DEVELOPMENT AND VALIDATION OF AN OBJECTIVE INSTRUMENT MEASURING INTERPERSONAL REASONING IN CHILDREN AND ADOLESCENT PEER GROUPS

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CHAPTER I

Introduction

Many factors are involved in the way children and adolescents interact in the groups in which they participate. Several of these factors are: (a) the environmental situation; (b) the social norms of the group; and (c) the social skills, status, and social reasoning of the individuals within the group (Hartup, 1983).

Shantz (1983) hypothesized that the way people think and reason about others has a major effect on their interactions. For example, a child who sees the leader's role in a group as being the one to tell everyone else what to do is likely to behave differently in that position than one who perceives a leader as someone who is an organizer of group goals (Selman, 1980).

Children's reasoning about interpersonal relationships, social conventions, and peer group organization becomes more complex and differentiated with age (Hartup, 1980; Neiderman, 1978; Selman, 1980). There are organizational differences in children's and adolescents' peer groups of different ages, and these differences can be understood in terms of a developmental progression (Neiderman, 1978).

Theoretical Overview

The social and behavioral sciences are rich with knowledge of how society and individuals interact. Theories attempting to explain the nature of human behavior are as old as the beginnings of civilization and are as current as the latest journal issues (Aubrey, 1980). One theoretical area revisited by current philosophers and research

scientists, which has resulted in a merger between social psychology and developmental psychology, is social-cognitive developmental theory or social cognition (Muuss, 1982).

The term social cognition refers to knowledge of the social world through an understanding of self and others (Shantz, 1975). Mead (1962) saw peer relationships as a vehicle where one learned about self and others, and where knowledge developed from the experience of viewing the world from the perspective of another. The ability to take the perspective of another has been described as a developmental task proceeding on a continuum from egocentrism to differentiated stages of perspective taking (Baldwin, 1906; Piaget, 1965; Selman, 1980).

Social-cognitive developmental theory has several basic theoretical assumptions about reasoning in peer groups. One assumption is children actively seek to order and organize the social phenomena in their world (Selman, 1980). The outcome of this ordering and organizing is the personal construction of social knowledge in a hierarchy where higher more complex ways of reasoning develop from the reorganization of simpler, less complex constructs (Selman, 1980). Other assumptions are the presence of qualitatively different stages of social understanding with an invariant sequence from simpler to more complex stages (Selman, 1980). Although environmental and physiological factors may alter the rate of progression from stage to stage, Selman (1980) assumed the hierarchial sequence does not vary from person to person or from culture to culture. He also assumed that there are structural similarities in patterns of thinking across social-cognitive domains. Some theorists (Kurdek, 1978; Piaget, 1965; Selman, 1977) have suggested these

structural similar patterns of thinking across domains are patterns of the underlying developmental construct of perspective taking.

This theoretical viewpoint raises many questions including: (a) What is that invariant developmental sequence of reasoning, which includes peer groups and other domains; (b) how can one go about assessing a person's social development; (c) what is the relationship between social reasoning and behavior in groups; and (d) what does this information have to offer practitioners in education and counseling fields?

Statement of the Problem

Current researchers have described similar structural developmental sequences in the way children, adolescents, and adults acquire social knowledge in a wide range of situational domains. These domains are (a) moral development (Damon, 1977; Kohlberg, 1969), (b) children's conceptions of friendships (Bigelow, 1977; Furman & Bierman, 1983; Hayes, 1978; Perl, 1983; Youniss, 1980), (c) children's conceptions of conflicting emotions (Harter, 1983), (d) social conventions (Turiel, 1978), (e) parent-child relationships (Damon, 1977; Selman, 1980), and (f) peer group interactions (Damon, 1977; Selman, 1980; Wagener, 1983).

Although current researchers are reporting similarities in describing developmental sequences in the way children, adolescents and adults acquire social knowledge, there has been little research showing a relationship between interpersonal reasoning and social behavior (Gerson & Damon, 1978; Shantz, 1975). Some writers attribute this to (a) inappropriate measures used to assess different constructs of perspective taking (Enright & Lapsley, 1980; Kurdek, 1980); (b) the

rigidness of simple stage theory (Lickona, 1978; Loevinger, 1978; Rest, 1979); (c) the continued use of hypothetical story dilemmas to predict real-life behavior (Brown & Herrnstein, 1975; Damon, 1977; Lickona, 1978); (d) problems with the subjective administration and scoring of hypothetical stories in clinical interviews (Page & Bode, 1980; Rest, 1979); and (e) a lack of data for testing theory (Rest, 1979; Shantz, 1975).

Most measures of social-cognitive development require an individually administered interview format using hypothetical story dilemmas as a stimulus for interview questions to assess the underlying logic or reasoning about issues. An advantage of the individual interview is the examiner can gather sufficient information on which to base scoring and can question content responses for an understanding of patterns of judgement (Damon, 1977; Selman, 1980).

Disadvantages of the individual interview format include the time-consuming nature of administration on a one-person one-interviewer basis. The scoring of responses requires training or expertise with a particular stage theory. Because of the uniqueness of each interview, the data is not strictly comparable from one person to another. Furthermore, there may be scorer bias in the coding of responses and interviewer bias in the slant of spontaneous leading questions (Page & Bode, 1980; Rest, 1979). Kurtines and Grief (1974) have argued that problems with the scoring and administration of the clinical interview may discourage independent research.

The focus of the present study is to answer the following question: Can a standardized objective instrument be developed which will be a

valid, reliable measure of childrens' and adolescents' stages of conceptualization of their peer group relationships?

Significance of the Study

For research purposes an instrument measuring interpersonal reasoning in peer groups is needed which can be objectively scored, standardized, and group administered. Such an instrument must be reliable and have construct validity.

The purpose of this investigation is to develop a paper-and-pencil, multiple choice measure of developmental stages of interpersonal reasoning about peer groups which is objectively scored and which can be administered to groups of children and adolescents. Such a measure would facilitate research in the field and would avoid most of the administrative and scoring problems associated with the interview-format measures. A second purpose of this investigation is to compare the measure developed to another measure of interpersonal reasoning and to the selected variables of age, sex, socioeconomic status, IQ scores, and peer status.

This study will add information to the field of social-cognitive assessments by providing an instrument which may be used as a screening test of interpersonal understanding about peer group interactions. The instrument could be used by researchers in the social-cognitive field and by counselors, teachers, and group leaders to test hypotheses concerning the relationship between developmental stages of interpersonal understanding and behavior in groups.

Definition of Terms

Social cognition focuses on the processes by which children, adolescents, and adults gain knowledge about their social world and

their reasoning processes in social matters (e.g. how people think about other people and themselves) (Muuss, 1980).

Social perspective-taking is a process by which a person is able to take the perspective of another and relate it to his or her own perspective (Cooney & Selman, 1980).

Egocentrism refers to the lack of differentiation between self and others, which causes people to attribute their own thoughts, viewpoints, and attitudes to others (Shantz, 1983).

Domain is defined as a group of behaviors, all of which are related to a hypothetical construct (Ghiselli, Campbell, & Zedeck, 1981).

Structural developmental theory refers to the structure of invariant sequences of social understanding which are qualitatively different and can be described as universal patterns of thinking about a certain domain or experience with an emphasis on the structure of thought as opposed to the content of thought (Selman, 1980).

Social conventions are concepts formed about the social groups and social systems in which people interact. These are behavioral uniformities that constitute knowledge shared by individuals involved in on-going interactions (Turiel, 1978).

Research Questions

The procedure of validation of the instrument was accomplished by investigating the following research questions:

1. Is there a relationship between the individual items on the instrument and the total score?
2. Is there a relationship between scores on an individually administered interview measuring interpersonal reasoning and scores on the objective instrument?

3. Are the within-scale correlations greater than the correlation between the total score on the instrument and mental ability?
4. Is there a relationship between age and scores on the instrument?
5. Is there a relationship between sex and scores on the instrument?
6. Is there a relationship between socioeconomic level and scores on the instrument?
7. Is there a relationship between peer status and scores on the instrument?

Assumptions of the Study

Underlying the study are two assumptions: (a) the items on the instrument are representative of sequential, developmental stages of reasoning about peer group interactions, and (b) participants in the study will choose items on the instrument representing their highest level of understanding.

Limitations

Sampling will be limited to school districts in Oklahoma and further limited to classroom clusters within those districts. The instrument can be generalized only to that population. Validity samples were chosen using nonrandom procedures and generalizations must be made with great caution.

This is a cross-sectional study sampling groups of children and adolescents at three grade levels to investigate developmental stages of reasoning. There are limitations in generalizing developmental growth patterns to individuals from investigations of different groups at different points in time.

Organization of the Study

Chapter I includes basic assumptions underlying social-cognitive developmental theory. These assumptions provide a theoretical framework for the construction of a measuring device to assess children's and adolescents' reasoning about their peer group interactions. Studies of developmental, age related sequences of children's and adolescents' reasoning in a variety of social domains are discussed in Chapter II. Also included in Chapter II are descriptions of methods of assessing social knowledge used in relationship and longitudinal studies. The construction of a paper-and-pencil, multiple-choice measure of interpersonal reasoning about peer groups, the results of a pilot study, the subsequent revisions of the instrument, and the final draft of the measure used in this study are described in Chapter III. Chapter IV includes an analysis of the data from the reliability and validity studies. Findings and conclusions from this study and implications for further research are presented in Chapter V.

