).

6. Materials related to educational and psychological measurements were studied, and acceptable techniques were used in devising test questions based upon information emphasized and agreed upon by the sources consulted.

7. A jury, consisting of the Area V Supervisor of Home and Family Life Education, an experienced former supervisor of Home and Family Life Education, the Director of the North Texas State College Nursery School (who also teaches college classes in child development), the Director of Home Economics Education at North Texas State College, and a doctoral student in education, was asked to examine the trial test, react to the items, and give suggestions for improvement.

8. After consideration of the jury's responses, the test was refined and named the "Child Development Competency Inventory" (CDCI).

Selection of Group

The subjects involved in this study were ninety-three women majoring in home economics education at North Texas State College during the spring semester, 1961. The women

ranged in age from eighteen to forty-two, with all but five women within the age range of eighteen to twenty-four years. Fifteen of the subjects were married.

Treatment of Data

After data were collected and organized, appropriate statistical procedures were used to determine: (1) the status of the subjects with regard to attitudes toward family life and children, (2) students' knowledge of child development content as taught in secondary homemaking programs in Texas, and (3) possible relationships between such attitudes and knowledges and (a) college classification, (b) number of child development courses completed, (c) age, (d) marital status, and (e) educational level of the subjects' parents.

Summary

A study was made of the home economics education majors at North Texas State College for the purpose of measuring attitudes toward children and knowledge of the child development content ordinarily taught in secondary school homemaking programs in Texas.

Data obtained from administration of a standardized attitude test and a child development competency measurement were statistically treated to determine possible relationships between the specific factors involved in the study.

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CHAPTER II

RELATED STUDIES

As indicated in Chapter I, an investigation of some specific questions appeared to be necessary for any adequate exploration of the problem. This chapter, therefore, is concerned with examination of reports of previous research related to (a) the nature of attitudes, (b) methods of instigating attitude change, and (c) the effects of courses in child development or child psychology upon attitudes toward children.

Research studies by Symonds (36), Hattwick (12), Shoben (33), and Baldwin (3) have shown the importance of parental attitudes and the family environment in determining the attitudes and behavior of the child. Furthermore, the cumulative effect of experiences on the conditioning of attitudes was indicated by Watson and Watson's study (41) which showed that a child can readily be conditioned to fear animals, and by Jones's research (16) which demonstrated that some fears can be eliminated by using pleasant associations in connection with the feared object.

Studies by Davis (7) indicated that subcultural derivation has a significant role in determining attitudes and

standards of behavior. Horowitz (13, pp. 330-334) found that if the members of a community had approximately the same attitudes on a subject, there was a strong probability that children growing up in that community would also adopt these attitudes. This assertion was confirmed by Towmley (37), whose study revealed that the adolescents included in her study expressed value judgments which tended to agree with those of their families and their subcultural group.

It is evident, therefore, that many attitudes seem to be formed through imitation of and identification with models or ego-ideals. Stoughton and Ray (35), in a study of children eight to twelve years of age, found that these models may be real or fictitious. Both the real and the imaginative models seemed to be significant in determining the child's vocational choice, political attitudes, and moral standards.

Horowitz's data (13, pp. 330-334) agreed that, although attitudes were often initiated as a result of identification with a model, such attitudes must be tried and found workable for the individual before he accepted them. These data also indicated that, as a child matured, the following changes could usually be observed: (a) a consistent and progressive development of social attitudes, (b) a steady increase of interrelatedness of attitudes, and (c) a constancy of response patterns.

Adorno (1) found that attitudes tended to be highly generalized and that a dislike for one religious or racial group was often accompanied by a dislike for other groups and by a tendency to judge persons on the basis of their group membership.

Edwards (9) concluded that attitudes could be incomplete or inconsistent. His study indicated that people could agree with democracy, for example, and, at the same time, endorse actions which were contradictory to the principles of democracy.

Murphy (24) indicated that each individual is, biologically, a unique organism and lives in an environment peculiarly his own. Thus, the manner in which a person reacts to any stimuli is different for each individual. Studies by Shirley (32) and Washburn (40) indicated that definite individual differences in temperament could be identified as early as the first year of life. Razran (29) found that when attempts were made to develop conditioned responses in humans, some people responded to stimuli readily; some were indifferent; and others reacted negatively.

An examination of research showed that attitudes seem to influence recall, the very facts an individual is willing to accept or even consider, and the interpretation one makes of facts. For example, Postman (28) showed that children were significantly less able to recall pairs of words when

the relationship between the words was incompatible with the respective child's attitudes. Also in relation to recall performance, a study by Seeleman (30) indicated that college students who were prejudiced against Negroes failed to respond to the individual aspects of pictures of Negroes and seemed to react to the Negroes on a group basis.

Investigations by Edwards (8), Jahoda and Cooper (14), and Lewis (19, 20) explored the effect of attitudes upon acceptance or rejection of facts. The studies indicated that if the individual had clear-cut convictions and the facts which were introduced were compatible with his views, the information would be welcomed as further justification for the person's position. However, if the new facts were contrary to well-formed convictions, the individual responded in one of the following ways: (a) by redefining the facts to give them meaning in terms of his existing convictions, or (b) by interpreting the information as a natural mistake or "deliberate frame-up," and, thus, rejecting the facts. However, other studies showed that if the individual had no previous attitudes or information concerning a subject, the introduction of facts had a great deal of impact on attitude formation. As a result of their study, Annis and Meier (2) concluded that, if people accepted the source of information as reliable and had no previous convictions concerning the matter, they would accept the viewpoint which was first presented to them.

Similar findings led Lund (21) to state that there seems to be a law of primacy in attitude formation. He stated that a belief, once formed, gains a certain personal connotation, which causes an individual to feel that the attitude is "his" and he must remain loyal to it.

A study by Jarrett and Sheriff (15) indicated that the methods in which the facts are presented have some influence upon the subject's willingness to accept the information. The data showed that when only one side of an issue was presented, the attitudes of the subjects tended to shift in favor of the point of view which was given; however, if both sides of the issue were discussed, attitudes tended to move in the direction of pre-existing biases.

Peterson and Thurstone (27) found that characterizations of nationality groups as portrayed in motion pictures tended to cause a shift in attitudes concerning ethnic groups.

Other research studies showed that positive changes may result through friendly contact and pleasant associations. Karuven (17) and Freedheim and Reichenberg-Hackett (10) found that child development courses which included observation of children in a laboratory were more effective in improving attitudes toward children than were lecture courses in child development.

However, personal contact does not always produce desirable attitude changes. Studies by Musson (25), Marshall (22),

and Newcomb (26) indicated that attitude change may be related to a type of "emotional readiness." Musson found significant differences in personality traits among the boys whose attitudes toward Negroes changed positively and those boys whose attitudes became more negative after attending an integrated summer camp. Musson concluded that racial antagonism may be an outlet for feelings resulting from lack of social assurance and self-respect.

Marshall reported that college students who exhibited high manifest anxiety and who favored harsh control of children had less social insight than those students who did not exhibit these traits. Newcomb found that the amount of change in attitudes which college students experienced as the result of exposure to new ideas depended largely on the amount of social satisfactions the individual student had attained in relation to parents and peers. Those students with self-confidence and readiness for independence were likely, upon graduation, to have many attitudes which differed from the accepted attitudes of their parents and home community, but the students who were more dependent upon their parents and home community were likely to react in an indifferent or negative manner to ideas which were incompatible with their existing attitudes.

A study by Gleason (11) seemed to indicate that the amount of information related to conditions or to a series

of events may not be significant to attitude formation if vocational goals were involved; however, LaBue (18) found a significant correlation between the professional attitudes of senior teacher education majors and the amount of professional information they possessed.

Studies have shown that, although individuals tend to cling to existing attitudes with tenacity, attitudes can be changed or modified by an educational program. Bieri (4) tested college students in a beginning child development course and in an elementary psychology course. Her data indicated that post-course attitudes were significantly more positive than pre-course attitudes for both groups and that the attitude changes apparently had no relationship to the subjects' personal adjustment, intelligence scores, attitudes toward the course, or college achievement. A great variation in the changes of attitudes was reported.

Marshall (22) found that classroom study of acceptable guidance methods modified attitudes of some college students toward harsh punishment as a means of controlling children; but since the individuals varied so greatly in amount and direction of attitude change, the mean scores did not indicate a change in attitudes for the group as a whole.

In a 1958 study, Costin (5) found that college students had significantly less domineering, possessing, and ignoring attitudes toward children following a course in child psychology.

In 1960, Costin (6) reported a decrease in intensity of attitudes and a tendency for students to gain more permissive and accepting attitudes toward children as a result of a child psychology course. A high initial and post-course score in "Marital Conflict" was also indicated.

Karuven (17) reported that the number of child development and psychology courses the student had completed was closely related to the student's possession of good attitudes concerning guidance of children, not so closely related to the student's sensitivity toward children's problems, and little related to the students' knowledge of behavior causes. These data also indicated that degree of maturity had no effect on one's understanding of children.

Freedheim and Reichenberg-Hackett (10) reported that staff members of a children's hospital who were skilled and experienced in working with children expressed significantly "healthier" attitudes toward children, on the PARI, than did a group of nurses' aides in the same hospital. The study also included analysis of (a) the attitudes of the nurses' aides toward children before and subsequent to a series of lectures in child development, (b) the pre-course and post-course attitudes of college students enrolled in a psychology class which included participation in a nursery school, and (c) the attitudes of a group of college students enrolled in a history class during the same interval (as a control group).

The group of psychology students showed a significant shift toward more positive attitudes, but the other two groups showed little change.

Walters and Fisher (39) reported a study of a group of college women who were majoring in child development and family relationships. The group was tested at intervals during a two-year time period, and significant changes in attitudes were found. The investigators concluded that the attitude changes were due to factors other than increased maturity alone and may have been the result of the curriculum which the subjects were taking as their major field of study.

Walters (37) also compared the pre-course and post-course attitudes toward children which were exhibited by a group of home economics majors in a beginning child development course with the attitudes expressed by members of a control group. The data indicated that the students who represented the upper and lower middle classes gained most from the course.

In a comparison of attitudes of graduate, senior, and freshman home economics majors toward child-rearing practices, Wheeler (42) found a significant difference between the attitudes of the subjects who had completed courses in both child development and psychology and the attitudes of subjects who had not had these courses. The data indicated that (a) the greatest change seemed to come after the first child development

course, (b) the favorable attitudes were retained for some time, and (c) the attitudes toward children were unaffected by motherhood.

Shapiro (31) and Stott and Berson (34) concluded from their studies that adults' attitudes toward child-rearing practices and the behavior of children could be changed by training programs. Shapiro found that the changes in attitudes toward children seemed to be in direct proportion to the number of group discussions his subjects attended. The study also indicated that those subjects whose attitudes were initially good had more positive change than did those adults whose initial attitudes were less desirable.

A review of research was made in an effort to investigate (a) the nature of attitudes, (b) methods of instigating attitude changes, and (c) the effects of courses in child development or child psychology upon attitudes toward children. Related studies seem to indicate that a multiplicity of factors are involved in attitude formation and change; however, attitudes can be restructured by an educational program.

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CHAPTER III

DEVELOPMENT OF THE CHILD DEVELOPMENT COMPETENCY INVENTORY

As the review of related literature did not reveal a suitable instrument for measuring knowledge and understanding of child development content, it was necessary to (a) examine the competencies which appeared to be necessary for the successful teaching of child development at the secondary level, (b) identify the areas of child development content which are usually included in secondary homemaking programs in Texas, and (c) develop an instrument which could be used to measure the status of home economics education majors in relation to these designated competencies and areas of child development content.

Collection of Data for Instrument

In order to examine the competencies related to this study, sources in homemaking education, child development, and child psychology (3, 7, 8, 9, 11, 12, 15, 23) were examined and analyzed. From this analysis, an attempt was made to identify the knowledges, understandings, and skills which seemed necessary for the successful teaching of child development at the secondary level. These competencies were compiled into a checksheet of forty-eight items which attempted

to include the special areas of content in child development (see Table I for checksheet).

The Texas Supervisor of Home and Family Life Education was asked for suggestions concerning the checksheet and for permission to contact each of the area supervisors of Home and Family Life Education in Texas for their reactions to the competency checksheet. After obtaining permission, the checksheet, along with a letter of transmittal (see Appendix) and instructions for marking, was sent to each of the thirteen area supervisors. Responses were received from nine of the thirteen supervisors.

The letter which accompanied the checksheet gave a brief explanation of the purposes of the study and asked each recipient to mark those items which, in her opinion, defined a quality which was essential to the teaching of child development in secondary homemaking programs. The letter also encouraged the professional home economists to add any competencies related to child development which, from their experiences, they believed to be essential to homemaking teachers. An explanation was included to the effect that the list presupposed general abilities as a teacher and was intended to include only those special abilities which seemed to be related to the teaching of child development.

The Area V Supervisor of Home and Family Life Education was then asked for a list of homemaking teachers in Area V

who, in her opinion, included high quality units of child development in their teaching. The checksheet, along with a letter similar to the one which was sent to the supervisors (see Appendix) was mailed to the forty-four teachers who were selected. Twenty-five of the forty-four homemaking teachers marked and returned the checksheet.

Table I presents the competency checksheet items, along with the number of teachers and supervisors who checked each item as essential for the successful teaching of child development in the secondary homemaking program.

TABLE I
COMPETENCY CHECKSHEET AND NUMBER OF HOME ECONOMISTS
WHO CHECKED EACH ITEM AS ESSENTIAL

Competencies	Number of Home Economists	
	T*	S*
1. Proficiency in helping adolescents understand the behavior of children	21	10
2. Knowledge of the skills and understandings needed by babysitters.	23	10
3. Skill in holding a baby.	15	7
4. Possession of genuine interest in and love for children	23	10
5. Knowledge of authoritative sources of information in child development suitable for adolescents, for parents, and for teachers	24	9
6. Skill in bathing an infant and a pre-school child.	17	8

TABLE I--Continued

Competencies	Number of Home Economists	
	T*	S*
7. Effectiveness in speaking to a child on his level of understanding	25	10
8. Ability to distinguish the cause of irritation by the sound of the cry of individual infants and small children. . . .	11	7
9. Efficacy in preparing a child for a new baby in his family	20	10
10. Appreciation of the effect of parental attitudes and practices upon the personality of the child	22	9
11. Comprehension of the way in which subcultural patterns influence child-rearing practices .	17	10
12. Knowledge of the human growth cycle from conception to adulthood.	22	10
13. Appreciation for the uniqueness of each individual	23	9
14. Recognition of the maturity traits characteristic of each developmental level of childhood	22	10
15. Understanding of the basic needs of human beings	24	9
16. Knowledge of the developmental tasks of each maturity level from infancy to adulthood.	24	9
17. Effectiveness in guiding individual children toward setting and maintaining limits on behavior that are consistent with the child's maturity level	17	8
18. Efficacy in managing children in a manner that prompts self-discipline	24	10

TABLE I--Continued

Competencies	Number of Home Economists	
	T*	S*
19. Recognition of the types of play characteristic of each developmental level of childhood.	22	9
20. Ability to select suitable toys and play equipment for children	24	10
21. Imagination and skill in improvising and constructing toys for pre-school children.	21	9
22. Ability to select and to use art materials suitable for pre-school children.	23	9
23. Proficiency in selecting books and stories for use by pre-school children. . .	23	10
24. Skill in reading and telling stories and poems in a manner that is entertaining to children	22	10
25. Knowledge of the factors which determine sleep needs of individual children.	16	8
26. Understanding of procedures which aid in promoting good sleeping habits for children.	22	10
27. Ability to select and to make suitable clothing for infants and children	22	8
28. Knowledge of clothing construction features which facilitate development of children's independence in dressing. . .	22	10
29. Awareness of (a) common household items that are a potential threat to the safety of the baby and small child, and (b) means of reducing such threats.	25	9

TABLE I--Continued

Competencies	Number of Home Economists	
	T*	S*
30. Effectiveness in guiding pre-school children to recognize and eliminate safety hazards.	22	6
31. Ability to foster good health habits in children	23	10
32. Appreciation for the importance of optimum pre-natal nutrition	24	9
33. Knowledge of the nutritional stages of development for infants and pre-school children and the effect of these stages upon the selection and preparation of foods for children.	23	10
34. Skill in feeding a baby	16	8
35. Efficacy in introducing new foods to infants and small children.	19	9
36. Comprehension of factors which contribute to the formation of positive attitudes toward food	23	10
37. Ability to care for a sick child.	21	10
38. Effectiveness in using first aid procedures for emergencies with children. .	21	9
39. Skill in helping children develop a sense of responsibility for others.	18	8
40. Ability to guide children in forming democratic social relations with others . .	22	10
41. Awareness of the factors which contribute to good mental health in children	20	10

TABLE I--Continued

Competencies	Number of Home Economists	
	T*	S*
42. Ability to help children (a) accept their feelings without undue guilt or shame, and (b) deal with these feelings effectively.	22	9
43. Proficiency in teaching children to handle strong emotions in a manner that is psychologically sound and socially acceptable.	18	10
44. Recognition of behavioral symptoms of emotional disturbances in the individual. .	21	10
45. Understanding of procedures a teacher can use in handling simple psychological problems.	23	9
46. Appreciation for the need of maintaining the dependency-independency element of the parent-child relationship at a level which is beneficial to the individual child	17	10
47. Understanding of the parent's role in facilitating the progression toward emotional maturity of the child	18	10
48. Ability to organize a play school	21	10

*"T"--teachers, "S"--supervisors.

The "T" column of Table I lists the number of teachers, out of a possible twenty-five, who checked each item as essential for the homemaking teacher. The column marked "S" gives the number of affirmations to the essential nature of

each item which was indicated by the state supervisor and nine area supervisors.

The data from the thirty-five professional home economists were statistically treated by using the chi-square test for significance, which included the correction for continuity described by Edwards (4, pp. 149-157). Results obtained from these calculations are presented in Table II.

As is shown in Table II, thirty-seven of the forty-eight items were marked as essential by a significant number of both the teachers and the supervisors. The remaining eleven items were discarded, and one additional item which was suggested by the group was included in the revised check-sheet. This supplementary item concerned music for the pre-school child.

TABLE II

CHI-SQUARE VALUES OBTAINED FROM AN ANALYSIS OF THE
RESPONSES OF PROFESSIONAL HOME ECONOMISTS
TO A COMPETENCY CHECKSHEET

Compe- tency Item Number	Chi-square Values		Compe- tency Item Number	Chi-square Values	
	Teachers	Supervisors		Teachers	Supervisors
1	10.42*	8.1*	19	13.78*	4.9*
2	16.00*	8.1*	20	19.36*	8.1*
3	.64	.9	21	10.42*	4.9*
4	16.00*	8.1*	22	16.00*	4.9*
5	19.36*	4.9*	23	16.00*	8.1*
6	2.56	2.5	24	13.78*	8.1*
7	23.04*	8.1*	25	1.44	2.5
8	.16	.9	26	13.78*	8.1*
9	7.84*	8.1*	27	13.78*	2.5
10	13.78*	4.9*	28	13.78*	8.1*
11	2.56	8.1*	29	23.04*	4.9*
12	13.78*	8.1*	30	13.78*	.1
13	16.00*	4.9*	31	16.00*	8.1*
14	13.78*	8.1*	32	19.36*	4.9*
15	19.36*	4.9*	33	16.00*	8.1*
16	19.36*	4.9*	34	1.44	2.5
17	2.56	2.5	35	5.76*	4.9*
18	19.36*	8.1*	36	16.00*	8.1*

TABLE II--Continued

Compe- tency Item Number	Chi-square Values		Compe- tency Item Number	Chi-square Values	
	Teachers	Supervisors		Teachers	Supervisors
37	10.42*	8.1*	43	4.00*	8.1*
38	10.42*	4.9*	44	10.42*	8.1*
39	4.00*	2.5	45	16.00*	4.9*
40	13.78*	8.1*	46	2.56	8.1*
41	7.84*	8.1*	47	4.00*	8.1*
42	13.78*	4.9*	48	10.62*	8.1*

*Significant at the .05-.01 level of confidence.

For each of the competencies listed in the revised checksheet, authoritative sources in child development and child psychology were consulted. Information was obtained concerning the content which appeared to be necessary for the evolvement of the respective competencies. Materials related to educational and psychological testing were also studied for acceptable techniques to be used in constructing the test items. Within the framework of these techniques and the content proposed, test items were devised. All items were documented in order to (a) ascertain correct answers and (b) indicate the relationship between the test item and the content which appeared to be necessary for the evolvement of the respective competencies. The proposed test items

were evaluated and refined in terms of the recommendations made by Lindquist (16) and Remmers (21). Directions for completion of the measurement were constructed; and an introductory statement was devised which contained information to the student about the purpose of the measurement and factors to remember when completing the proposed competency test.

In order to check the revised version of the measurement, a five-member jury, consisting of the Area V Supervisor of Home and Family Life Education, an experienced former supervisor of Home and Family Life Education, the Director of the North Texas State College Nursery School (who also teaches college classes in child development), the Director of Home Economics Education at North Texas State College, and a doctoral student in the School of Education at North Texas State College, was asked to react to the test in terms of the following questions:

1. Are the instructions to the student complete and specific? (See Appendix, "Information for Students.")
2. Do the questions seem to test the person's knowledge of the competency it is intended to measure?
3. Is the wording clear?
4. Are any questions tricky?
5. Do you agree that the answers which are marked correct are true statements? If not, why?

6. Will the measurement distinguish between students with varying degrees of knowledge concerning the child development content which is usually included in secondary homemaking programs?

7. Can the test be shortened in some way and still measure the same competencies? How?

8. Do you have any suggestions for improving the items, the test as a whole, or the form of the test?

The Instrument

After consideration of the jury's responses, the instrument was refined and entitled "Child Development Competency Inventory," or CDCI. The following measurement is the final form of the test which was used to obtain data for this study.

CHILD DEVELOPMENT COMPETENCY INVENTORY

Directions: Please write your name in the space provided. Read each question and its corresponding statements carefully. Decide which of the statements you believe to be correct answers. Indicate your decision by circling the number to the left of each correct statement. Some questions have no correct answers given; some have 1 correct answer given, some 2, some 3, and some have 4 correct answers given. Therefore, circle the number of any answer you believe to be correct. Please answer all questions. Do not spend too much time on any one item; finish those you know and come back to the others if time permits.

Example: When would expect a baby to cry?

1. When he is happy
- ②. When he is hungry
- ③. When he is angry
4. When he feels playful

The following are questions which might arise when teaching child development in the high school homemaking program and when working with children, individually and in groups.

I.

Which of the following authors have written books which provide valid information in child development or child psychology?

For the teacher:

1. Lawrence Frank
2. Robert Havighurst
3. Charlotte Buhler
4. Grace Metalious

For the high school students:

1. Elizabeth Hurlock
2. Erskine Caldwell
3. Mollie and Russell Smart
4. Jonathan Winters

For the parents:

1. James L. Hymes, Jr.
2. John O'Hara
3. Arnold Gesell
4. Benjamin Spock

II.

Which of these items characterize good books for use by pre-school children (15, pp. 271-289; 20, pp. 252-271)?

1. Stories about everyday experiences of children
2. Detailed illustrations or photographs
3. Most of the action carried in the pictures
4. Few words per page

III.

Which of these authors have written good books for the use of pre-school children?

1. Margaret Wise Brown
2. Margaret Chase Smith
3. Dr. Spock
4. Dr. Seuss

IV.

Which of these pointers should be remembered when reading or telling stories to pre-school children (15, pp. 276-281)?

1. It is best to hold the book in your lap while reading, so that you can see the words clearly.
2. Some of the children will be unable to sit still if the story lasts more than 5-10 minutes.
3. Asking questions during a story should be encouraged.
4. The reader should read a story at least twice before presenting the story to the children.

V.

Which of these activities would be expected to increase the adolescents' understanding of the behavior of pre-school children (2; 3, pp. 334-335; 15, pp. 5-11)?

1. Gather personal information concerning children in a nursery school or kindergarten, such as condition of health, economic background, size of family, etc.
2. Assign each adolescent to take brief notes on individual children's behavior, and use these notes in class discussion.
3. Have the pupils give psychological tests to the children in order to determine causes of behavior.
4. Have a "Kid Day" during which the adolescents play with children's toys and enact the role of the children in common behavior situations which they have observed.

VI.

Which of these procedures encourage children to cooperate and to "fit in" as members of a group of children (1)?

1. Give a gold star each week to the boy and girl whose behavior has been best.
2. Let the children vote on when to schedule rest, free play, and other such routines.
3. Help each child to develop a feeling of mutual friendship with other children and with adults.
4. Avoid the imposition of an adult's will upon the children.

VII.

Which of these suggestions would help fulfill the purposes of music with pre-school-age children (15, pp. 289-305)?

1. Teach them simple fundamentals of music, such as the scales, reading of notes, etc.
2. Be sure that each child joins with the group when they are singing, dancing, or playing instruments.
3. Join in with the children's singing and improvise songs to accompany the children's work and play.
4. Discourage children with "monotone" voices from singing with a group to prevent embarrassment to them.