CHAPTER II

Review of Literature

Introduction

The literature on measurement of developmental concepts of interpersonal reasoning about selected peer group issues is reviewed in this chapter. First, developmental studies of age-related changes in children's and adolescents' thinking relative to their peers and peer-group issues are reviewed. This section deals with describing peer group issues in stage-related sequences of development. A review of research examining the relationship between reasoning and social adjustment follows. The effects of demographic variables on measures of interpersonal reasoning are also reviewed. Measurement procedures for assessing interpersonal reasoning are discussed in the final section.

Developmental Studies

According to Wagener (1983) the organization of children's groups becomes increasingly differentiated with age. Several authors have described similar levels of thinking about group membership across ages.

Neiderman (1978) investigated third, sixth, ninth, and twelfth, grade students' understanding of group membership in classroom, family, and peer situations using open-ended interview questions about hypothetical dilemmas. Age-related trends were found to be associated with four levels of understanding. At level one, the group was seen as a collection of persons with different views requiring regulation. Level two thinking tended to focus on the legitimacy of individual

differences rather than the larger conception of the group as a whole. Level three thinking focused upon the group as an organization. Members were seen as playing reciprocal roles to fulfill group purposes. Level four thought focused upon the group as a changing organization open to a variety of influences.

Selman (1980) cites similar levels of interpersonal reasoning about peer group formation, cohesion, and conformity. Five age-related stages were conceived from responses to individual interviews using hypothetical dilemmas about peer group issues. A description of these stages follows (Jacquette, 1979):

Stage 0: Physical connections (approximately ages 3-6). At this stage, the reason for joining or forming a group is egocentric, such as to gain rewarding objects or activities. Individual loyalty to the group is described in terms of physical connections to the activity.

Stage 1: Unilateral relationships (approximately ages 5-11). The child believes at this stage that groups get together because individuals want to do a certain activity. Interaction is unilateral in that it benefits the self. Groups are formed for material reasons and by asking people to join. Group members stick together because individuals like the same activities and because of simple social niceties and good manners. Loyalty is unilateral respect for some authority in the group. Conformity has to do with actions rather than thoughts. Members do the same things because of some direct material benefit. The group shows the individual how to act, or the individual copies the group.

Stage 2: Bilateral partnerships (approximately ages 7-14). At this stage, groups are seen as a series of bilateral partnerships or friendships. Individuals join groups to make more friendships, to avoid

feeling lonely, and to promote self-interests by cooperating with each other. Groups stay together through bilateral friendships and coordinated teamwork. Loyalty is seen as fair and honest relationships between members, as opposed to the later stage of the individual's contribution to the total community. Conforming is seen as a way to make or keep friendships and to make a good impression on others.

Stage 3: Homogeneous community (approximately ages 12-adult). At this stage, members are motivated to join groups to seek prestige, to be part of a larger whole, and to share feelings and personal problems. Joining a group is seen as the incorporation of an individual into a total system, which might involve the member's conforming to the psychological traits and conventions of the group. The group is seen as a total system held together by common values and beliefs, and similar interests of the membership. Trust in each other and confidentiality become values which are justified in maintaining the sense of community. Loyalty is viewed as a kind of "all for one" concept.

Stage 4: Pluralistic organization (approximately ages 17-adult). Stage 4 groups are composed of members with a variety of interests and individual differences who form and join groups to fulfill basic human needs of attachment and identification, and to realize a collective sense of purpose. Members naturally promote their own interests, but are aware that individualism may need to be modified to accomplish collective goals.

In summary, children's and adolescents' reasons for forming and remaining in groups seem to change with age. Younger children may not fully grasp the idea of the group as a social unit and tend to perceive group membership as a means of satisfying individual desires. It is not

until the latter part of childhood and beginning adolescence that the group is viewed as an organization of individuals working toward a common goal.

Social Rules

Several authors have described children's and adolescent's knowledge of social rules on a developmental continuum. Piaget (1965) investigated the development of moral reasoning with children in relation to rules, intentionality, and justice.

To study children's understanding of rules, Piaget (1965) questioned children about the rules in the game of marbles. Four stages emerged in the development of children's knowledge about the rules in social games. These stages, similar to stages of cognitive development, are described by Wadsworth (1979):

Motor Stage (approximately ages 0-2). At this stage, the child does not seem to be aware of rules. Marbles were played with as physical objects with no awareness of a game in the social sense.

Egocentric Stage (approximately ages 2-5). At this stage the child is aware of the game, but imitates the actions of others in egocentric, isolated play rather than cooperative play. Rules are viewed as fixed and respect for them has a one-way egocentric quality.

Stage of Cooperation (approximately ages 7-11). At this stage, children begin to understand the significance of rules for game playing. Rules are no longer seen as fixed, but they can be changed. Children begin to try to win while following the rules of fair play.

Codification of Rules (approximately ages 11+). Rules are viewed as fixed by mutual agreement and changeable by mutual agreement.

From individual interviews, Selman (1980) defined five stages of children and adolescent's concepts of group rules and norms. At approximately ages 3-6, rules are confused with punishment and with little awareness of the functions of rules to interactions. In the next stage (approximately ages 5-11) rules give specific information on what to do. The reasons for obeying rules are concrete (e.g. to avoid being hurt, to avoid being punished, or to stop fights). Around ages 7-14, group rules serve as a way to organize different wants into cooperative actions and to coordinate relations between members. Approximately after the age of twelve, rules are generalized expectations or shared norms, which are seen as important for maintaining homogeneity of values among group members and bind the group together as a social whole. At the highest stage, approximately ages 17-adult, rules are seen as providing the group with structure to help the group achieve its shared goals.

In a study with 56 boys and girls, ages 4-9, Damon (1977) investigated children's knowledge of social conventions and social-moral rules. Responses to hypothetical verbal interviews were categorized into four levels of social rules knowledge. At level 0, the child respects only those rules which conform to his or her own desires. Rules are seen as specific directives, which the child may or may not choose to follow. No rule is seen as stable or uniform across situations, nor does any rule apply similarly to all people. At level 1, there is an appreciation of the stability and constancy of certain rules that go beyond specific situations and are independent of personal desires. The meaning of social rules is understood through the demands of actual authority figures, parents, or peer groups. Rules are

respected to avoid unpleasant consequences. Rules are enforced by specific authority figures. At level 2, the child begins to see the exceptions to rules. Some rules are seen as less mandatory than others. At level 3, children begin to understand the organizational function of rules. Everyone has an equal responsibility for upholding a social rule, for the good of the group. Although some rules may be considered more important than others, it is believed at this stage that all rules should be rigidly enforced.

Damon's (1977) level 0 and 1 are very similar to Selman's (1980) stage 0 and stage 1 in that rules are followed for egocentric reasons followed by the unilateral demands of authortiy figures. Damon's (1977) level 2 and 3 appears much like Selman's stage 2 where pragmatic equality is important as reasons for rules with less consideration for individual differences.

Turiel (1978) described age-related developmental sequences in children's conceptions of social rules. Seven levels of social conventional concepts were identified from interviews with 110 children, adolescents, and adults ranging in age from six to twenty-five. Turiel (1978) believed that each stage of affirming a social convention was followed by a re-evaluation of the previous way of thinking which resulted in a stage of negation of that social convention.

At stage one (approximately ages 6-7) social conventions are related to physical traits or behavior. Stage two (approximately ages 8-9) empirical uniformity is no longer a sufficient reason for judging behavior. At stage three (approximately ages 10-11) social conventions are based on concrete rules and expectations of authority. Stage four (approximately ages 12-13) is a negation of stage three thinking in that

social conventions are viewed as only expectations which can be changed or rejected. At stage five (approximately ages 14-16) social convention is viewed as the norm, and regulations are necessary for participating in the social system, which has fixed roles, and a hierarchial organization. Stage six (approximately ages 17-18) previous thinking about conventions are re-evaluated and uniformity is no longer regarded as necessary for the social system to function. Stage five conventions are then viewed as superflous social roles and societies' expectations. Stage six thinking resembles Erikson's (1968) description of a successful completion of the identity vs. role confusion stage.

Kohlberg (1969) used responses to hypothetical moral dilemmas to expand Piaget's (1965) stages of moral judgment to include three levels and six age-related stages. Kohlberg (1976) suggested considering the three levels as three different types of relationships between the self and society's rules and expectations. From this perspective, preconventional reasoning is one where rules and social expectations are something external to the self. In stage 1, rules are followed to avoid punishment and because of the superior power of authorities. At stage 2, rules are followed to serve one's own needs or interests with the recognition that others have interests also. With this recognition of other's needs and interests comes the idea of fairness and equal exchange of favors.

At the conventional level the self has identified with or internalized the rules and expectations of others, especially those of authority. At stage 3, rules are followed in an effort to live up to other's expectations, to support stereotypical good behavior. Rules are upheld to maintain the social system at stage 4.

At the postconventional level, the self has become differentiated from the rules and expectations of others, and values are defined in terms of self-chosen principles. At stage 5, rules are considered relative to the group and are upheld because of social commitment freely entered upon with others. At stage 6, rules are based on self-chosen ethical principles for the good of all.

Kohlberg (1976) believed the preconventional level is the level of reasoning for most children under age nine, some adolescents, and many adolescent and adult criminal offenders. The conventional level is the level of reasoning used by most adolescents and adults. The postconventional level is reached by a minority of adults, usually after the age of twenty.