VIII.

Which of these toys could be economically made by high school girls in the homemaking department (13, pp. 124-137)?

1. Rag dolls
2. Doll houses
3. Blocks
4. Musical rhythm instruments

IX.

Which of the following art materials are suitable for the needs and interests of children, 2½-5 years of age (17)?

1. Water colors in oval-shaped containers
2. Thick crayons in a small variety of bright colors
3. Powdered poster paint and absorbent paper
4. Color books about favorite television and story characters

X.

If young children just scribble without any organization or plan, which of these suggestions should be tried (17)?

1. Have a contest and post the best drawings for each age group where the parents can see them, in order to give the children incentive to do better.
2. Draw pictures for them, so they will have some idea of what to draw.
3. Provide them with the materials and leave them alone as long as they seem to enjoy scribbling.
4. Ask them what they are drawing, so they will find out they are supposed to "make" something.

XI.

Four-year-old Linda is 2 inches shorter and 5 pounds lighter than the recommended height and weight for the average girl her age. On the basis of this information, what should be done (6, 7)?

1. Try to coax Linda to eat more food for lunch.
2. Provide extra snacks for Linda.
3. Ask Linda's mother to take her to the doctor, since she is too small for her age.
4. Ask Linda's mother to buy her elevated shoes, so she will be as tall as the other girls.

XII.

Terry, age 3, had very little appetite at lunchtime, and he tried all sorts of tricks to avoid eating. Which of these procedures would be expected to improve Terry's eating habits (14, pp. 10-13; 20, p. 126)?

1. Arouse his interest in food by giving him new foods he has not eaten before.
2. See that he plays quietly without falling asleep for a few minutes before mealtime.
3. Give him a carbonated beverage or candy between meals so he won't get too hungry and lose his appetite.
4. Pay no attention to his tricks and casually remove his plate if he continues to dawdle after about thirty minutes.

XIII.

Some of the parents of pre-school children asked for information concerning the development of good sleeping habits in children. Which of these items would be good suggestions for parents (15, pp. 199)?

1. Wait until the child shows signs of sleepiness before putting him to bed.
2. Give the child a few minutes' warning so that he can become accustomed to the idea of going to bed.
3. Encourage strenuous play after supper so the child will be tired enough to sleep.
4. Give the child a spanking if he cries or demands a lot of attention at bedtime.

XIV.

Which of these features of children's clothing encourage independence in dressing (24)?

1. Long zippers in the front of the garment
2. Fasteners in the back of the garment
3. Clear markings for easy determination of front and back of the garment
4. Slipover garments with grippers at the shoulder

XV.

Boisterous 3-year-old Jamie fell from the horizontal ladder. He received a blow on his head and a small cut that bled profusely. How should he be treated (18)?

1. Apply a hot water bottle to the wound to reduce swelling and curb the flow of blood.
2. Give him a drink of water and an aspirin to prevent headache.
3. If he is groggy or semi-conscious, have him walk around until he is fully conscious.
4. Encourage him to play a lively game of tag to get his mind off the injury.

XVI.

Susan, age 4, is a very shy child who has seldom played with other children. How could she be encouraged to play well with other children (20, pp. 214-239)?

1. When she tries to take toys away from another child, spank her hands lightly and lead her to another play area.
2. Help her become close friends with one child, then with the group.
3. Have one of the high school girls play with her until she wants to play with other children.
4. Make up contests and races between the children because competition increases friendliness within the group.

XVII.

May, age $3\frac{1}{2}$, seemed very disturbed about the differences between boys and girls. She asked her play-school teacher to tell her why she was not made like Johnny. What should the teacher say to May (20, p. 113; 25, pp. 71-151)?

1. "Girls are made as they are so that when they grow up, they can be mothers and have babies. Boys are going to grow up and be fathers and start the baby, but girls are the ones who grow the baby. Isn't it nice to be a girl?"
2. "You can't understand such things now, but don't worry about it. Your mother will tell you all about it when you are bigger. Now run along and play."
3. "You shouldn't ask such questions. Boys are just different from girls; that's all there is to it."
4. "Let me show you a picture I have in my office. Now this is a picture of the place in a woman's body where the baby grows. . . . (etc. to explain fully and objectively the facts about sex and reproduction).

XVIII.

One day Billy decided he did not want to stop playing for the usual rest period. When a high school student insisted, he threw his toy at her and screamed, "I hate you. I'm going to chop you to pieces!" How should the teacher handle this situation (3, pp. 232-234; 20, pp. 186-203)?

1. Wash his mouth with soap, so he can learn to hold his temper and use civil language.
2. Refer him to a psychologist, since such an outburst indicates a deep-seated personality problem.
3. Tell him you understand how hard it is to stop playing when you are having so much fun. Give him a choice of whether to rest now or later when the other children are playing, and abide by his choice.
4. Make Billy apologize to the girl and promise not to act that way again.

XIX.

For several weeks, 3-year-old Lana seemed unhappy and was openly hostile on several occasions. She sucked her thumb at rest period, and often hit other children who did not pay attention to her. One day she demolished a doll with a hammer and reported to the teacher that Susan had broken the doll. What factors should be considered in deciding whether or not this is a serious behavior problem (3, pp. 232-234)?

1. The age of the child
2. How often and how long the behavior persists
3. How much the child differs from other children her age
4. Whether or not she has any aunts or uncles in mental institutions

XX.

What procedures should the homemaking teacher (with the average amount of psychological training) use in Lana's situation (see the above item) (3, pp. 72-265; 20, pp. 167-192)?

1. Give Lana a Rorschach test to gain a better understanding of the causes of her behavior.
2. Analyze one of Lana's recent drawings for signs of her true emotions.
3. Schedule a conference with Lana's parents to determine if anything is disturbing her at home.
4. Ignore her when she "acts up" so she will learn that she gets more attention when she acts properly.

XXI.

Mike, age $2\frac{1}{2}$, was the smallest in the group, although he wanted very much to be a "big" boy. He frequently bossed, bragged, and hit other children. Which of these procedures would be expected to help him (15, pp. 35-53; 20, pp. 167-192)?

1. Tell him he should not be such a baby. Big boys don't act that way.
2. Encourage him to work with art materials and music as an outlet for his emotions.
3. When he looks ready to attack a child, offer him a substitute by saying, "You can't hit him; hit me instead."
4. Ask him to act like Jerry, a boy who seldom gives the teacher any trouble.

XXII.

Jimmy, age 3, took some money belonging to Susan. How should the situation be handled (5; 6, pp. 367-368; 8, p. 30)?

1. Tell Jimmy he will have to stay at home if he steals other people's property.
2. Schedule a conference with Jimmy's mother and father, since stealing at this age may lead to serious trouble.

3. Ask all the mothers not to let their children bring anything valuable to school.
4. Ask the other children not to let Jimmy play with their things until he learns not to be a thief.

XXIII.

Which of these procedures would be expected to help children learn good health habits (14, pp. 112-121)?

1. Insist that children stay as clean as possible.
2. Remind them to drink a large glass of water just before lunch.
3. Keep the playroom temperature at approximately 78° F., on the children's level.
4. Provide for a period of rest or sleep during the daytime.

XXIV.

An epidemic of influenza caused many small children to be confined to their beds. Parents asked for suggestions related to care of the convalescent child. Which of these suggestions should be given to them (14, pp. 193-229)?

1. Tell your child the doctor will not hurt him, so he will be more cooperative.
2. Mix medicine with milk or with some food your child likes, so that he will accept it more readily.
3. Keep other children in your family quiet, so you can devote your attention to the convalescent.
4. Place the child's bed so that he can look out a window if possible, and provide him with toys and play materials so he can entertain himself.

XXV.

Mrs. James, 3-year-old Martha's mother, was expecting another child. She asked for advice on preparing Martha for the coming event. Which of these suggestions should be made (19, pp. 109-113)?

1. About six months before the birth, tell Martha about the baby, so that she can have several months to anticipate the birth.
2. Tell Martha that the stork brings babies to boys and girls if they are good.
3. In order to help her understand that the baby will be very helpless and demand much of her mother's time, visit friends who have tiny babies.

4. A month or two before the birth, let Martha help decorate the bassinet and assemble the clothing and other articles the baby will need.
-

When a neighbor suddenly became ill one weekend, the homemaking teacher offered to care for the baby, an adorable, 8-months-old girl named Janie. The following are some of the questions which arose during Janie's stay.

XXVI.

Which of the following would be suitable toys for an 8-months-old baby (8, pp. 115, 373)?

1. A push-pull toy
2. Nested measuring cups
3. A hammer and peg toy
4. A rubber, squeaky bear

XXVII.

What should be remembered when feeding a baby (19, pp. 229-244)?

1. Count the baby's teeth in order to determine the consistency of its food--strained, chopped, or prepared as for adults.
2. The diets of most babies under one year of age consist of milk formula, orange juice, and a vitamin supplement.
3. By the age of 8 months, a baby can eat most of the foods adults eat.
4. It is best to feed a baby whenever he indicates he is hungry, even though his mealtime is still several minutes away.

XXVIII.

When feeding Janie a new food, such as liver, which of these procedures would be expected to produce a maximum of success (19, pp. 229-244)?

1. Assume she will like the liver.
2. Give her a small amount of the liver at a meal which includes a larger amount of foods that she likes.
3. Feed her an entire can of liver so Janie will become accustomed to the flavor and texture.

4. Tell her, "I understand just how you feel. I can't stand the stuff, either," and make a funny face so Janie's mind will be kept off the taste.

XXIX.

Janie was just beginning to crawl and climb. In order to allow her to satisfy her need for exploring safely, which of the following should be done (18, pp. 25-29)?

1. Place Janie's playpen in the kitchen so the teacher can watch her while preparing meals.
2. Remove metal pots and pans from the lower cabinets in the kitchen.
3. Place soaps, detergents, and cleaning preparations out of Janie's reach.
4. Remove overhanging tablecloths from the tables.

True-False

Read the statements carefully and place a T in the blank to the left of each statement that is true and an F in the blank to the left of each statement that is false. Please mark clearly.

- _____ 1. A good way to win the confidence of a child with whom you babysit is to bring him a simple toy (11, 22).
- _____ 2. The babysitter usually should try to use the same methods as the parents use when caring for and handling the child (11, 22).
- _____ 3. Before leaving their children with a babysitter, parents should explain to the children that they are leaving, where they plan to go, etc. (11, 22)
- _____ 4. Be sure to bring along your friends' telephone numbers when babysitting in case you need help with your homework (11, 22).
- _____ 5. The basic pattern of the individual's personality is determined during the first few years of his life (12, pp. 6-23).
- _____ 6. Since most humans follow the same pattern of development, it is usually possible to predict what a given child will be able to do at a given age (12, pp. 6-23).

- _____7. Certain stages of human development are characterized by "problem" behavior and difficulty in getting along with others (12, pp. 6-23).
- _____8. Each individual is unique in his style of development (12, pp. 6-23).
- _____9. Teachers and parents should try to protect the child from the experience of failure until he is at least ten years old (3, pp. 237-244).
- _____10. A child needs to feel that he is important (3, pp. 237-244).
- _____11. The achievement of mental health depends upon the child's ability to be the leader of his group (3, pp. 237-244).
- _____12. The major factor in determining the mental health of the child is his belief that he is able to do whatever anyone else can do (3, pp. 237-244).
- _____13. One of the developmental tasks of infancy and early childhood is learning to talk (10).
- _____14. One of the developmental tasks of middle childhood is the achievement of emotional independence from parents and other adults (10).
- _____15. A child should have begun to develop a conscience before he is six years old (10).
- _____16. The pre-school child needs to learn physical skills necessary for ordinary games (10).
- _____17. A good way to teach a child to be good is to tell him the "boogey man" will get him (5).
- _____18. A child needs to be taught to suppress his emotions (5).
- _____19. A child needs to have freedom from adult limitations (5).
- _____20. Lack of affection may impair a child's development even though he has adequate physical care (12, p. 110).
- _____21. Parents should help a child achieve emotional maturity by urging him to grow up as soon as possible (7).

- _____ 22. The child needs to be given increasing amounts of duties and responsibilities as he grows older (1).
- _____ 23. Parents should realize that the child is, at some stages of development, very jealous of the mother and father's love for each other (8).
- _____ 24. If a mother wants to work outside the home after the birth of the baby, the best time to do so is before the baby is one year old (12, p. 114).
- _____ 25. Children of indulgent parents are likely to be popular and make social contacts easily (12, pp. 204-209).
- _____ 26. Discord between parents, if continual and intense, is almost certain to do psychological damage to the child (3).
- _____ 27. A disturbed parent-child relationship is most frequently the cause of a child's psychological problems (3).
- _____ 28. Overprotected children are likely to be insecure and dependent (12, pp. 204-209).
- _____ 29. Children who are $2\frac{1}{2}$ years of age usually can share toys with other children (8, p. 354).
- _____ 30. By the age of 5, most children can play cooperatively (8, p. 354).
- _____ 31. Quarreling is rare among children $3\frac{1}{2}$ years old (8, p. 354).
- _____ 32. Four-year-olds can be expected to form special friendships with some children to the exclusion of others (8, p. 354).
- _____ 33. If the doctor says the pregnant woman's weight gain is right, the fetus is probably receiving the nutrients it needs (19, pp. 97-104).
- _____ 34. Since she must provide for both her own needs and the needs of the child, the pregnant woman should eat twice as much food as she required before becoming pregnant (19, pp. 97-104).

- _____ 35. If the diet and health of the pregnant woman are "good" or "excellent," the infant will probably be in good or excellent physical condition (19, pp. 97-104).
- _____ 36. The diet of a pregnant woman plays an important part in determining her mental attitude and her feelings of well-being (19, pp. 97-104).

Examination of the relationships between the items of the CDCI and those in the competency checksheet may reveal the competencies which each CDCI question was designed to measure. The compilation of this analysis is presented in Table III.

The competencies which are not represented in Table III are those items which were either (a) deleted when the responses of the home economists were analyzed for statistical significance or (b) measured by the PARI. The content of the competency items may be found by referring to Table I.

TABLE III

RELATIONSHIP BETWEEN THE CDCI QUESTIONS AND ITEMS
OF THE COMPETENCY CHECKSHEET

CDCI Question Number	Competency Item Each Question Was Designed to Measure**	CDCI Question Number	Competency Item Each Question Was Designed to Measure**	CDCI Question Number	Competency Item Each Question Was Designed to Measure**
I	5, 48	XIV	28, 48	XXVII	14, 33
II	23, 48	XV	38, 48	XXVIII	35
III	23, 48	XVI	40, 48	XXIX	29
IV	24, 48	XVII	7, 48	1-4	2
V	1, 10, 48	XVIII	14, 42, 43, 48	5-8	12, 13
VI	18, 48	XIX	44, 48	9-12	15, 41
VII	48, 49*	XX	45, 48	13-16	16
VIII	21, 48	XXI	42, 43, 48	17-20	15, 18
IX	22, 48	XXII	14, 41, 48	21-24	15, 47
X	22, 48	XXIII	31, 48	25-28	10
XI	13, 48	XXIV	37, 48	29-32	19
XII	36, 48	XXV	9, 14, 48	33-36	32
XIII	18, 26, 48	XXVI	14, 20	..	..

*Added to the revised checksheet.

**Competency number is given in Table I.

Summary

As the review of related literature did not reveal an adequate instrument for measuring knowledge and understanding of the child development content which is usually included in secondary homemaking programs, the following procedures were used in constructing such a measurement.

1. From an analysis of sources in homemaking education, child development, and child psychology, a competency check-sheet was constructed which included (a) the competencies which appeared to be necessary for the successful teaching of child development in secondary homemaking programs, and (b) the areas of child development content to which the competencies seemed related.

2. A group of thirty-five professional home economists were asked for their considered judgments concerning the importance of each competency on the checksheet.

3. The chi-square test of significance was used to determine which of the items had been checked essential by a significant number of the home economists.

4. Sources in child development and child psychology were consulted in relation to each of the significant competencies, and materials concerning educational and psychological measurement were examined for acceptable techniques in test construction. Within the framework of the techniques and content proposed, test items were devised and documented.

The proposed test was evaluated, refined, and submitted to a five-member jury for consideration and criticism.

5. After studying the jury's suggestions, the test was further refined, and the final form of the measurement was named the "Child Development Competency Inventory (CDCI)." This instrument, along with bibliographical references to sources from which the content of the test items was taken, was presented within the body of the preceding discussion.

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CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA OBTAINED THROUGH ADMINISTRATION OF THE PARI AND CDCI

In order to examine any possible relationships between the factors with which this study was concerned, the PARI and the CDCI were administered to the home economics education majors at North Texas State College during the period of time from March 27, 1961, to May 10, 1961. Fifty of the subjects completed the measurements in a group situation; however, it became necessary for forty-three of the subjects to respond to the measurements individually. The women involved in the study included all the home economics education majors currently enrolled in North Texas State College, with the exception of five women who did not return the measurements in time for analysis.

The completed measurements were scored and the results were recorded on individual information sheets according to instructions given for both instruments on the score sheet (see Appendix). Total scores for PARI and total number of correct answers to the CDCI were used for statistical analysis of the data. It is noted that much of the information concerning the individual subject's attitudes was masked through use of a total score for PARI; but, for the purposes of this

study, it seemed impracticable to analyze each aspect under study in terms of twenty-three separate factors. Schaefer and Bell (4) indicated that each investigator who uses the PARI must choose the statistical means of partialling out response sets which seem best for the individual situation. They also noted that, while a total score for PARI is not useful as a measure of pathogenicity, such a composite score may be useful as a personality measurement. The data from the individual score sheets were compiled and may be found in the Appendix.

An appraisal of the status of the total group in relation to each of the CDCI questions was made by compiling the responses and calculating the per cent of correct answers for each item. Figure 1 shows the results of such a calculation.

As shown in Figure 1, each group of four true-false questions was constructed to measure the same competency; and thus, the responses to the true-false questions were considered in units of fours. Chapter III contains the content of the test items; Table III reveals the number of the competency to which the CDCI questions relate; and Table I gives the competency item.

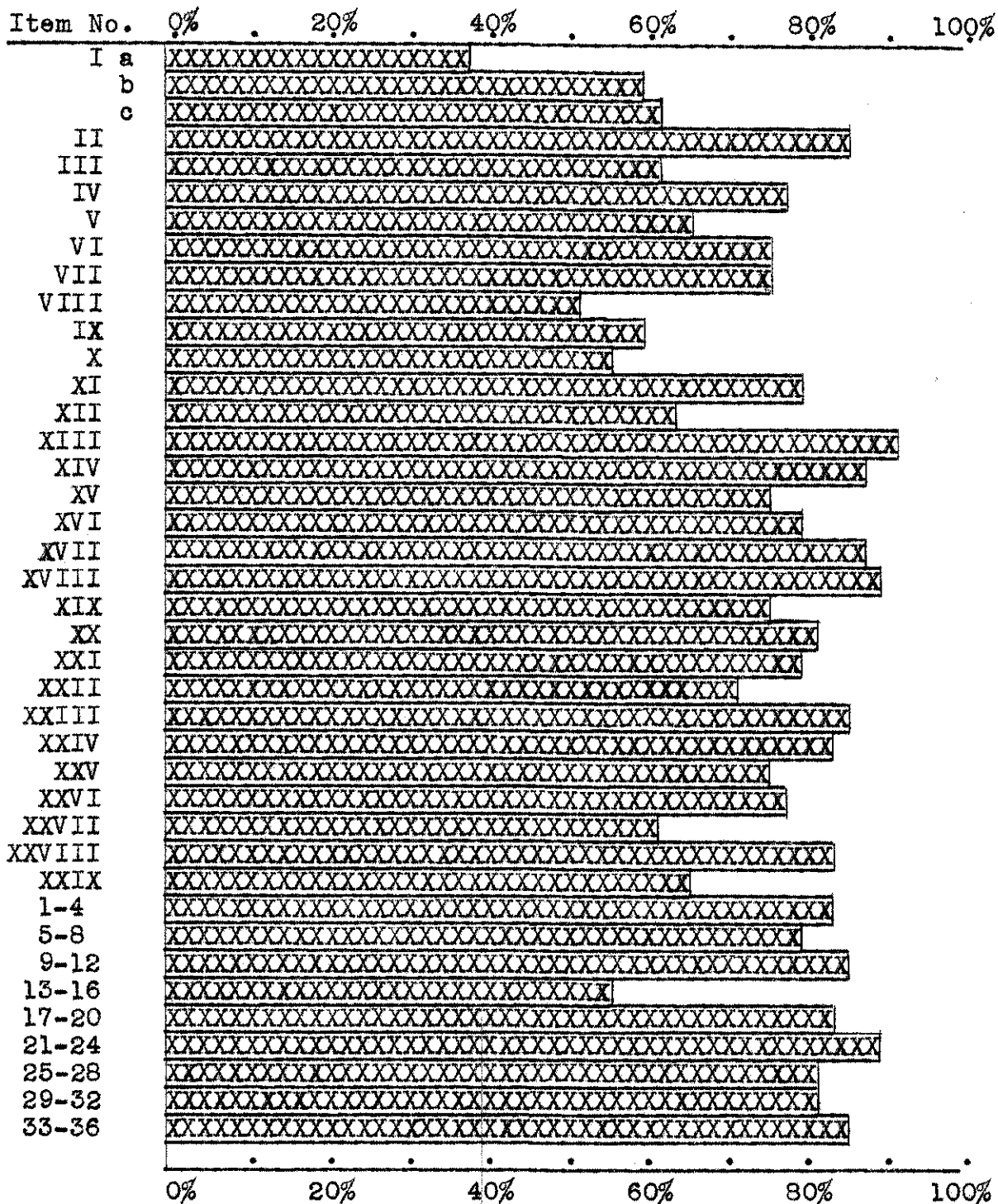


Fig. 1--Percentage of correct responses given by home economics education majors to each item of the "Child Development Competency Inventory (CDCI)."

Scores for the PARI and CDCI were then arranged according to these groupings: (a) college classification, (b) number of college child development courses completed by the subject, (c) age, (d) marital status, (e) educational level of the subjects' mothers, and (f) educational level of the subjects' fathers. The resulting data were examined for possible relationships between these variables and (a) attitudes toward children and (b) knowledge of child development content.

In order to determine the significance of the differences between mean scores for the groups, Fisher's formula for calculating t from small uncorrelated samples was used. This formula and Fisher's table for determining the significance of values for t are given by Smith (5).

Analysis of Data According to College Classification

The PARI scores were grouped according to college classification of the subjects. Table IV presents the data which were obtained from such a grouping.

Two of the subjects were graduate students; therefore, the total number considered in this particular analysis was ninety-one. The large standard deviations listed in Table IV indicate the wide variation which was found within the groups of PARI scores.

TABLE IV
 DATA OBTAINED FROM GROUPING OF PARI SCORES
 ACCORDING TO COLLEGE CLASSIFICATION

Data from PARI	College Classification of Subjects			
	Freshman	Sophomore	Junior	Senior
N	41	12	20	18
M	291.29	278.00	282.00	274.83
σ	31.64	30.81	25.88	34.41
$\sum x^2$	41,050.24	11,391.00	13,392.00	21,314.52

Statistical comparison was made of the data presented in Table IV. Table V shows the t values which were obtained when each college classification group was compared with each other such group.

Since low scores on the PARI indicate positive attitudes toward children, a review of the mean scores in Table IV indicates that the sophomore and senior groups exhibited the more positive attitudes toward children. Statistical treatment of the observed differences, however, showed that none of the t scores obtained from the comparisons of college classification groups were significant at the .05-.01 level of confidence.

TABLE V

t SCORES RESULTING FROM COMPARISONS OF DATA FROM PARI
ACCORDING TO COLLEGE CLASSIFICATION

Classifi- cation	College Classification of Subjects			
	Freshman	Sophomore	Junior	Senior
Freshman	..	..	..	..
Sophomore	1.2633	..	..	..
Junior	1.1260	.3817	..	..
Senior	1.7604	.2488	.7106	..

The CDCI scores were then grouped according to college classification of the subjects. These data are revealed in Table VI.

TABLE VI

DATA OBTAINED FROM GROUPING OF CDCI SCORES
ACCORDING TO COLLEGE CLASSIFICATION

Data for CDCI	College Classification of Subjects			
	Freshman	Sophomore	Junior	Senior
N	41	12	20	18
M	116.76	120.83	121.60	125.61
σ	7.71	5.69	9.46	6.69
$\sum x^2$	2,439.50	387.67	1,788.80	806.24

The CDCI score was obtained by totaling the number of correct responses to the test questions; therefore, the data given in Table VI appear to indicate an increase in knowledge of child development content as the subject progresses in college classification.

In order to determine the significance of observed differences between the mean score recorded in Table VI, the data were treated statistically to obtain t scores. Table VII reveals the results of this analysis.