Overall, children's and adolescents' conceptions of group rules and social norms seem to change with age from a unilateral perspective where rules are handed down by authority to a more differentiated view of rules being situation-specific and changeable to meet the needs of the group made up of individuals.

Decision Making

Groups have to decide who does what and how members will share the efforts and rewards of the group endeavor. Making decisions and solving problems are issues found in most group interactions. Several authors have described age-related developmental stages of decision-making in children and adolescent's peer groups.

In an effort to extend Kohlberg's (1976) moral stages to include younger children's reasoning, Damon (1977) studied positive justice reasoning expressed by 50 children ages four through eight. All

children were given hypothetical positive justice interviews using a story dealing with the fair distribution of rewards earned.

A distinct sequence of six age-related levels of justice emerged from this study of children's reasoning. These levels were: 0-A, where choices were based on the child's wish that the act occur; 0-B, where choices were justified on the basis of external, observable realities from a self-serving view; 1-A, where fairness was equated with strict equality in action, regardless of merit; 1-B, where choices included reciprocity in actions with notions of merit and deserving; 2-A, where choices included compromise and recognizing special needs; and 2-B, where choices included the coordination of equality and reciprocity with the claims of various persons and the demands of the specific situation.

Power and Reimer (1978) studied methods of resolving conflicts in groups with 65 students attending an alternative high school based on Kohlberg's (1976) idea of the "just community." Data was gathered from transcripts of weekly community meetings, interviews with individual students, and observations of student-faculty interactions to form the stage-like structure of conflict resolution in groups. These stages were coded similar to Kohlberg's (1976) stages of moral development. There were no stages of conflict resolution observed below stage 2. At stage 2, conflicts were resolved through reciprocal concrete exchanges between individuals. At stage 3, conflicts were resolved by appealing to shared expectations, such as trust and caring, which define how one can be a good member of a group. Stage 4 reasoning included the resolution of conflicts by referring to one's role obligations or responsibilities for the activities of the group as a whole.

Selman (1980) described children and adolescents' conceptions of decision making in groups in five age-related stages. At stage 0, decisions are arrived at through an egocentric inclination toward a particular action without finding out what others would like to do or considering different interests. Decision making is a unilateral process of individual ideas and wants often resulting in a stalemate at stage 1. The child at this level sees the need for good manners and simple niceties from individuals as ways to make a decision or to work together.

At stage 2, agreement is important. The method for agreement is usually voting, and accepting the idea with the most votes. Ones own interests are linked with others' interest, and a reciprocal exchange of favors often settles arguments. At stage 3, consensus provides a method of making decisions based on unanimous accord, which preserves the social unit. At stage 4, all interests or points of view are equally represented when possible and compromise is necessary when one overall approach is necessary.

Again, as with other group issues, there are many similarities in the developmental studies, with younger children using egocentric means of decision making followed by older children preferring pragmatic equality in resolving problems, to adolescents' understanding of situation-specific exceptions and individual differences.

Group Leadership

Hartup (1983) states:

> Group members are seldom equivalent in social power; one or more always emerge with greater power than others. Since every group possesses a unique normative structure, it follows that

social power will accrue to individual members on different bases in different groups (p. 148).

Leadership and authority are issues children and adolescents confront in their groups. Several authors have interviewed children and adolescents about the issues of group leadership and authority, and have found age-related differences in their understanding of these issues.

Damon (1977) believed the key issues in studying child-to-child authority relations are the reasons for thinking of someone as an authority and the rationale for choosing to obey the authority. With these questions in mind, Damon interviewed 50 children, ages 4-7, using hypothetical story dilemmas focusing on an authority relationship between peers and between an adult and a child.

Damon described six authority levels as a series of unfolding mental confusions. At level 0-A, authority's commands are confused with self's desires. The child may change his or her own desires to conform with those of the authority figure, or may distort the authority figure's commands, so they conform to the desires of the child. Elkind (1980) refers to this as one of the assumptive realities of childhood: Children sometimes alter the facts to fit their hypotheses rather than alter the hypotheses.

At level 0-B, physical attributes--size, sex, dress, etc. are given as descriptive reasons for persons to be in command and are not linked logically to the function of authority. Commands are followed as a means of achieving self desires or to avoid actions contrary to self-desires. At level 1-A, authorities are thought to have attributes (physical strength or social power) which enable them to enforce their commands. Respect for the authority figure's social or physical power

is given as the reason for obeying. At level 1-B, reasons for following an authority are special talents and abilities attributed to the authority figure's ability to accomplish changes. This is more than just physical power at the previous stage. Reciprocity is evident at this stage where one obeys the authority figure for an equal exchange of favors from the authority figure. At level 2-A, authorities are thought to have experience or prior training related in some way to the process of leadership. Respect for this leadership ability includes the belief that the authority figure has a concern for the welfare of the group. At 2-B, situational factors contribute to the reason a person is thought of as an authority. A person may have attributes for leadership in one situation but not in another. Leadership is seen as being adopted temporarily for the welfare of the group.

Damon (1977) found level 0-A reasoning only at age four in the sample; level 0-B, was found primarily at ages four, five, and six; level 1-A, at ages four through seven; level 1-B, at ages six through nine; and levels 2-A and 2-B at ages eight and nine. Children's knowledge about peer authority seemed to develop in much the same way as does their knowledge about adult authority with one exception. Children before the age of seven tended to score higher on the adult authority dilemma, and children ages seven and older tended to score higher on the peer authority dilemma.

Selman (1980) cited five stages of interpersonal reasoning about group leadership. At stage 0 (approximately ages 3-6) leadership is viewed as physical power over others. Around ages 5-11 (stage 1) leaders are seen as being the best and knowing the most. The leader is seen as a teacher rather than an organizer; the one who tells everyone

what to do. Fair and equal treatment becomes the focus of leadership at stage 2 (approximately ages 7-14). Leaders are seen as organizers of the group so that each person gets a fair deal. At this level, the leader is viewed as someone who is sensitive to other's feelings and promotes good relations within the group along with being the authority. At stage 3 (approximately age 12 and above) the leader is someone with the ability to bring the group together as a whole; who reflects the concerns of the group rather than directing the group. At stage 4, (usually past age 17) leadership is seen as abstract roles created by the organizational demands separate from the leader's own personality or self-interest.

In summary, the stages of age-related changes in children's and adolescents' reasoning about peer group issues were derived, for the most part, from individual interviews using responses to hypothetical dilemmas to classify thinking by stages. There seem to be similar patterns across ages and across issues of children's and adolescents' conceptualizations of group organization.

Relationship Studies

The relationship between children's and adolescents' thinking about peer group interactions and their actual interactions or social adjustment has been investigated in a limited number of studies. Damon (1977) investigated the relationship between reasoning about peer authorities using hypothetical story dilemmas and reasoning about team captains in a real-life setting. A total of 16 boys and girls at each of the ages, four, six, eight, and ten participated in the study. Groups of four, two boys and two girls, formed a "basketball team" whose objective was to score as many points as possible within a time limit,

to elect a captain, and to evaluate the captain as a leader with reasons for obeying. Responses to the real-life interview were scored using the six levels of authority reasoning, and age was closely associated with both the hypothetical dilemma reasoning (r=.77, p<.001) and the real-life reasoning level (r=.76, p<.001). Also, there was a strong correlation between the hypothetical interview levels of reasoning and the levels of reasoning in the real-life situation (r=.80, p<.001). There was little difference in children's thinking about leaders using a hypothetical story as a stimulus for responses and levels of thinking about electing a captain and working in a group in real life.

Children's scores on the hypothetical authority interview were inversely related to their tendencies to choose themselves as captains. Children scoring at lower authority levels were more likely than those scoring at the higher levels to choose themselves as captains. This supports the theoretical construct of the egocentric nature of self-desires at the 0-A theoretical stage level.

There were differences noted in strategies chosen for "winning the game" (p. 225). A total of 72 percent of the younger children chose the take-turns strategy, everyone on the team had an equal opportunity to shoot baskets, while 69 percent of the older children chose the best-shooter strategy, the best shooters take more turns. Older children seemed to have some notion of individual differences being an asset to accomplishing the group's goals; whereas, the younger children chose a strategy demonstrating fairness and equality.

Enright and Sutterfield (1980) found a relationship between moral judgement and social behavior with verbal ability partialled out, with 40 first grade students who were individually interviewed using Dammon's

(1977) positive judgement measure. Altmann's (1974) Sequence Sampling method was used as an observation technique. Observers scanned the room or playground in a left-to-right manner, and whenever a child interrupted any other child, the behavior was recorded on a standardized sheet noting, among other things, whether either child was considered successful in the interaction. Moral judgement was found to be negatively related to the frequency of unsuccessful outcomes and positively related to the proportion of successful outcomes and being approached by others in social contexts. However, the variance attributed to moral judgement ranged from seven percent to 14 percent.

Using three measures of moral judgement, Damon's (1977) positive justice stories, Selman's (1980) individual story dilemmas, and Piaget's (1965) forced-choice stories dealing with intentionality, Kurdek (1980) found a positive association between two moral judgement measures and parent-rated behaviors in 28 children in grades one and three. Attempts to score Selman's (1980) dilemmas according to the structural levels were unsuccessful because children were not interviewed in enough detail for reliable classification. A total of 40 percent of the variance in parent-rated adjustment scores could be accounted for by scores on the Positive Justice Interview (Damon, 1977), while reasoning levels on the Piagetian tasks accounted for 27 percent of the variance in the relationship between parent-ratings of adjustment and reasoning.

In a study with 44 boys attending public school and 17 boys with behavioral and learning problems attending a special school, Selman (1980) investigated the relationship between scores on the interpersonal reasoning interview about peer group organizations and teachers' perceptions of strengths and ratings of negative social adjustment

problems. The results indicated no significant relationship for either group between teachers' ratings of children's social adjustment problems and levels of reasoning. However, there was a significant positive relationship between teachers' perceptions of students strengths and interpersonal reasoning scores about group relationships. The students that teachers rated as having high levels of strengths also scored higher on interpersonal understanding.

Selman (1980) studied the interpersonal reasoning levels of a matched sample of 21 boys, ages 6-12, attending a special school for children with behavioral and learning problems and 21 boys attending public school. The two groups were matched on the basis of age, sex, race, socioeconomic status, and intelligence range. A generally lower level of expressed interpersonal understanding was found with the group in the special school when compared to the matched group in public school (t=2.82, p<.02).

Geiger and Turiel (1983) studied the relationship between social judgement and social behavior of junior high school students in a one-year longitudinal study. Social reasoning was measured using a social convention interview which consisted of three hypothetical stories dealing with social conventions. Responses to the interview were coded according to Turiel's (1978) seven levels of social-conventional concepts.

A group of 22 eighth-grade students selected as having a record of disruptive behavior and 22 randomly selected eighth graders who were considered not disruptive were administered the social-convention interview (Turiel, 1978). Results from the interviews indicated that a greater proportion of disruptive students scored lower than level five

(15 disruptive compared to 3 nondisruptive). Level five in Turiel's stages has to do with maintaining the rules of the social system.

One year later 20 of the disruptive students were re-administered the social convention interview. On the basis of counselor records, seven were still considered disruptive, and 13 were classified as nondisruptive. On the second testing, of the 13 students no longer considered disruptive, seven had attained stage five reasoning, while five showed stage level change. Of the seven students still considered disruptive, none had attained stage five reasoning. The researchers concluded that students in junior high who had reached stage five reasoning on Turiel's (1978) social convention interview were less likely to be labeled disruptive.

The relationship between moral reasoning and delinquent behavior has been investigated. Hains and Miller (1980) investigated moral development of 96 pre-adolescents and adolescents categorized as delinquents and nondelinquents using the Defining Issues Test (Rest, 1979). A significant difference was found between delinquents and nondelinquents on moral judgement with delinquents lagging behind nondelinquents in moral development. However with another group, Hains and Ryan (1983) found no differences between 10 to 11 and 14 to 15 year old male delinquents and nondelinquents on two group-administered measures of moral judgement with IQ partialled out. Rest's (1979) Defining Issues Test and the Prosocial Reasoning Task (Eisenberg-Berg, 1979) were read to the participants.

In summary, individually administered measures of social development have, in some instances, shown a relationship to behavior in peer groups. Where the hypothetical stories in the measurement instrument are closely

related to the behavior being measured, as with Damon's (1977) research on peer group authority, and Geiger and Turiel's (1978) research with behavior and junior high students' conceptions of social norms, results have been more likely to show a relationship. Less related have been measures of interpersonal reasoning and teachers' ratings of students' strengths and weaknesses. Other factors may be involved in the relationships including verbal ability. In studies comparing the level of moral reasoning to delinquent and nondelinquent behavior, intelligence was found to be a factor contributing to the relationship.

Peer Status

Another area that has been investigated is the association between levels of interpersonal understanding and peer status. Hartup (1983) described status as the extent to which a child is thought to be a worthy or valuable member of a group. Leadership, social power, and prestige are terms referring to group status.

Selman (1980) investigated the relationship between 44 boy's, (ages 6-12) stage-level scores on an interpersonal understanding interview and peer sociometric ratings. He reported that positive peer sociometric ratings did not correlate significantly with interpersonal understanding stages. However, negative judgements by peers significantly correlated inversely with increasing levels of interpersonal understanding. Selman interpreted this to mean that those children who showed low levels of interpersonal understanding were generally rated poorly by peers. Children with adequate levels of expressed interpersonal conceptions might be liked or disliked by peers. Selman states "an adequate or 'normal' level of interpersonal understanding was viewed as a necessary

but by no means sufficient condition for positive peer evaluation." (p. 200)

Kurdek and Krile (1982) investigated the relationship between interpersonal understanding and peer group acceptance with children in grades three through eight, using a group administration of Selman's filmstrip story dilemmas. A total of 313 children participated in the study. Developmental trends were noted in children's written responses to interview questions. Peer acceptance was measured by eliciting positive and negative nominations for best friend, playmate, free-time partner, and workmate. Children with favored peer status had high levels of interpersonal understanding, and mutual friends were more similar on interpersonal understanding. Older children's peer acceptance was more closely linked to level of interpersonal understanding than younger children.

In some cases, level of reasoning may be related to peer status; however, other variables may be contributing to the relationship. Achievement is typically found to be associated with status in school, and researchers need to be cautious when interpreting relationships where ability and/or achievement in school have not been considered as part of the peer status variance (Asher, 1983). This caution is especially appropriate to studies where the measurement includes written responses as in the Kurdek and Krile (1982) study.

Demographic Variables

IQ Scores

Harris (1970) found that IQ correlated with higher scores on moral maturity measured in individual interviews using story-pairs similar to those used by Piaget (1965). When IQ was controlled, Hains and Ryan

(1983) found no differences in scores between groups of delinquents and nondelinquents on a group administered objective measure of moral judgement (Rest, 1979).

Damon (1977) found a strong association between levels of children's reasoning about justice issues and levels of logical reasoning measured by Piagetian tasks. The correlations ranged between .76 and .88.

Sex

Selman (1980) used a matched-pairs comparison of 46 girls and 46 boys matched on the basis of age, race, and social class to investigate the possibility of sex differences in interpersonal understanding. No significant difference was found between the two groups (t=1.49, p=.20). Younger girls tended to score higher than younger boys on interpersonal reasoning measures; however, this difference did not continue for older children.

Kurdek and Krile (1982) in investigating the relationship between peer acceptance and interpersonal understanding in children in grades three through eight, found girls had higher interpersonal understanding scores than boys as measured by written responses to social dilemmas

Enright, Colby, and McMullan (1977) found no sex differences in pre- and post-tests of an intervention study using an individual measure of interpersonal reasoning (Selman, 1980). Enright, Franklin, and Manheim (1980) found no sex differences in the mean scores of kindergarten, second, and fourth grade children on a paired-comparisons measure of distributive justice (Damon, 1977). In a similar study of first, third, and fifth grade students, there was not a significant main effect for sex. Also, in a cross-cultural study with first, third, and

fifth grade children from Kinshasa, Africa, a significant main effect was not found for sex on measures of distributive justice (Damon, 1977).

Damon found no sex differences in children, ages 4-9, and their levels of positive justice and authority reasoning. Academically gifted female high school students scored higher than academically gifted male high school students on a group administered objective measure of moral judgement (Tan-Williams & Gutteridge, 1981).

Socioeconomic status

In a study with children, ages 7-14, Selman (1980) found that children of working-class parents generally expressed lower levels of interpersonal understanding on an individually administered interview of social reasoning up until about age eleven. After age eleven, this study indicated lower-class children's reasoning tended to match that of their middle-class peers.

Enright, Enright, Manheim, and Harris (1980) investigated the relationship between social class and the distributive justice development of kindergarten and third grade white children. Distributive justice was measured using a paired-comparison, standardized, objective test, which was individually administered to each child (Enright, Franklin, & Manheim, 1980). With verbal ability partialled out, a significant relationship was found between distributive justice reasoning and social class. Lower-class children tended to score lower than middle-class children on the measure of distributive justice.

In a similar study with black kindergarten and third grade children, when verbal ability was used as the covariate, a significant main effect was found for social class. Lower-class children scored

lower than middle-class children on the measure of distributive justice reasoning.

In summary, IQ scores and logical reasoning appear to be related to measures of social cognition. The results from these studies are mixed concerning sex differences on measures of interpersonal reasoning. There is some indication that girls score higher than boys in some situations. Younger middle-class children seem to score higher on social reasoning tasks than younger lower-class children; however, there is some indication this trend does not continue past middle childhood.

Longitudinal Studies

Campbell (1984) has stated that research studies must be longitudinal in order to measure developmental changes. However, most of the research on children's and adolescents' reasoning relative to peer group interactions have been cross-sectional studies where inferences have been made about developmental sequential changes.

Over a one-year period, Damon (1977) studied the developmental nature of children's reasoning about peer authority figures with 36 children, ages 6-10. The results indicated that 22 percent scored at the same level, 72 percent had higher peer authority scores in year 2 than in year 1, and six percent had lower scores on the peer authority dilemmas during year 2 than during year 1.

Selman (1980) reported interpersonal understanding scores obtained from 40 children over a five-year interval at three time periods. From time 1 to time 3, no one remained at the same stage or regressed, seven moved up a fraction of a stage, and 33 moved up one stage or more. The study indicated it takes approximately four to five years to move from

stage 2 to stage 3, and less time for children to move from stage 1 to stage 2.

Measures of Interpersonal Reasoning

Most measures of interpersonal reasoning are semi-structured individual interviews about hypothetical story dilemmas (Damon, 1977; Kohlberg, 1969; Selman, 1980; Turiel, 1978). Responses are scored according to theoretical stage levels of development. Reliability is measured by inter-rater agreement on stage-level responses (Isaac & Michael, 1971).