TABLE VII

t SCORES RESULTING FROM COMPARISONS OF DATA FOR CDCI ACCORDING TO COLLEGE CLASSIFICATION

Classifi- cation	College Classification of Subjects			
	Freshman	Sophomore	Junior	Senior
Freshman	..	..	..	..
Sophomore	1.6680	..	..	..
Junior	2.0952*	.2154	..	..
Senior	4.1549*	1.9670	1.4528	..

*Significant at the .05-.01 level of confidence.

As shown in Table VII, the differences in mean scores between the freshman and sophomore, sophomore and junior, sophomore and senior, and junior and senior groups appeared

to be relatively large; but statistical analysis proved that these differences were not large enough to be significant at the .05-.01 level of confidence. However, significant differences were found between freshman and junior and freshman and senior groups. The t score for the freshman-senior comparison was significant at better than the .01 level of confidence.

Analysis of Data According to Number of Child Development Courses

In order to find possible relationships between the number of child development courses which the subjects had completed and (a) attitudes toward children and (b) knowledge of child development content, subjects were grouped according to the number of child development courses they had completed, and the PARI and CDCI scores were tabulated for each group. Table VIII is a compilation of the data which resulted from the grouping of PARI scores.

Although large standard deviations are apparent in the data given in Table VIII, it is interesting to note that, since low scores for PARI indicate more desirable attitudes, the scores for the subjects who had completed one-half course of child development instruction exhibited markedly less positive attitudes than those who had not taken any child development course. The level of attitude expressed by those having no child development instruction was more desirable than that of any group except those who had completed two courses in child development.

TABLE VIII

DATA OBTAINED FROM GROUPING OF PARI SCORES ACCORDING
TO NUMBER OF CHILD DEVELOPMENT COURSES COMPLETED

Data for PARI	Number of Child Development Courses Completed by Subjects				
	0	$\frac{1}{2}$	1	$1\frac{1}{2}$	2
N	9	25	36	5	18
M	276.89	295.36	283.14	290.60	271.56
σ	43.29	28.11	28.08	28.58	27.89
$\sum x^2$	16,866.87	19,747.76	28,378.32	4,083.42	14,002.38

The values of t were determined by statistically comparing the data from each of the groups, as listed in Table VIII. The results of this analysis are presented in Table IX.

As shown in Table IX, there proved to be very little statistical difference between the PARI scores of the groups whose constituents had completed the following number of child development courses: 0 and 1, 0 and $1\frac{1}{2}$, 0 and 2, $\frac{1}{2}$ and $1\frac{1}{2}$, and 1 and $1\frac{1}{2}$. Some difference was noted between the groups of subjects who had completed 0 and $\frac{1}{2}$, $1\frac{1}{2}$ and $\frac{1}{2}$, 2 and 1, and 2 and $1\frac{1}{2}$ courses in child development. The latter groups, respectively, exhibited the less positive attitudes. The only significant difference in attitudes

TABLE IX

t SCORES RESULTING FROM COMPARISONS OF DATA FOR PARI
ACCORDING TO NUMBER OF CHILD DEVELOPMENT
COURSES COMPLETED

Number of Child Develop- ment Courses	Number of Child Development Courses Completed by Subjects				
	0	$\frac{1}{2}$	1	$1\frac{1}{2}$	2
0	..	..	..	..	..
$\frac{1}{2}$	1.4474	..	..	..	..
1	.5169	1.6424	..	..	..
$1\frac{1}{2}$	.5889	.4486	.5417	..	..
2	.2877	2.6832*	1.4053	1.2838	..

*Significant at the .05-.01 level of confidence.

toward children was found to exist between the group of subjects who had completed one-half course and those who had finished two courses.

In order to study possible relationships between knowledge of child development content and the number of child development courses which the subjects had completed, the CDCI scores were grouped accordingly. The resulting data are submitted in Table X.

The mean CDCI scores, as shown in Table X, appear to indicate a progressive increase in knowledge of child

TABLE X

DATA OBTAINED FROM GROUPING OF CDCI SCORES ACCORDING
TO NUMBER OF CHILD DEVELOPMENT COURSES COMPLETED

Data for CDCI	Number of Child Development Courses Completed by Subjects				
	0	$\frac{1}{2}$	1	$1\frac{1}{2}$	2
N	9	25	36	5	18
M	115.78	115.72	120.31	125.20	125.94
σ	10.22	7.20	6.44	8.69	8.205
$\sum x^2$	939.57	1,295.04	1,494.36	372.80	1,208.88

development content with the completion of additional child development courses. The greatest increases apparently occurred between the completion of one-half course and one course and between the completion of one course and one and one-half courses.

The observed differences between the mean scores for each group of CDCI scores were analyzed for significance. The results of this analysis are presented in Table XI.

Examination of the t values given in Table XI reveals significant differences in knowledge of child development content between the groups whose constituents had completed the following number of courses: 0 and 2, $\frac{1}{2}$ and 1, $\frac{1}{2}$ and $1\frac{1}{2}$, $\frac{1}{2}$ and 2, and 1 and 2. The differences between the $\frac{1}{2}$ and $1\frac{1}{2}$

TABLE XI

t SCORES RESULTING FROM COMPARISONS OF DATA FOR CDCI
ACCORDING TO NUMBER OF CHILD DEVELOPMENT
COURSES COMPLETED

Number of Child Develop- ment Courses	Number of Child Development Courses Completed by Subjects				
	0	$\frac{1}{2}$	1	$1\frac{1}{2}$	2
0	..	..	..	..	..
$\frac{1}{2}$	.0190	..	..	..	..
1	1.6178	2.5642*	..	..	..
$1\frac{1}{2}$	1.6157	3.3736*	1.4818	..	..
2	2.6878*	4.2231*	2.7067*	.1685	..

*Significant at .05-.01 level of confidence.

and the $\frac{1}{2}$ and 2 groups proved significant at better than the .01 level of confidence. No significant differences in knowledge were found to exist between the groups who had completed 0 and $\frac{1}{2}$ courses and $1\frac{1}{2}$ and 2 courses. The observed differences between the groups of subjects who had completed 0 and 1, 0 and $1\frac{1}{2}$, and 1 and $1\frac{1}{2}$ courses in child development were relatively large, but these differences did not prove significant at the accepted level of confidence.

Analysis of Data According to Age of Subjects

In order to analyze possible relationships between the chronological age of the subjects and (a) attitudes toward

children and (b) knowledge of child development content, the subjects were grouped according to their ages. For the purposes of this analysis, the twelve subjects who were twenty-three years of age and older were considered as one group. The data obtained from grouping PARI scores according to the age of the subjects are submitted in Table XII.

TABLE XII
DATA OBTAINED FROM GROUPING OF PARI SCORES
ACCORDING TO AGE

Data for PARI	Age of Subjects					
	18	19	20	21	22	23 +
N	20	24	17	13	7	12
M	292.20	287.46	285.12	285.00	267.29	267.58
σ	30.64	29.62	26.65	25.18	27.50	41.45
$\sum x^2$	18,781.20	21,053.92	12,073.69	8,240.00	5,295.40	20,616.96

As revealed in Table XII, the standard deviations within the groups of PARI scores proved to be large. A casual observation of Table XII may seem to indicate a decline in desirable attitudes with increased maturity; however, since low scores on PARI are intended to represent more positive attitudes toward children, the subjects' attitudes appeared to become progressively better with an increase in maturity.

Data presented in Table XII were analyzed in order to determine the significance of the observed differences in mean PARI scores exhibited by the several groups. A compilation of the \underline{t} scores obtained from such an analysis is offered in Table XIII.

TABLE XIII
 \underline{t} SCORES RESULTING FROM COMPARISONS OF DATA FOR PARI
 ACCORDING TO AGE

Age	Age of Subjects					
	18	19	20	21	22	23
18	..	..	..	..	..	..
19	.5085	..	..	..	..	..
20	.7224	.2532	..	..	..	..
21	.6811	.2469	.0120	..	..	..
22	1.8275	1.5598	1.4128	1.3771	..	..
23/	1.8609	1.6058	1.3368	1.2284	.0156	..

When the mean PARI scores of the 22 and 23/ groups were compared with the groups of younger subjects, there seemed to be relatively large differences; however, these differences were not significant at the .05-.01 level of confidence. In fact, none of the \underline{t} scores obtained from comparisons with each of the age groups under consideration proved to be

statistically significant. These data seem to support the indication given in Tables V and IX to the effect that there seemed to be no significant progression of positive attitudes toward children as the subjects moved through the home economics education curriculum.

The scores obtained from the administration of the CDCI were analyzed for possible relationships between knowledge of child development content and age of the subjects. Table XIV presents the data obtained when CDCI scores were grouped according to age of the subjects.

TABLE XIV
DATA OBTAINED FROM GROUPING OF CDCI SCORES
ACCORDING TO AGE

Data for CDCI	Age of Subjects					
	18	19	20	21	22	23 +
N	20	24	17	13	7	12
M	117.50	116.71	118.18	127.00	126.14	122.08
σ	7.04	8.31	7.16	7.41	3.94	8.05
$\sum x^2$	990.00	1,656.86	870.43	713.00	108.86	776.96

The mean CDCI scores of the age groups show very little difference in knowledge between the groups of subjects who were younger than 21 years of age. At this age level, however,

a large increase in knowledge of child development content appeared to occur. It may be noted that there seemed to be a slight loss of knowledge exhibited after the age of 21; however, the 23 $\frac{1}{2}$ group included several subjects who had been out of school for some years.

The t scores were obtained by statistically comparing the mean CDCI scores for each of the age groups. These scores are shown in Table XV.

TABLE XV
t SCORES RESULTING FROM COMPARISONS OF DATA FOR CDCI
 ACCORDING TO AGE

Age	Age of Subjects					
	18	19	20	21	22	23 $\frac{1}{2}$
18	..	..	..	..	..	..
19	.3291	..	..	..	..	..
20	.2833	.5764	..	..	..	..
21	3.5984*	3.6360*	3.1841*	..	..	..
22	2.9690*	2.8149*	2.6533*	.3385	..	..
23 $\frac{1}{2}$	1.6070	1.7959	1.3265	1.5279	1.1836	..

*Significant at the .05-.01 level of confidence.

Little difference was found between the scores of the 18, 19, and 20 age groups; however, when these three groups were compared with the 21-year-old group, and when the

18- and 19-year-old groups were compared with the 22-year-old group, t values were obtained which proved to be significant at better than the .01 level of confidence. A comparison of the 22- and 20-year-old groups revealed a difference which was significant at only the .05-.01 level of confidence. There appeared to be little difference between the 21- and 22-year-old groups; and, although relatively large differences were noted in the comparisons of each of the other age groups with the 23 $\frac{1}{2}$ group, none of these differences proved significant at the .05-.01 level of confidence.

Analysis of Data According to Marital Status

The results obtained from the administration of the PARI and CDCI were analyzed for possible relationships between marital status and (a) attitudes toward children, (b) knowledge of child development content, and (c) attitudes related to marital conflict. Scores for marital conflict were obtained by totaling the scales of the PARI intended to measure attitudes which might produce conflict in the home. These scores were taken from scale seven, "Marital Conflict"; scale thirteen, "Rejection of the Homemaking Role"; scale seventeen, "Inconsiderateness of the Husband"; and scale nineteen, "Ascendancy of the Mother." The subjects were divided according to marital status; and the PARI, CDCI, and marital conflict scores were analyzed for each of the groupings. The data which was obtained is presented in Table XVI.

TABLE XVI

DATA RESULTING FROM THE GROUPING OF PARI, CDCI, AND MARITAL
CONFLICT SCORES ACCORDING TO MARITAL STATUS

Data	PARI		CDCI		Marital Conflict	
	Marital Status		Marital Status		Marital Status	
	M**	U**	M	U	M	U
N	15	77	15	77	15	77
M	268.40	287.44	121.53	119.69	45.67	48.12
σ	43.48	27.01	10.05	8.14	7.66	7.81
$\sum x^2$	28,360.00	56,183.87	1,515.84	5,096.80	879.35	4,697.61
\bar{t}	2.2011*		.7603		1.1036	

*Significant at the .05-.01 level of confidence.

**"M"--married, "U"--unmarried.

Since one of the subjects was divorced, it seemed inadvisable to group her scores in either the married or the unmarried group; therefore, the subject's scores were not considered. The total number involved in the analysis was ninety-two. It may be relevant to note that the numbers in the groups were markedly unequal. The standard deviations of both groups of PARI scores were very large, but the standard deviation for the smaller group was much greater than that of the unmarried group. Within the limitations previously acknowledged,

a significant difference was found to exist between the groups in relation to attitudes toward children, with the group of married subjects expressing the more positive attitudes. Very little difference appeared to exist between the groups in regard to knowledge of child development content or attitudes related to marital conflict. It may be noted that scores of 20-40 indicate disagreement with attitudes which appear to be related to marital conflict, scores of 40-60 indicate strong agreement with the statements designed to measure marital conflict. Examination of the compiled data for the total group (see Appendix) reveals that fifteen of the ninety-three subjects exhibited scores lower than 40, seven of the subjects had scores of 60 and above, and the remaining seventy-one women expressed scores between 41 and 59.

Analysis of Data According to Educational Level of Subjects' Parents

The scores of the subjects were grouped according to the educational level of the mother and father of each subject. The educational level was designated as the highest level of education which the parent had completed; thus, if the subject's mother had gone to college for one year, the educational level of her mother was classified as "secondary school." Table XVII shows the data which were obtained when the scores for PARI and CDCI were grouped according to educational level of the subjects' mothers.

TABLE XVII

DATA RESULTING FROM GROUPING OF PARI AND CDCI SCORES
ACCORDING TO EDUCATIONAL LEVEL OF SUBJECTS' MOTHERS

Data	PARI			CDCI		
	Educational Level			Educational Level		
	Elementary School	Secondary School	College	Elementary School	Secondary School	College
N	14	51	27	14	51	27
M	275.36	289.57	276.56	123.29	118.94	120.44
σ	30.42	31.04	31.47	6.39	8.97	7.90
$\sum x^2$	12,955.22	49,150.16	26,734.69	571.00	4,104.64	1,686.57

No information was available concerning the education of one subject's mother; therefore, the total number of subjects in this analysis was ninety-two. Examination of the mean scores appears to indicate that the subjects whose mothers graduated only from elementary school expressed more knowledge of child development content and more positive attitudes toward children than was expressed by the subjects whose mothers graduated from secondary school or from college. Of the three groups tested, the subjects whose mothers graduated from secondary school exhibited the least positive attitudes toward children and the least knowledge of child development content.

The observed differences, as revealed in Table XVII, were statistically analyzed for significance. Table XVIII reveals a compilation of the analysis results.

TABLE XVIII

t SCORES OBTAINED FROM COMPARISONS OF THE DATA FOR PARI AND FOR CDCI ACCORDING TO EDUCATIONAL LEVEL OF SUBJECTS' MOTHERS

Edu- cational Level	PARI			CDCI		
	Educational Level			Educational Level		
	Elemen- tary School	Second- ary School	College	Elemen- tary School	Second- ary School	College
Elemen- tary	..	..	..	..	..	..
Second- ary	1.5005	..	..	1.6730	..	..
College	.1141	1.7300	..	1.1264	.7211	..

As shown in Table XVIII, none of the observed differences in attitudes toward children were significant at the .05-.01 level of confidence. Although the standard deviations were large, the groups of subjects whose mothers had graduated only from elementary school expressed the most knowledge of child development content and the most positive attitudes toward children.

The results of the measurements were then grouped according to educational level of the subjects' fathers. Table XIX shows the data obtained from the grouping of PARI and CDCI scores.

TABLE XIX

DATA OBTAINED FROM GROUPING PARI AND CDCI SCORES ACCORDING TO EDUCATIONAL LEVEL OF SUBJECTS' FATHERS

Data	PARI			CDCI		
	Educational Level			Educational Level		
	Elementary School	Secondary School	College	Elementary School	Secondary School	College
N	21	42	25	21	42	25
M	272.52	287.67	287.96	122.86	118.83	119.48
σ	26.64	33.13	29.51	6.95	9.06	8.04
$\sum x^2$	16,603.23	46,103.38	21,776.92	1,013.78	3,449.88	1,616.27

Since no information was available concerning the educational level of five subjects' fathers, the total number of subjects included in this analysis was eighty-eight. The data concerning the educational level of the fathers appeared to indicate similar scores on both the PARI and CDCI for the groups whose fathers finished high school and whose fathers

graduated from college. The subjects whose fathers graduated from elementary school exhibited the most knowledge of child development content and the most positive attitudes toward children.

The data presented in Table XIX were statistically analyzed in order to examine the significance of the observed differences. Table XX shows the results of these calculations.

TABLE XX

t SCORES RESULTING FROM DATA FOR PARI AND CDCI ACCORDING TO EDUCATIONAL LEVEL OF SUBJECTS' FATHERS

Edu- cational Level	PARI			CDCI		
	Educational Level			Educational Level		
	Elemen- tary School	Second- ary School	College	Elemen- tary School	Second- ary School	College
Elemen- tary	..	..	..	..	..	..
Second- ary	1.7677	..	..	1.7598	..	..
College	1.7665	.0355	..	1.4759	.2914	..

Although the data in Table XIX indicated that the group of subjects whose father had only finished elementary school expressed the most positive attitudes toward children and the greatest amount of knowledge of child development content,

the differences, as shown in Table XX, did not prove significant at the .05-.01 level of confidence. Little difference was found to exist in expressed attitudes toward children or knowledge of child development content between the groups of the subjects whose fathers had only graduated from secondary school and those whose fathers had finished college.

Correlation of Knowledge of Child Development
Content and Attitudes toward Children

In order to investigate whether or not an individual's attitudes toward children have any significant relationship to his knowledge of child development content, the PARI and CDCI scores for each of the subjects were analyzed, using the product-moment method of determining correlation as described by Garrett (1). A correlation of 0.5366 was obtained, and the probable error of the correlation was 0.0495. In order to further test the hypothesis that the true correlation was 0.5366, the method of calculating t scores of correlations as recommended by Lindquist (3, pp. 210-212) was followed, and a t score of 60.2300 was obtained. Since this score was significant at better than the .01 level of confidence and since Garrett stated that one may be reasonably sure of some degree of correlation if the coefficient of correlation is at least four times greater than its probable error, it would seem that the coefficient of correlation which was obtained was not due to chance alone.

Garrett (1, p. 342) stated that a correlation of from $\pm .40$ to $\pm .70$ indicates a substantial or marked relationship between the factors under consideration. Since the calculated correlation was more than .50, it would appear that, within the limitations of this study and the instruments which were used, a relationship does exist between an individual's attitudes toward children and his knowledge of child development content.

Summary

The CDCI and the PARI were administered to ninety-three home economics education majors enrolled in North Texas State College. The results of the measurements were tabulated and statistically treated. Such a procedure involved analysis of test items as well as grouping of the scores on the basis of students' (a) college classification, (b) completion of required child development courses, (c) age, and (d) marital status. Scores were also examined to determine (a) any possible relationship between students' attitudes toward children, knowledge of child development content, and the educational level of their parents, and (b) significant relationships between marital status and attitudes related to marital conflict. This procedure resulted in the following:

1. According to CDCI scores, when students were grouped by college classification, significant differences in knowledge of child development content existed only between the freshmen and juniors and the freshmen and seniors.

2. When data for CDCI were grouped according to number of child development courses the subjects had completed, it was apparent that significant differences existed between the groups whose constituents had completed (a) 0 and 2, (b) $\frac{1}{2}$ and 1, (c) $\frac{1}{2}$ and $1\frac{1}{2}$, (d) $\frac{1}{2}$ and 2, and (e) 1 and 2 courses.

3. The CDCI scores differed significantly only between the age groupings whose members were (a) 18 and 21, (b) 19 and 21, (c) 20 and 21, (d) 18 and 22, (e) 19 and 22, and (f) 20 and 22 years of age.

4. Analysis of the percentage of correct responses which were given by the total group to the test questions of the CDCI showed that the least number of correct responses were given to questions which were designed to measure the students' (a) knowledge of authoritative sources of information in child development for the teacher, (b) imagination in improvising children's toys, (c) ability to select and use art materials for the pre-school child, and (d) knowledge of the developmental tasks of childhood.

5. Significant differences in attitudes toward children, as expressed by PARI scores, were found only between the groups of subjects who had completed one-half course in child development and those who had completed two courses, and between the unmarried students and the married students. The latter groups in both comparisons expressed the more positive attitudes. Scores for marital conflict were not found to be

significantly different for married and unmarried students, but a majority of the students in both groups expressed agreement with the statements designed to measure marital conflict.

6. A correlation of 0.5366 was found when attitudes toward children, as expressed by total PARI scores, and knowledge of child development content, as measured by the CDCI, were compared by the product-moment method. The probable error of the correlation was 0.0495. To further test the hypothesis that the true correlation was 0.5366, a t score was calculated. A t value of 60.23 led to the conclusion that the coefficient of correlation which had been obtained was significant.

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CHAPTER V

SUMMARY, FINDINGS, AND IMPLICATIONS

The purpose of this study was to examine possible relationships between knowledge of child development content and attitudes toward children. In addition to this consideration, an attempt was made to explore observable relationships between each of these factors and (a) college classification, (b) number of child development courses completed, (c) age, (d) marital status, and (e) educational level of one's parents.

The "Parent Attitude Research Instrument (PARI)" was used to measure attitudes toward children. Since no adequate instrument was found to examine knowledge of the child development content usually included in secondary homemaking programs, the "Child Development Competency Inventory (CDCI)" was constructed.

The PARI and the CDCI were administered to ninety-three home economics education majors at North Texas State College during the spring semester of 1961. Results were tabulated and total scores for PARI and CDCI were grouped according to each of the factors examined. Scales of the PARI which were intended to measure attitudes related to marital conflict were totaled, and the resulting scores were grouped

according to the marital status of the subjects. Data were analyzed using Fisher's formula for calculating t from small uncorrelated samples. The product-moment method of calculating correlation was used to indicate any relationship between the subjects' attitudes toward children, as expressed by PARI scores, and knowledge of child development content, as measured by the CDCI.

Statistical analysis of the PARI scores showed no consistent pattern of attitude change in relation to (a) college classification, (b) number of child development courses completed, (c) age of subjects, and (d) educational level of the subjects' parents. However, the married students exhibited significantly more positive attitudes toward children than did the unmarried students.

High standard deviations indicate that some of the observable differences within the groups may have been masked. However, the t scores were obtained to indicate how many times scores such as these could have occurred by chance.

Although the differences were not significant at the .05-.01 level of confidence and the standard deviations within the groups were large, raw data from PARI indicated:

1. When subjects were grouped according to college classification, the most positive attitudes toward children were expressed by the sophomore and senior groups.

2. In relation to number of child development courses completed by the subjects, the groups who exhibited the most

positive attitudes toward children were those whose constituents had either completed no child development courses or two such courses. The group who had completed one course in child development expressed the middle level of attitudes for these groupings, and those subjects who were enrolled in child development courses when the measurements were administered expressed the least positive attitudes toward children.

3. A progressive shift toward more positive attitudes toward children seemed to be indicated as the subjects increased in maturity.

4. Very little difference was apparent between the scores of the married and unmarried students in relation to marital conflict scores.

5. Similar attitudes were indicated by the groups of subjects whose mothers had only graduated from elementary school and those whose mothers had finished college, but the group whose mothers' education terminated with secondary school demonstrated less positive attitudes toward children than either of the other groups.

6. The attitudes of the group whose fathers had only finished high school and the group whose fathers had graduated from college appeared to be similar. The group of subjects whose father had only finished elementary school expressed more desirable attitudes toward children than either of the other groups.

Statistical analysis of the data obtained from administration of the CDCI showed significant differences in knowledge of child development content between several of the groups. When the subjects were grouped according to college classification, freshmen and juniors, as well as freshmen and seniors, showed statistically significant differences in knowledge of child development content. When data for CDCI were grouped according to number of child development courses the subjects had completed, it was apparent that differences existed between the groups whose constituents had completed (a) 0 and 2, (b) $\frac{1}{2}$ and 1, (c) $\frac{1}{2}$ and $1\frac{1}{2}$, (d) $\frac{1}{2}$ and 2, and (e) 1 and 2 courses in child development. The CDCI scores were found to differ significantly between the groups whose subjects were (a) 18 and 21, (b) 19 and 21, (c) 20 and 21, (d) 18 and 22, (e) 19 and 22, and (f) 20 and 22 years of age.

Standard deviations for the groups of CDCI scores were fairly large, and although some of the differences which were observed did not prove to be significant at the .05-.01 level of confidence, the raw scores for CDCI indicated the following trends:

1. Knowledge of child development content appeared to progress with higher college classification. The greatest increases in knowledge appeared to come between the freshman and sophomore years and the junior and senior years.

2. Knowledge of child development content seemed to increase as additional courses in child development were

completed. The greatest changes appeared to occur between the completion of $\frac{1}{2}$ and 1 course and 1 and $1\frac{1}{2}$ courses in child development.

3. Increased maturity appeared to be accompanied by increased knowledge of child development content through the age level of 21 years. A sharp increase seemed to occur at the age of 21, and a slight decline was evidenced by the groups of subjects who were 22 and 23 $\frac{1}{2}$ years of age.