An advantage to the individual interview is that spontaneous content responses can be further explored to understand the child's underlying structure of reasoning (Selman, 1981). Filmstrips and pictures have been used with the individual interview to enhance younger children's understanding of the dilemmas (Enright, Franklin, & Manheim, 1980; Selman, 1980). Criticism of this type of measurement are interviewer bias and the time-consuming nature of scoring responses. Another disadvantage to the individually administered interview for research purposes is the inability to measure large numbers of people at one time. Some researchers have attempted group measurement by obtaining written responses to questions about hypothetical stories (Kurdek & Krile, 1982). This provides for standardized questions; however, responses are often difficult to score because of a lack of data relevant to theoretical structure (Selman, 1981). Another criticism of the individual interview format is the task requires verbal production by the child, and stage-level scores may be confounded by verbal abilities (Rest, 1979).

Enright, Franklin, and Manheim (1980) developed a standardized, individually administered measure of distributive justice using paired-comparison pictures of stage-level responses to dilemmas, which could be objectively scored. Internal consistency reliabilities reported for stages were: 0-A, .61; 0-B, .51; 1-A, .79; 1-B, .35; and 2-A, .64.

In the moral reasoning domain, several group-administered, objectively scored measures have been developed. Maitland and Goldman's (1974) Moral Judgement Scale, Page and Bode's (1980) Ethical Reasoning Inventory, and Rest's (1979) Defining Issues Test begin with hypothetical moral dilemmas, and subjects are asked to rate issues or choose from alternatives representing different stages of reasoning.

Although these recognition tasks offer much to researchers wanting to collect a large amount of data in a short time, Gibbs, Widaman, and Colby (1983) have argued that recognition measures and spontaneous production measures cannot be considered to assess the same construct. Rest (1979) has proposed that people prefer statements at stages higher than the stages they can spontaneously produce. A particular type of thinking seems to be evident developmentally first in a preference task, next in a paraphrasing for comprehension task, and later in a spontaneous production task. Rest believes children tend to choose the highest stage at which they are capable of understanding, and then verbally producing that understanding comes later.

Factors in Instrumentation

Based on Enright and Lapsley's (1980) review of the literature, several factors need to be considered when constructing an instrument to measure the developing process of social reasoning in peer groups. Because the process of social reasoning in peer groups is a social-

cognitive construct, the measure should assess thinking or reasoning about peer group interactions. The instrument should include issues found previously to be related to the situational domain being assessed. The issues of formation, cohesion-loyalty, conformity, rules-norms, decision-making, leadership, and termination have been found to be related to interpersonal reasoning in peer groups (Cooney & Selman, 1980). Because such an instrument is measuring a developing process, it should provide means to distinguish between levels or stages of reasoning according to theory.

Ghiselli, Campbell, and Zedeck (1981) described domain sampling as a process of defining a domain, developing a series of items from that definition, and selecting the best sample of items to satisfy the definition. Selecting the best sample of items requires an estimation of the reliability from intercorrelations among the items on the instrument.

Sechrest (1984) reported that construct validity is established by showing that a measure is related in a systematic way to other measures and performances as would be expected from the theoretical nature of the construct. Enright and Lapsley (1980) indicate that stage levels should increase with age to reflect the developmental nature of the construct of social-cognitive development.

Convergent validity, according to Sechrest (1984), represents the proposition that a measure ought to correlate with other measures of the same construct. Divergent validity is demonstrated by showing that measures do not correlate with other measures or variables with which they should not correlate. Enright and Lapsley (1980) report that

measures of social-cognitive development should have higher within-scale correlations than correlations between the scale and general intelligence.

Summary

Children's and adolescents' reasons for forming and remaining in groups, their conceptions of group rules and decision making strategies, and their perceptions of group leaders seem to change with age. Younger children may not fully grasp the idea of the group as a social unit and tend to perceive group membership as a means of satisfying individual desires. It is not until the latter part of childhood and beginning adolescence that the group is viewed as an organization of individuals working toward a common goal.

Children's and adolescents' conceptions of group rules and social norms seem to change with age from a unilateral perspective where rules are handed down by authority to a more differentiated view of rules being situation-specific and changeable to meet the needs of the group made up of individuals.

Younger children tend to use egocentric means of decision making followed by older children preferring pragmatic equality in resolving problems, while adolescents seem to have an understanding of situation-specific exceptions and individual differences deserving merit in decision making. Leaders are viewed by younger children as authorities with expert power, followed by an understanding of leadership roles created by organizational demands.

Individually administered measures of social development have, in some instances, shown a relationship to behavior in peer groups where the hypothetical stories in the measurement instrument are closely

related to the behavior being measured. Less related have been measures of interpersonal reasoning and teachers' ratings of students' strengths and weaknesses. Other factors may be involved in the relationships including verbal ability. In studies comparing the level of moral reasoning to delinquent and nondelinquent behavior, intelligence was found to be a factor contributing to the relationship.

In some cases, level of reasoning may be related to peer status; however, other variables may be contributing to the relationship. IQ scores and logical reasoning appear to be related to measures of social cognition. The results from these studies are mixed concerning sex differences on measures of interpersonal reasoning. There is some indication that girls score higher than boys in some situations. Younger middle-class children seem to score higher on social reasoning tasks than younger lower-class children; however, there is some indication this trend does not continue past middle childhood.

CHAPTER III

Methodology and Design

Introduction

This study is composed of three phases. Phase one consists of the development of a multiple-choice, paper-and-pencil instrument to measure developmental stages of reasoning about peer group relations and organization. Phase two includes a pilot study to check the reliability and validity of the instrument and to further refine the instrument. Phase three included the validation of the revised instrument with students from elementary, junior high, and high school levels from five geographical regions in Oklahoma.

Instrument Development

The instrument was developed in two phases. The original instrument was composed of 14 incomplete sentences created from the issues described by Cooney and Selman (1980) as being most relevant to children's interpersonal understanding of peer-group relations. These peer-group issues were: formation, cohesion/loyalty, conformity, rules and norms, decision-making, leadership, and termination. (See Appendix B for a copy of the instrument.)

Incomplete sentences were written to elicit open-ended responses on each issue. The number of incomplete sentence stubs selected for each issue was determined from a list of mandatory open-ended probes previously used in individual interview assessment in this domain (Jaquette, 1979).

Issues	Number of Sentence Stubs
Formation	3
Cohesion-loyalty	1
Conformity	2
Rules-norms	2
Decision-making	2
Leadership	2
Termination	2

Background information on age, sex, and grade level in school was obtained from respondents. Directions for taking the instrument were: Complete the following sentences with the first thing that comes to your mind and everything you think of while writing that down. These incomplete sentences are about people getting together in groups. The words group, team, and club can mean the same thing in your responses.

Instrument Design

The instrument was designed to measure children's and adolescents' reasoning about peer group organization on a developmental continuum of sequential hierarchial stages (Selman, 1980). Conceptions of peer group relations is the overall score which is obtained by adding the ranked stage value of multiple-choice items endorsed as best completing a sentence. Total scores were converted to mean stage scores by dividing the total score by the number of items. Mean stage scores can be rounded off to stage scores using a conversion table. (See Appendix A)

Sample

The incomplete sentence inventory was completed by two sample groups. Sample one consisted of 30 students (ages 9-17) enrolled in a summer computer-aided instruction program in one Oklahoma community.

The following background information was obtained from the instructor: (a) socioeconomic status (10% upper SES, 80% middle SES, 10% lower SES); (b) cultural (7% Oriental, 10% Native American, 83% Caucasian); (c) sex (16 boys and 14 girls); and (d) educational instructional level (10% accelerated, 20% learning disabled, 3 % handicapped (deaf), 67% average).

An additional 20 people, ages six to approximately age 40 from two predominately rural geographical regions in Oklahoma, completed the inventory. The inventory was administered orally to the younger participants, and their responses were recorded verbatim. This sample consisted of 15 males and five females from middle to lower socioeconomic levels. Four of the respondents were Black and 16 were Caucasian.

Procedure

Responses to the incomplete sentence blanks were scored using stage level conceptions of peer group organization (Selman, 1979). An item pool was constructed of responses to each incomplete sentence. Responses were categorized according to the following developmental stages of social cognition about peer group organization: (0) physical connections, (1) unilateral relationships, (2) bilateral partnerships, (3) homogeneous community, and (4) pluralistic organization.

Some responses were not scorable due to lack of information on which to rank a response to a stage of development. These responses were included in the non-scorable category of the item pool. Responses were also entered into the item pool by age of the respondent.

Multiple-choice Instrumentation

The second part of test construction consisted of selecting developmental stage level responses from the item pool to be included in a multiple-choice instrument. This instrument was called Form A (See Appendix C) and consisted of the 14 sentence stubs from the sentence-completion instrument followed by a five-item multiple-choice response. Each response was representative of each of the five developmental stage categories.

Because of the minimum number of responses in the lowest and highest stage categories, it was necessary in some instances for the author to write an item. Examples from the literature of responses to individually administered interviews of peer group relations provided this information (Cooney & Selman, 1980; Jaquette, 1979; Selman,1980).

In order to keep vocabulary consistent with elementary reading levels, some vocabulary words were changed in responses selected for the instrument. A readability score of fourth grade on the completed Form A was obtained using the Dale-Chall readability formula (Hunnicutt & Iverson, 1958).