4. Very little difference in knowledge of child development content was found to exist between the groups of subjects in relation to marital status.

5. When CDCI scores were considered according to educational level of the subjects' parents, the groups of subjects whose mothers and fathers had only graduated from elementary school expressed the most knowledge of child development content; the groups of subjects whose parents had graduated from college exhibited the next largest amount of knowledge; and the group whose parents' education terminated with graduation from secondary school expressed the least amount of knowledge of child development content.

The PARI and CDCI scores for each of the subjects were compared, using the product-moment method of correlation, and the coefficient of correlation was found to be 0.5366. Thus, within the limitations of this study, it would appear that there is a relationship between one's attitudes toward

children and his knowledge of child development content. This relationship, however, was not apparent in the grouped data.

Although no attempts were made to examine the status of the subjects' attitudes toward children when they first came to college, to compare the attitudes of these subjects with the "normal" population, or to obtain pre-course and post-course scores for individual students, an examination of the grouped data does not show a progressive pattern of change in attitudes toward children as subjects moved through the home economics education curriculum. In fact, attitudes as positive as those expressed by the freshmen were not observable in any other group except the seniors. As previously reported research indicated that attitudes toward children may be improved as a result of one course in college child development or child psychology, it would seem that some procedures might be employed which would result in the demonstration of progressive levels of positive attitudes toward children.

Costin (1) and Zuckerman (2) reported that the unmarried students they tested expressed high scores for marital conflict. The data in this study also indicated high scores for both the married and unmarried students, and the large majority of the subjects expressed agreement with the attitudes related to marital conflict. These data may indicate weaknesses in the scales of the PARI, when used with unmarried

subjects with college education, or they may indicate the need for instruction designed to improve attitudes toward family relations and marriage.

The least desirable attitudes were expressed by students who were enrolled in child development courses at the time of administration of the measurements. It may be of interest to note that the first half of both courses in child development were primarily concerned with the study of prenatal development.

Since the greatest growth in attitude was observed during the last half of the second course in child development and since this course involves participation with children, it would appear that participation with children contributes more to the development of desirable attitudes toward children than does observation of children.

Within the limitations of this study, it was evident that additional courses in child development (a) produced consistent gains in knowledge of child development content and (b) were not directly related to formation of positive attitudes toward children. It would appear, therefore, that it is possible to acquire and recall information without any change in basic attitudes. However, a correlation of 0.5366 was found to exist between attitudes toward children and knowledge of child development content.

Since many of the students in this study will become homemaking teachers, their attitudes may influence the attitudes

of many pupils in the future. Related studies have indicated that attitudes toward children influence one's application of knowledge concerning children; therefore, it appears that an important consideration of child development courses for future teachers should be the development of desirable attitudes toward children and family relations.

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APPENDIX

PARENT ATTITUDE RESEARCH INSTRUMENT (PARI)*

Read each of the statements below and then rate them as follows:

A	a	d	D
strongly agree	mildly agree	mildly disagree	strongly disagree

Indicate your opinion by drawing a circle around the "A" if you strongly agree, around the "a" if you mildly agree, around the "d" if you mildly disagree, and around the "D" if you strongly disagree.

There are no right or wrong answers, so answer according to your own opinion. It is very important to the study that all questions be answered. Many of the statements will seem alike but all are necessary to show slight differences of opinion.

	<u>A</u>	<u>a</u>	<u>d</u>	<u>D</u>
1. Children should be allowed to disagree with their parents if they feel their own ideas are better.	A	a	d	D
2. A good mother should shelter her child from life's little difficulties.	A	a	d	D
3. The home is the only thing that matters to a good mother.	A	a	d	D
4. Some children are just so bad they must be taught to fear adults for their own good.	A	a	d	D
5. Children should realize how much parents have to give up for them.	A	a	d	D
6. You must always keep tight hold of baby during his bath for in a careless moment he might slip.	A	a	d	D
7. People who think they can get along in marriage without arguments just don't know the facts.	A	a	d	D
8. A child will be grateful later on for strict training.	A	a	d	D
9. Children will get on any woman's nerves if she has to be with them all day.	A	a	d	D
10. It's best for the child if he never gets started wondering whether his mother's views are right.	A	a	d	D
11. More parents should teach their children to have unquestioning loyalty to them.	A	a	d	D

PARI--Continued

- | | | | | | |
|-----|--|---|---|---|---|
| 12. | A child should be taught to avoid fighting no matter what happens. | A | a | d | D |
| 13. | One of the worst things about taking care of a home is a woman feels that she can't get out. | A | a | d | D |
| 14. | Parents should adjust to the children some rather than always expecting the children to adjust to the parents. | A | a | d | D |
| 15. | There are so many things a child has to learn in life there is no excuse for him sitting around with time on his hands. | A | a | d | D |
| 16. | If you let children talk about their troubles they end up complaining even more. | A | a | d | D |
| 17. | Mothers would do their job better with the children if fathers were more kind. | A | a | d | D |
| 18. | A young child should be protected from hearing about sex. | A | a | d | D |
| 19. | If a mother doesn't go ahead and make rules for the home the children and husband will get into troubles they don't need to. | A | a | d | D |
| 20. | A mother should make it her business to know everything her children are thinking. | A | a | d | D |
| 21. | Children would be happier and better behaved if parents would show an interest in their affairs. | A | a | d | D |
| 22. | Most children are toilet trained by 15 months of age. | A | a | d | D |
| 23. | There is nothing worse for a young mother than being alone while going through her first experience with a baby. | A | a | d | D |
| 24. | Children should be encouraged to tell their parents about it whenever they feel family rules are unreasonable. | A | a | d | D |
| 25. | A mother should do her best to avoid any disappointment for her child. | A | a | d | D |
| 26. | The women who want lots of parties seldom make good mothers. | A | a | d | D |
| 27. | It is frequently necessary to drive the mischief out of a child before he will behave. | A | a | d | D |
| 28. | A mother must expect to give up her own happiness for that of her child. | A | a | d | D |
| 29. | All young mothers are afraid of their awkwardness in handling and holding the baby. | A | a | d | D |
| 30. | Sometimes it's necessary for a wife to tell off her husband in order to get her rights. | A | a | d | D |

PARI--Continued

- | | | | | | |
|-----|---|---|---|---|---|
| 31. | Strict discipline develops a fine strong character. | A | a | d | D |
| 32. | Mothers very often feel that they can't stand their children a moment longer. | A | a | d | D |
| 33. | A parent should never be made to look wrong in a child's eyes. | A | a | d | D |
| 34. | The child should be taught to revere his parents above all other grown-ups. | A | a | d | D |
| 35. | A child should be taught to always come to his parents or teachers rather than fight when he is in trouble. | A | a | d | D |
| 36. | Having to be with the children all the time gives a woman the feeling her wings have been clipped. | A | a | d | D |
| 37. | Parents must earn the respect of their children by the way they act. | A | a | d | D |
| 38. | Children who don't try hard for success will feel they have missed out on things later on. | A | a | d | D |
| 39. | Parents who start a child talking about his worries don't realize that sometimes it's better to just leave well enough alone. | A | a | d | D |
| 40. | Husbands could do their part if they were less selfish. | A | a | d | D |
| 41. | It is very important that young boys and girls not be allowed to see each other completely undressed. | A | a | d | D |
| 42. | Children and husbands do better when the mother is strong enough to settle most of the problems. | A | a | d | D |
| 43. | A child should never keep a secret from his parents. | A | a | d | D |
| 44. | Laughing at children's jokes and telling children jokes makes things go more smoothly. | A | a | d | D |
| 45. | The sooner a child learns to walk the better he's trained. | A | a | d | D |
| 46. | It isn't fair that a woman has to bear just about all the burden of raising children by herself. | A | a | d | D |
| 47. | A child has a right to his own point of view and ought to be allowed to express it. | A | a | d | D |
| 48. | A child should be protected from jobs which might be too tiring or hard for him. | A | a | d | D |
| 49. | A woman has to choose between having a well run home and hobnobbing around with neighbors and friends. | A | a | d | D |
| 50. | A wise parent will teach a child early just who is boss. | A | a | d | D |

PARI--Continued

- | | | | | | |
|-----|--|---|---|---|---|
| 51. | Few women get the gratitude they deserve for all they have done for their children. | A | a | d | D |
| 52. | Mothers never stop blaming themselves if their babies are injured in accidents. | A | a | d | D |
| 53. | No matter how well a married couple love one another, there are always differences which cause irritation and lead to arguments. | A | a | d | D |
| 54. | Children who are held to firm rules grow up to be the best adults. | A | a | d | D |
| 55. | It's a rare mother who can be sweet and even tempered with her children all day. | A | a | d | D |
| 56. | Children should never learn things outside the home which make them doubt their parents' ideas. | A | a | d | D |
| 57. | A child soon learns that there is no greater wisdom than that of his parents. | A | a | d | D |
| 58. | There is no good excuse for a child hitting another child. | A | a | d | D |
| 59. | Most young mothers are bothered more by the feeling of being shut up in the home than by anything else. | A | a | d | D |
| 60. | Children are too often asked to do all the compromising and adjustment and that is not fair. | A | a | d | D |
| 61. | Parents should teach their children that the way to get ahead is to keep busy and not waste time. | A | a | d | D |
| 62. | Children pester you with all their little upsets if you aren't careful from the first. | A | a | d | D |
| 63. | When a mother doesn't do a good job with children it's probably because the father doesn't do his part around the home. | A | a | d | D |
| 64. | Children who take part in sex play become sex criminals when they grow up. | A | a | d | D |
| 65. | A mother has to do the planning because she is the one who knows what's going on in the home. | A | a | d | D |
| 66. | An alert parent should try to learn all her child's thoughts. | A | a | d | D |
| 67. | Parents who are interested in hearing about their children's parties, dates and fun help them grow up right. | A | a | d | D |
| 68. | The earlier a child is weaned from its emotional ties to its parents the better it will handle its own problems. | A | a | d | D |

PARI--Continued

- | | | | | | |
|-----|---|---|---|---|---|
| 69. | A wise woman will do anything to avoid being by herself before and after a new baby. | A | a | d | D |
| 70. | A child's ideas should be seriously considered in making family decisions. | A | a | d | D |
| 71. | Parents should know better than to allow their children to be exposed to difficult situations. | A | a | d | D |
| 72. | Too many women forget that a mother's place is in the home. | A | a | d | D |
| 73. | Children need some of the natural meanness taken out of them. | A | a | d | D |
| 74. | Children should be more considerate of their mothers since their mothers suffer so much for them. | A | a | d | D |
| 75. | Most mothers are fearful that they may hurt their babies in handling them. | A | a | d | D |
| 76. | There are some things which just can't be settled by a mild discussion. | A | a | d | D |
| 77. | Most children should have more discipline than they get. | A | a | d | D |
| 78. | Raising children is a nerve-wracking job. | A | a | d | D |
| 79. | The child should not question the thinking of his parents. | A | a | d | D |
| 80. | Parents deserve the highest esteem and regard of their children. | A | a | d | D |
| 81. | Children should not be encouraged to box or wrestle because it often leads to trouble or injury. | A | a | d | D |
| 82. | One of the bad things about raising children is that you aren't free enough of the time to do just as you like. | A | a | d | D |
| 83. | As much as is reasonable a parent should try to treat a child as an equal. | A | a | d | D |
| 84. | A child who is "on the go" all the time will most likely be happy. | A | a | d | D |
| 85. | If a child has upset feelings it is best to leave him alone and not make it look serious. | A | a | d | D |
| 86. | If mothers could get their wishes they would most often ask that their husband be more understanding. | A | a | d | D |
| 87. | Sex is one of the greatest problems to be contended with in children. | A | a | d | D |
| 88. | The whole family does fine if the mother puts her shoulders to the wheel and takes charge of things. | A | a | d | D |

89. A mother has a right to know everything going on in her child's life because her child is part of her. A a d D
90. If parents would have fun with their children, the children would be more apt to take their advice. A a d D
91. A mother should make an effort to get her child toilet trained at the earliest possible time. A a d D
92. Most women need more time than they are given to rest up in the home after going through childbirth. A a d D
93. When a child is in trouble he ought to know he won't be punished for talking about it with his parents. A a d D
94. Children should be kept away from all hard jobs which might be discouraging. A a d D
95. A good mother will find enough social life within the family. A a d D
96. It is sometimes necessary for the parents to break the child's will. A a d D
97. Mothers sacrifice almost all their own fun for their children. A a d D
98. A mother's greatest fear is that in a forgetful moment she might let something bad happen to the baby. A a d D
99. It's natural to have quarrels when two people who both have minds of their own get married. A a d D
100. Children are actually happier under strict training. A a d D
101. It's natural for a mother to "blow her top" when children are selfish and demanding. A a d D
102. There is nothing worse than letting a child hear criticisms of his mother. A a d D
103. Loyalty to parents comes before anything else. A a d D
104. Most parents prefer a quiet child to a "scrappy" one. A a d D
105. A young mother feels "held down" because there are lots of things she wants to do while she is young. A a d D
106. There is no reason parents should have their own way all the time, any more than that children should have their own way all the time. A a d D
107. The sooner a child learns that a wasted minute is lost forever the better off he will be. A a d D

108. The trouble with giving attention to children's problems is they usually just make up a lot of stories to keep you interested. A a d D
109. Few men realize that a mother needs some fun in life too. A a d D
110. There is usually something wrong with a child who asks a lot of questions about sex. A a d D
111. A married woman knows that she will have to take the lead in family matters. A a d D
112. It is a mother's duty to make sure she knows her child's innermost thoughts. A a d D
113. When you do things together, children feel close to you and can talk easier. A a d D
114. A child should be weaned away from the bottle or breast as soon as possible. A a d D
115. Taking care of a small baby is something that no woman should be expected to do all by herself. A a d D

- A. Name _____
- B. Number of college courses in child development completed:
(circle one) 0 1/2 1 1 1/2 2
- C. Age _____
- D. Classification: (circle one) Fr. Soph. Jr. Sr. Grad.
- E. Education of father: (circle level completed)
Grade School High School College
- F. Education of mother: (circle level completed)
Grade School High School College
- G. What kind of work does your father do? _____
- H. Are you married? _____ When? _____
month day year
- I. Ages and sex of children:

*Earl Schaefer and Richard Q. Bell, "Development of a Parent Attitude Research Instrument," Child Development, XXIX (September, 1958), 339-361.