Background information was obtained in the following areas: (a) grade, (b) school, (c) age, (d) sex, and (e) father's and mother's occupations. Directions for taking the instrument were: Please mark the answer that you believe best completes the following sentences.

There were five possible responses for each item. Responses were arranged in random order with the exception of randomly placing stage 0 (physical connections) responses within the first three choices. Based on the literature of placement of selection items, lower stage ideas were introduced early in the list of items, so less advanced students

could identify their own ideas and be less likely to project their thinking to higher stage items (Rest, 1979).

Form B was constructed as an alternate form of the instrument to be used with high school students. (See Appendix D) There was some indication from respondents to Form A that the stage 0 items might sound silly to older students and would consequently alter the validity of the instrument.

Sentence-completion responses made by older respondents were selected from the item pool to be included in Form B. Vocabulary words were left verbatim, and stage 0 responses were omitted. Form B consisted of the same fourteen sentence stubs used in Form A with each sentence stub followed by a four-item multiple-choice response set. Each of the four-item choices represented the developmental stages of: (a) unilateral relations, (b) bilateral partnerships, (c) homogeneous community, and (d) pluralistic organization. Responses were arranged in random order. Scoring was the same as for Form A with a total score being calculated from the sum of the ranks selected for each item.

Using the Dale-Chall readability formula (Hunnicutt & Iverson, 1958) a readability score of fifth grade was calculated for Form B. Directions for taking Form B were: Please mark the answer you believe best completes the following sentences. Mark only one answer.

Pilot Study

A pilot study was undertaken to check the reliability and validity of the instruments. A total of 76 students, ages 8-18, from a rural school district in Oklahoma participated in the pilot study in August, 1984. Four profiles were incomplete and were removed from the sample. There were 37 boys and 35 girls in the remaining sample.

Both Form A and Form B were administered to all participants by teachers at three educational levels including: (a) elementary (combined third and fourth grade self-contained classroom, N=18); (b) junior high (eighth-grade English class, N=28); and (c) high school (tenth-grade history class, N=26). Special directions were given to the teacher of the elementary class for introducing the concept of peer group relations and for reading the instrument. (See Appendix E) Instructions were read to the junior high and high school classes; however, individual items were not read aloud. Students were not required to put their names on the instruments.

Reliability

Using Cronbach's Alpha Coefficient (Cronbach, 1970) a measure of the internal consistency of test items, a reliability coefficient of .71 was obtained on Form A. Individual item/total correlations ranged from .30 to .68. (See Table 1) An internal reliability coefficient of .68 was obtained on Form B with individual item/total correlations ranging from .24 to .60 (See Table 2).

To select the most reliable sample of items to measure the hypothetical domain of interpersonal reasoning about peer group relations, items from Form A and Form B having the highest item/total correlations were selected to make up a revised instrument known as Form C. (See Appendix F) An item analysis of Form C indicated an internal relibility coefficient of .76 with individual item/total correlations from .32 to .67 (See table 3).

Interrater reliability was assessed in term of exact agreement on stage rankings of items in the instrument. There was 71 percent agreement on the stage level ranks.

Table 1

Item Analysis (Form A)

Item	Std. Dev.	Corr. (Total)
1	1.337	0.443**
2	0.981	0.272*
3	1.283	0.548**
4	1.097	0.360**
5	1.357	0.427**
6	1.332	0.444**
7	1.228	0.503**
8	1.505	0.675**
9	1.165	0.449**
10	1.313	0.449**
11	1.273	0.506**
12	1.394	0.533*
13	1.095	0.301**
14	1.444	0.451**

**$p < .01$

*$p < .05$

Table 2

Item Analysis (Form B)

Item	Std. Dev.	Corr. (Total)
1	0.911	0.445**
2	0.963	0.502**
3	0.958	0.582**
4	0.731	0.260*
5	0.790	0.416**
6	1.120	0.574**
7	1.110	0.374**
8	1.136	0.483**
9	1.079	0.578**
10	0.971	0.387**
11	1.168	0.596**
12	1.066	0.382*
13	0.947	0.240**
14	1.085	0.312**

**$p < .01$

*$p < .05$

Table 3

Item Analysis (Form C)

Item	Std. Dev.	Corr. (Total)
1	1.337	0.367**
2	0.963	0.568**
3	0.958	0.443**
4	1.097	0.453**
5	1.357	0.433**
6	1.120	0.615**
7	1.228	0.518**
8	1.505	0.666**
9	1.079	0.544**
10	1.313	0.494**
11	1.168	0.510**
12	1.394	0.496**
13	1.095	0.315**
14	1.444	0.524**

**$p<.01$

Validity

The average scores for the three educational levels measured in the pilot study are listed in Table 4. The average total scores on Form C for the elementary, junior high, and high school groups were 25.8, 34.7, and 40.5, respectively. A Pearson correlation coefficient of .56 ($p<.001$) was obtained which indicated a significant positive relationship between students' total scores on Form C and their age. A total of 31 percent of the variance in the total scores can be attributed to differences in ages of the students. The developmental reasoning stages obtained by students of different ages are presented in Table 5. Stage level scores tended to increase with increased age.

The relationship between scores on the instrument and sex of the respondent was analyzed using the biserial correlation coefficient. A correlation coefficient of -.37 ($p<.001$) indicated a significant negative relationship between total scores and sex of the respondents. Fourteen percent of the variance in the total scores can be attributed to the sex of the respondent. Girls tended to score higher than boys in the pilot sample. The number of boys and girls scoring at each stage level of development is reported in Table 6.

Procedure and Sample Selection

Three samples of students from five geographical regions in Oklahoma participated in this study. Characteristics of the samples are shown in Table 7. There were a total of 420 students in three grade levels, fifth (N=147), eighth, (N=119), and eleventh, (N=154). A summary table of the age levels represented in this study is presented in Table 8.

Table 4

Average Total, Mean Stage, and Stage Scores by Grade

Grade	N	Average Total	Mean Stage	Stage
Elementary				
(Ages 7-10)	18	25.8	1.84	2[a]
Jr. High				
(Ages 11-14)	28	34.7	2.48	2(3)
High School				
(Ages 15-18)	26	40.5	2.89	3

[a] Major Stage (Minor Stage)

Table 5

Number of Students Scoring at Each Developmental Reasoning Stage Across Age

	Age											
	7	8	9	10	11	12	13	14	15	16	17	18
Stage[a]												
Stage 0 Physical Connections												
Stage 1 Unilateral Relations								1			1	
Stage 1(2) Unilateral Relations (Bilateral Partnerships)	1	1										
Stage 2(1) Bilateral Partnerships (Unilateral Relations)	1		2				2					
Stage 2 Bilateral Partnerships		4	4	1		1	3	1	1	1	1	
Stage 2(3) Bilateral Partnerships (Homogeneous Community)		1	2			1	1		1	1		
Stage 3(2) Homogeneous Community (Bilateral Partnerships)			1		1	1	5	1	2			
Stage 3 Homogeneous Community							6	3	10		1	1
Stage 3(4) Homogeneous Community (Pluralistic Organization)								1	3	1		
Stage 4(3) Pluralistic Organization (Homogeneous Community)										1	1	
Stage 4 Pluralistic Organization												

[a]Major Stage (Minor stage).

Table 6

Number of Boys and Girls Scoring at Each Developmental Reasoning Stage

Stage[a]	Boys	Girls
State 0 - Physical Connections		
Stage 1 - Unilateral Relations	2	
Stage 1(2) - Unilateral Relations (Bilateral Partnerships)	1	1
Stage 2(1) - Bilateral Partnerships (Unilateral Relations)	4	1
Stage 2 - Bilateral Partnerships	12	5
Stage 2(3) - Bilateral Partnerships (Homogeneous Community)	4	3
Stage 3(2) - Homogeneous Community (Bilateral Partnerships)	5	6
Stage 3 - Homogeneous Community	7	13
Stage 3(4) - Homogeneous Community (Pluralistic Organization)	2	4
Stage 4 - Pluralistic Organization		2

[a]Major Stage (Minor Stage)

Table 7

Characteristics of Samples in Validity and Reliability Analysis

Sample	N	Age	Sex	School	Ethnic Composition
I	270	10-18	133 Male	Rural	Black 3%
			137 Female		Hispanic 7%
					Caucasian 90%
				Surburban	Black 7%
					Am. Indian 4%
					Asian 5%
					Hispanic 2%
					Caucasian 82%
				Rural	Black 7%
					Am. Indian 17%
					Caucasian 76%
II	135	10-18	77 Male	Rural	Black 8%
			58 Female		Am. Indian 14%
					Caucasian 78%
III	15	10-17	8 Male	Rural	Caucasian 100%
			7 Female		
Total	420				

Table 8

Number of Students at Each Age Level by Sample

	Age								
	10	11	12	13	14	15	16	17	18
Sample									
I	39	59	4	37	38	3	51	38	1
II	24	16		14	16	6	30	27	2
III	1	4		1	3	1	1	4	
Totals	64	79	4	52	57	10	82	69	3

Sample I consisted of 270 students in grades five, eight, and eleven (133 males, 137 females), from three geographical regions in Oklahoma. The ages of the students ranged from 10 to 18. There were 104 fifth grade students, 76 eighth grade students, and 90 eleventh grade students. Forty-seven of the respondents to the objective instrument were enrolled in a small rural school district in western Oklahoma, 185 were attending a large suburban school district in central Oklahoma, and 40 were enrolled in a rural school district in eastern Oklahoma.

Sample II was composed of 135 students (77 males, 58 females), in grades five, eight, and eleven in a rural school district in southeastern Oklahoma. The ages of the students ranged from 10 to 18. There were 42 fifth grade students, 35 eighth grade students, and 58 eleventh grade students.

Sample III consistered of 15 students, eight males and seven females, from a small rural school district in north central Oklahoma. Their ages ranged from 10 to 17.

Procedure

In the spring of 1985, five rural and two urban school districts were randomly selected from an alphabetical list of school districts in Oklahoma (State Department of Education, 1984-1985). This sample selection was in proportion to the rural and urban school districts in Oklahoma. Letters were mailed to administrators in these districts explaining the nature of the study. (See Appendix K) Enclosed with each letter was a self-addressed postcard for their reply indicating three choices: (a) My school will participate in the study. Teachers will administer the instruments; (b) My school will participate in the

study. I would prefer that you come and administer the instruments; (3) My school will not participate in the study. (See Appendix L for a copy of the postcard.)

One of the originally selected school districts agreed to participate in the study, so additional urban and rural school districts were selected to make up Sample I. A telephone call to each school district agreeing to participate was made to make arrrangements for the testing.

Students did not put their names on the instruments. Parental permission was obtained for students participating in the study (See Appendix M for a copy of the parental permission letter). Teachers administered the instrument to students in Sample I. School counselors and teachers administered Form C of the instrument to students in Sample II and conducted a sociometric survey with two self-contained fifth-grade classes from that sample during regular classroom guidance time. The author administered Form C to individual students in Sample III followed by the Interpersonal Understanding Interview (Jacquette, 1979) Responses were recorded and scored according to the manual.

Instrumentation

Form C. This test consists of fourteen sentence stubs followed by a five-item multiple-choice response set measuring levels of interpersonal reasoning about peer group interaction. Each response represents one of five stage levels of interpersonal understanding. An over all score represents the summed ranked stage values of the multiple-choice items endorsed as best completing each sentence.

This was a paper-and-pencil test which was group administered. The time required for administration was approximately 20 minutes. The

directions for taking the instrument were: Please mark the answers that you believe best completes the following sentences. Mark only one answer. Background information was obtained in the following areas: (a) grade, (b) school, (c) age, (d) sex, and (e) father's and mother's occupation. The following measures were used with sample groups II and III to investigate the validity of the measure of the theoretical construct of interpersonal reasoning.

Socioeconomic Measure

For a random sample of 102 students selected from Sample I, socioeconomic level was measured using the Standard International Occupational Prestige Scale (Treiman, 1977). This is a ranking of socioeconomic levels according to occupational titles which are assigned a number from 0 to 99. When both father's and mother's occupational titles were available the occupation with the highest ranking was selected for inclusion in the study.

Sociometric Measure

Using two intact fifth-grade classroom groups from Sample II, peer group nominations were obtained from a sociometric survey of positive peer-group attributes constructed for this study. (See Appendixes I and J) Fifth-grade classrooms were chosen because self-contained classroom groups may be more conducive to sociometric assessment than departmentalized classroom groups. A matrix table was used to tally the number of choices each student received, yielding the sociometric total score. Choices were weighted so that first choice equaled three points, second choice equaled two points, and third choice equaled one point (Shertzer & Linden, 1979).

Mental Ability Measure

Scores from school records of standardized group mental ability tests were used to rank mental ability levels of one group of students from fifth, eighth, and eleventh grades in Sample II (N=118). These scores were ranked as follows: above average (above 110), average (90-110), and below average (below 90).

Individual Interviews

The Interpersonal Understanding Interview (Jaquette, 1979) was used to measure stages of conceptions of peer-group relations with students from Sample III. This was a semi-structured individual interview about a hypothetical story dilemma. Fifth-grade students were read a story about a baseball team, and eighth and eleventh-grade students read a story about a rock band. The Baseball Team Story was adapted from the Hockey Club Story in the manual (Jacquette, 1979) (See Appendix G for a copy of the stories). A set of structured interview questions containing 22 mandatory probes was used (See Appendix H). The interview was recorded and responses were scored according to the criteria in the manual. Selman (1980) reported average inter-rater reliability correlations of .94 and test-retest reliabilities of .69 for a ten-week interval, .51 for a two-month interval, .63 for a five-month interval, .92 for a 22 week period, and .62 for a six-month interval with elementary school students.

Construct validity was discussed in terms of correlations across domains of reasoning, stage-by-age trends, social class, sex, race, and school and peer adjustment. Selman (1980) reported correlation coefficients of .81 and .73 when comparing children's scores on the interpersonal reasoning interview in the peer group organization domain

with their scores obtained from the understanding of self, and the friendship interview respectively.

Selman (1980) reported interpersonal reasoning scores correlated .76 with the chronological age of 225 interviewees who ranged in age from 4 to 32. He found a significant difference between the interpersonal reasoning scores of working-class children and middle-class children in the 7 to 10 year age range, F (1,223) = 5.07, p =. 02. This difference was not significant for children between the ages of 11 and 14. No significant difference, t (45) = 1.49, p = .20, was found between a matched-pairs sample of males and females. Differences in interpersonal understanding scores by race were reported to be nonsignificant, F (1,223) = .003, p = .99.

In investigating specific groups expected to function at developmentally higher or lower levels of interpersonal understanding when compared to the general population, Selman (1980) reported a significant difference in the peer-group reasoning scores of a matched-pairs study of 21 students enrolled in public school and 21 students attending a special school for behavioral and learning problems, t (20) = 5.87, $p < .05$.

Statistical Analysis

From the data collected from Sample I, the Pearson product moment correlation was used to calculate the correlation between item responses and total response to investigate the research hypothesis: There is a relationship between individual items on the instrument (Form C) and the total score.

The Pearson product moment correlation was used to analyze the data collected from Sample I relevant to the research hypothesis: There is a

relationship between age and scores on the instrument. The two independent measures were age and scores on the instrument.

The biserial correlation, a type of Pearson product moment correlation, was used to analyze the data collected from Sample I relevant to the research hypothesis: There is a relationship between sex of the student and scores on the instrument.

From a randomly selected group from Sample I, the Spearman rank order correlation coefficient was used to analyze the data relevant to the research hypothesis: There is a relationship between socioeconomic level and scores on the instrument. The two independent measures are scores on the instrument and socioeconomic rank scores.

From the data collected from Sample II, the Pearson correlation coefficient was used to analyze the data relevant to the research hypothesis: There is a relationship between peer status and scores on the instrument.

For a selected group from Sample II, Kendall's tau correlation between the scores on the instrument and mental ability scores, and a median item/total correlation was examined to determine if the within-scale median correlations were greater than the correlations between scores on the instrument and mental ability.

The Spearman rank order correlation coefficient was used to analyze the data collected from Sample III to investigate the research hypothesis: There is a relationship between scores on the individually administered interview, The Interpersonal Understanding Interview, and scores on the objective instrument.

Level of Significance

The level of significance for this study was set at α =.10 so that the chances are no more than 10 out of 100 that relationships found to be significant are the result of chance. Since the validation of an objective measure in the field of social cognitive development is an exploratory study, it was felt that Type II errors might discourage future research; whereas, Type I errors would do no more than encourage others to attempt objective measures, so a more liberal alpha level was set.

Summary

An objective instrument was developed to measure children's and adolescents' stages of reasoning about peer group relationships. Selman's theory of stages of reasoning about peer group organization was used for constructing the instrument. An initial 14-item sentence-completion instrument was administered to 50 subjects to obtain items used in the multiple-choice instrument. Item analysis performed on data from the pilot study resulted in a revised 14-item multiple choice instrument which was administered to 420 fifth, eighth, and eleventh grade students from three sample groups. Additional measures used with selected sample groups included individual interviews and measures of peer group status, socioeconomic status, and mental ability. Statistical analysis was performed on these data to assess the reliability and validity of the multiple choice instrument.

Chapter IV

Analysis of Data and Presentation of Results

Introduction

The purpose of this study encompasses two main goals. The first goal was to develop a standardized, objective measure of children's and adolescents' developmental stages of reasoning about peer group issues. The second purpose was to field test the instrument and determine the reliability and validity of the responses.

This chapter presents the results of the reliability and validity studies. The results are presented in the following order. First, analysis of the reliability of test items is described. This includes an assessment of the correlation between test items and the total score. Next, interrater reliability of the scores obtained on the individual interviews is presented. Construct validity is discussed in terms of the relationship between scores on the instrument and age, grade, sex, socioeconomic level, mental ability ranks, and peer status. Finally, scores on the instrument are compared with scores on an individually administered instrument measuring peer group reasoning.

Reliability Analysis

Internal Consistency Reliability

For Sample I, the correlation between items on the instrument and the total scores was computed as a measure of internal consistency reliability. Cronbach's coefficient alpha was found to be .66 with

individual item/total correlations ranging from .14 to .57. The median correlation was .45 (See Table 9).

Table 10 shows the internal consistency reliability estimates by grade level. The reliability estimate for fifth grade was .60, for eighth grade, .46, and for eleventh grade, .69.

Interrater Reliability

For coding of the individual interviews used in Sample III, interrater reliability was assessed in terms of the percentage of scoring agreement on issues. Three transcribed individual interviews, containing a total of 21 issues, were randomly selected for blind scoring by an untrained rater using the instructions in the Interpersonal Understanding Interview Manual (Jacquette, 1979). These scores were compared with the scoring of the interviews by the author (self-trained) (See Table 11).