905 Welch Street
Denton, Texas
November 22, 1960

(To Supervisors)

I am beginning a graduate problem at North Texas State College which attempts to define the competencies needed for the successful teaching of child development at the secondary level. Mrs. Ruth Huey has given me permission to contact you for a qualified judgment on this matter.

Attached is a checksheet of items which may or may not be essential to the homemaking teacher in the area of child development. I would appreciate your reaction to the list and the addition of any other factors which have proved helpful in your experience.

Your judgment is valuable to me, and I am very grateful for your cooperation.

Would you please return the marked checksheet at your earliest convenience.

Cordially yours,

(Mrs.) Karen Pritchett

2 enclosures:

Checksheet
Self-addressed envelope

905 Welch Street
Denton, Texas
November 22, 1960

(To Teachers)

I am beginning a graduate problem at North Texas State College which attempts to define the competencies needed for the successful teaching of child development at the secondary level. Mrs. Marie Healey gave me your name as one of the teachers in Area V who is well qualified to give a judgment on this matter.

Attached is a checksheet of items which may or may not be essential to the homemaking teacher in the area of child development. I would appreciate your reaction to the list and the addition of any other factors which have proved helpful in your experience.

Your judgment is valuable to me, and I am very grateful for your cooperation.

Would you please return the marked checksheet by December 9, in the enclosed envelope.

Cordially yours,

(Mrs.) Karen Pritchett

2 enclosures:

Checksheet
Self-addressed envelope

INFORMATION FOR STUDENTS

This is to inform you about the general nature of the instruments you are about to complete. The PARI was designed to measure attitudes toward children and family life, and the CDCI was designed to measure understanding of child development content utilized in high school homemaking programs. The results of neither part of the measurements will be used by any teacher for the purpose of determining grades in any courses. Your response is needed for research purposes only.

When completing the CDCI, do not become discouraged if you find a large number of questions which you are unable to answer. These items are to be given to the Home Economics Education majors at North Texas State College, and not even the most advanced students are expected to make a perfect score.

Do your very best, and work as rapidly as you can. "Guess" only if you can do so intelligently. If you know nothing about the question, indicate this by making a question mark (?) in the space provided for the answer.

This study will not be possible without your cooperation, and I want to express my sincere appreciation for your time and effort.

Thank you,

Karen Pritchett

KEY TO CORRECT RESPONSES OF CDCI

I.a	1 2 3	IX.	2 3	XIX.	1 2 3	XXIX.	3 4
b	1 3	X.	3	XX.	3	1. 2. 3. 4.	T T T F
c	1 3 4	XI.		XXI.	2	5. 6. 7. 8.	T T T T
II.	1 3 4	XII.	2 4	XXII.	3	9. 10. 11. 12.	F T F F
III.	1 4	XIII.	2	XXIII.	4	13. 14. 15. 16.	T F T F
IV.	2 3 4	XIV.	1 3	XXIV.	4	17. 18. 19. 20.	F F F T
V.	1 2 4	XV.		XXV.	3 4	21. 22. 23. 24.	F T T F
VI.	3	XVI.	2	XXVI.	2 4	25. 26. 27. 28.	F T T T
VII.	3	XVII.	1	XXVII.	1 4	29. 30. 31. 32.	F T F T
VIII.	1 2 3 4	XVIII.	3	XXVIII.	1 2	33. 34. 35. 36.	F F T T

INDIVIDUAL SCORE SHEET

Name _____ Classification _____
 Educational Level of Mother _____ Father _____ Marital Status _____
 Age _____ No. of Child Development Courses _____

PARI TABULATION*

Instructions: Enter the number 4, 3, 2, or 1 in each column according to whether the response was Strong Agreement, Mild Agreement, Mild Disagreement, or Strong Disagreement, respectively. Scale Total is merely the sum of entries across rows. Total PARI Score is the sum of the scale totals. Total Marital Conflict Score is the sum of scales 7, 13, 17, and 19.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Scale Total	Marital Conflict	Scale Title	
																											Encouraging Verbalization
																											Posturing Dependency
																											Seclusion of Mother
																											Breaking the Will
																											Martyrdom
																											Fear of Harming the Baby
																											Marital Conflict
																											Strictness
																											Irritability
																											Excluding Outside Influences
																											Deification
																											Suppression of Aggression
																											Rejection of Homemaking Role
																											Equalitarianism
																											Approval of Activity
																											Avoidance of Communication
																											Inconsiderateness of Husband
																											Suppression of Sexuality
																											Ascendancy of the Mother
																											Intrusiveness
																											Comradeship and Sharing
																											Acceleration of Development
																											Dependency of the Mother
TOTAL PARI SCORE _____														TOTAL MARITAL CONFLICT SCORE _____													

CDCI SCORE _____

*Earl S. Schaefer and Richard Q. Bell, "Informal Notes on the Use of PARI," unpublished notes, U. S. Department of Health, Education, and Welfare, National Institutes of Health, Bethesda, Maryland, 1959.

DATA OBTAINED FROM ADMINISTRATION
OF THE CDCI AND PARI

Subject's Number (1)	PARI Score (2)	CDCI Score (3)	Age (4)	College Classification* (5)	Number of Child Development Courses (6)	Education of Mother** (7)	Education of Father** (8)	Marital Status*** (9)	Marital Conflict Score (10)
1	311	121	27	F	1 1/2	H	H	M	46
2	232	126	27	J	1	H	H	M	41
3	253	130	18	F	1	C	C	S	42
4	343	117	19	F	1 1/2	H	H	S	52
5	300	111	18	F	0	H	H	S	52
6	261	116	20	So	1	C	C	S	48
7	299	113	20	J	1 1/2	H	G	S	54
8	276	122	21	J	1	H	H	S	42
9	303	118	19	J	1	C	C	S	44
10	292	132	21	J	1	H	H	S	52
11	281	144	21	J	2	H	H	S	53
12	304	118	18	F	1 1/2	H	H	S	58
13	321	113	20	So	1	C	C	S	58
14	287	123	18	F	1 1/2	C	C	S	40
15	265	103	19	F	1 1/2	H	H	S	48
16	265	128	19	So	1	C	H	S	44
17	310	124	22	J	1 1/2	G	G	S	57
18	258	119	19	F	1 1/2	H	H	S	41
19	193	137	27	Sr	2	C	G	M	37
20	245	123	22	J	1	G	H	M	48
21	303	104	18	F	1 1/2	C	C	S	54
22	233	135	24	Sr	2	H	H	M	36
23	324	126	21	Sr	1 1/2	C	C	S	50
24	279	124	20	So	1	H	H	S	44
25	257	126	19	J	1	H	C	S	45
26	266	123	18	F	1 1/2	C	C	S	43
27	288	118	21	J	1	H	H	S	41
28	334	113	18	F	1 1/2	H	H	S	60
29	309	115	21	J	1	C	C	S	60
30	286	122	24	Sr	2	C	C	S	47
31	279	117	20	So	1	H	H	S	53
32	291	117	19	F	1	H	H	S	42
33	294	115	19	F	1 1/2	H	G	S	50
34	311	103	19	F	1 1/2	H	H	S	53

DATA FROM CDCI AND PARI--Continued

Subject's Number (1)	PARI Score (2)	CDCI Score (3)	Age (4)	College Classification* (5)	Number of Child Development Courses (6)	Education of Mother** (7)	Education of Father** (8)	Marital Status*** (9)	Marital Conflict Score (10)
35	266	127	22	Sr	2	H	H	S	42
36	278	119	20	J	2	H	H	S	34
37	301	111	23	Gr	1	H	G	S	43
38	247	115	20	J	1	H	G	S	34
39	319	106	19	F	1	H	H	S	49
40	330	117	20	So	1	H	H	S	59
41	304	116	18	F	1	H	H	S	43
42	304	121	20	F	1	H	H	S	55
43	262	122	19	F	1	H	H	S	44
44	309	112	39	F	0	G	G	S	48
45	291	127	18	Sr	2	G	G	M	51
46	251	131	21	F	1	G	G	S	37
47	283	117	42	Sr	2	H	C	S	44
48	329	112	18	Sr	2	G	H	M	57
49	326	111	18	F	2	H	H	S	64
50	342	100	20	F	0	H	C	M	59
51	212	130	32	J	0	H	H	M	38
52	291	123	18	So	0	G	C	M	55
53	289	120	22	F	2	C	C	S	45
54	275	110	18	Sr	2	H	H	S	44
55	258	120	19	F	1	G	G	S	39
56	242	129	22	F	1	H	H	S	47
57	264	117	18	Sr	1	C	C	S	36
58	250	126	21	F	2	C	C	S	41
59	249	117	18	Sr	0	C	C	M	38
60	320	115	19	F	1	H	H	S	48
61	331	116	24	F	0	H	C	M	59
62	250	117	19	Sr	1	H	C	M	33
63	285	115	20	J	2	H	H	S	43
64	314	112	19	J	1	H	C	S	63
65	266	118	38	So	2	H	G	S	39
66	293	125	20	Gr	2	G	G	M	49
67	230	127	22	Sr	0	G	G	S	46
68	336	106	19	F	1	H	C	S	60
69	252	133	21	J	2	C	C	S	54

DATA FROM CDCI AND PARI--Continued

Subject's Number (1)	PARI Score (2)	CDCI Score (3)	Age (4)	College Classification* (5)	Number of Child Development Courses (6)	Education of Mother** (7)	Education of Father** (8)	Marital Status*** (9)	Marital Conflict Score (10)
70	268	128	21	Sr	2	H	G	S	47
71	317	125	19	F	1	C	C	S	60
72	265	121	18	F	1	C	C	S	44
73	259	124	20	So	1	H	G	S	44
74	280	120	20	Sr	2	H	H	S	51
75	319	118	21	J	1	H	H	S	57
76	317	124	21	Sr	2	H	H	S	56
77	287	132	19	F	1	H	H	S	53
78	290	128	18	F	1	C	C	S	55
79	276	111	20	J	1	H	H	S	46
80	278	120	19	So	1	H	C	S	44
81	312	99	19	F	0	C	H	S	55
82	271	126	20	J	1	H	H	S	39
83	295	115	19	F	1	H	H	S	46
84	259	127	19	So	1	G	G	S	39
85	289	133	22	Sr	2	G	G	M	58
86	278	134	21	J	1	H	G	S	32
87	243	133	20	Sr	1	G	G	S	44
88	358	106	18	F	1	H	H	S	62
89	305	123	18	F	1	C	C	S	52
90	296	117	18	F	1	C	C	S	45
91	226	117	19	F	1	H	H	S	31
92	254	120	24	F	0	C	C	D	38
93	279	122	19	So	1	H	H	S	48

*"F"--freshman, "So"--sophomore, "J"--junior, "Sr"--senior, "Gr"--graduate.

**"G"--completed elementary school, "H"--completed high school, "C"--completed college.

***"M"--married, "S"--single, "D"--divorced.

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