The percentage of interrater agreement on the global stage by issue is shown in Table 12. Raters agreed within one global stage on 76 percent of the issues. Exact agreement was .19, within one-third stage, .57, and within two-thirds stage, .76. Raters disagreed by one stage level on 14 percent of the issues and by two stage levels on 10 percent of the issues.

Construct Validity Analysis

The construct validity correlations by sample are shown in Table 13. Using the Pearson product moment correlation to analyze the data from the 270 students in Sample I, significant correlations were found between scores on the instrument and the age (r = .34, p<.001) and grade level (r = .38, p<.001) of students. However, age and grade level

Table 9

Med/Total Correlations for Items

Item	Std. Dev.	Corr. (Total)
1	1.220	0.272**
2	1.001	0.455**
3	0.821	0.439**
4	0.739	0.142*
5	1.009	0.499**
6	1.170	0.567**
7	0.855	0.436**
8	1.176	0.540**
9	0.934	0.486**
10	0.987	0.424**
11	1.120	0.554**
12	1.155	0.480**
13	1.045	0.310**
14	1.375	0.424**

*$p < .05$. **$p < .01$.

Table 10

Internal Consistency Reliability (Cronbach's alpha) by Grade

Grade	N	Internal Reliability	Mean	SD
Fifth	104	.60	35.3	6.2
Eighth	76	.46	39.9	5.0
Eleventh	90	.69	41.3	5.8
Total	270	.66	38.6	6.4

Table 11

Interrater Agreement of Global Stages by Issue

Issue	Fifth	Eighth	Eleventh
Formation			
Rater 1	2(1)[a]	2	2(3)
Rater 2	1(2)	1(2)	2
Group Cohesion			
Rater 1	2	2	3
Rater 2	2	2	2
Group Conformity			
Rater 1	2	2(3)	3
Rater 2	1(2)	2(1)	3(2)
Decision Making			
Rater 1	2(3)	3(2)	3
Rater 2	1	2(1)	3(2)
Group Leadership			
Rater 1	1(2)	2	3
Rater 2	1	2(1)	3(2)
Group Termination			
Rater 1	2	3	2
Rater 2	1	1	2(1)

[a] Major Stage (Minor Stage)

Table 12

Percentage of Interrater Agreement by Issue

Agreement	Number of Issues	Percentage	Cumulative Percentage
Exact	4	.19	.19
Within One-third Stage	8	.38	.57
Within Two-thirds Stage	4	.19	.76
Difference of One Stage	3	.14	.90
Difference of Two Stages	2	.10	1.00

Table 13

Construct Validity Correlations by Sample

Sample	Variable	N	Form C
I	Age	270	.34 $p<.001$
	Grade	270	.38 $p<.001$
	SES	102	.18 $p=.06$
	Sex	270	.06 $p=.12$
II	Peer Status		
	Leader	41	.20 $p=.20$
	Member	41	.14 $p=.38$
	MA	118	.27 $p<.001$
III	Interview	15	.80 $p<.001$

accounted for only 12 and 14 percent, respectively, of the variance in the scores.

The means and standard deviations of the scores by age levels are shown in Table 14. The means tended to increase with increased age with the exception of the average scores for the thirteen and sixteen age groups who obtained higher mean scores and smaller standard deviations, indicating less variance in those groups.

The percentage of students in each sample scoring at each stage level by ages is presented in Tables 15, 16, and 17. The highest percentage of students in all samples scored at Stages 2 and 3. It is notable that Stage 4 scores were not found before age 13 in Sample I, before age 14 in Sample II, and before age 17 in Sample III.

As shown in Table 18, the means for the three grade levels were: fifth, 35.27; eighth, 39.95; and eleventh, 41.29. Analysis of variance performed on these data indicated that there were significant differences among the means, $F(2,267) = 24.72$, $p<.001$ (See Table 19). Tukey's procedure for unequal N's indicated fifth grade means differed significantly ($p<.01$) from eighth and eleventh grade means; however, there was not a significant ($p>.10$) difference between eleventh and eighth grade means.

The percentage of students scoring at each stage level by grade is shown in Table 20. In Sample I, the highest percentage of scores fell at Stage 3 for all grade levels; whereas, in Sample II, most fifth and eighth grade students obtained Stage 2 scores, while most eleventh grade students obtained Stage 3 scores. In Sample III, most fifth grade students scored at Stage 2, while most eighth and eleventh grade students scored at Stage 3. Stage 4 scores were not found at grade five

Table 14

Means and Standard Deviations by Age (Sample I)

Age	N	Mean	Standard Deviation
10	39	35.38	6.38
11	59	35.27	6.19
12	4	34.50	7.41
13	37	41.22	4.69
14	38	38.50	5.16
15	3	39.00	4.35
16	51	42.49	4.27
17	38	39.68	9.83
18	1	41.00	0.00

Table 15

Percentage of Students Scoring at Each Stage Level by Age (Sample I)

		Stages				
Age	N	0	1	2	3	4
10	39		3	41	56	
11	59		3	36	61	
12	4			25	75	
13	37			8	84	8
14	38			18	82	
15	3				100	
16	51			4	90	6
17	38		5	8	79	8
18	1				100	
Total	270					

Table 16

Percentage of Students Scoring at Each Stage Level by Age (Sample II)

Age	N	Stage 0	1	2	3	4
10	24			58	42	
11	16			75	25	
13	14		7	71	21	
14	16			56	38	6
15	6			50	50	
16	30			40	57	3
17	27		4	41	55	
18	2			100		
Total	135					

Table 17

Percentage of Students Scoring at Each Stage Level by Age (Sample III)

		Stage				
Age	N	0	1	2	3	4
10	1			100		
11	4			75	25	
13	1				100	
14	3				100	
15	1			100		
16	1				100	
17	4				75	25
Total	5					

Table 18

Means and Standard Deviations by Grade Level in Sample I

Grade	N	Mean	Standard Deviation
Fifth	104	35.27	6.19
Eighth	76	39.95	5.02
Eleventh	90	41.29	7.23
Total	270	38.60	6.38

Table 19

Analysis of Variance Summary Table

Source	df	MS	F
Grade	2	971.22	24.72*
Error	267	39.29	
Total	269		

*$p < .001$.

Table 20

Percentage of Students Scoring at Each Stage Level by Grade

Sample	Grade	N	Stage 0	1	2	3	4
I							
	Five	102		3	37	60	
	Eight	76		1	10	84	4
	Eleven	90		2	5	85	7
II							
	Five	42		2	64	33	
	Eight	35			58	39	3
	Eleven	58		2	43	53	2
III							
	Five	5			60	40	
	Eight	5			20	80	
	Eleven	5				80	20

in any sample; however, Stage 1 scores were found at all grade levels in Samples I and II.

The range of scores within one standard deviation of the mean by grade level is shown in Table 21. Assuming a normal distribution, about two-thirds of the fifth grade students' average total scores ranged from 2.07 to 2.93; eighth grade from 2.50 to 3.21; and eleventh grade from 2.57 to 3.43.

There was not a significant correlation between sex and scores on the instrument, r (268) = .06, p = .12. Socioeconomic status and scores on the instrument from a group selected from Sample I were analyzed using the Spearman rank order correlation coefficient. A significant correlation was found between socioeconomic status and scores on the instrument, r (100) = .18, p = .06. However, socioeconomic status accounted for only three percent of the variance in the scores.

From a group of fifth grade students selected from Sample II, the relationship between peer status and scores on the instrument was analyzed using the Pearson product moment correlation. The peer status variable had two levels: leader and group member. There was not a significant correlation between scores on the instrument and the two levels of peer status, (leader) r (39) = .20, p = .20; and (group member) r (39) = .14, p = .38.

For a group of fifth, eighth, and eleventh grade students selected from Sample II, Kendall's tau correlation coefficient was used to analyze data pertaining to the relationship between mental ability ranks and scores on the instrument. There was a significant correlation between scores on the instrument and mental ability ranks, r (116) =

Table 21

Range of Scores Within One Standard Deviation of the Mean by Grade (Sample I)

Grade	Total	Range	Global Stage
Fifth	29-41	2.07-2.93	2 - 3
Eighth	35-45	2.50-3.21	3(2) - 3
Eleventh	36-48	2.57-3.43	3 - 3(4)

.27, $p<.001$. However, only seven percent of the variance in the scores can be attributed to the mental ability ranks.

When the correlation between mental ability ranks and scores on the instrument (r (116) = .27) was compared to the internal consistency reliability correlation for that same group (.60), the internal consistency reliability was greater than the correlation between scores on the instrument and mental ability ranks. This indicates a relationship between the construct being measured and cognitive ability; however, items on the instrument appear to account for more variance in the total scores suggesting the instrument is measuring something other than mental ability.

There was a significant correlation between the scores on the individual interview and scores on the objective instrument, r (13) = .80, $p<.001$. Scores on the individual interview and scores on the objective instrument shared 64 percent of the variance. The means and standard deviations of the scores from the individual interview and Form C are shown in Table 22. The mean scores for the individual interview and the objective instrument were: 2.42 and 2.85, respectively. A dependent t-test indicated the means were significantly different, $t = -4.24$, $p<.001$. Students tended to obtain higher scores on the objective instrument.

Summary

Information presented in this chapter is data derived from field testing the multiple choice instrument for reliability and validity. A measure of internal consistency reliability was computed to analyze the correlation between items on the instrument and the total scores for

Table 22

Means and Standard Deviations of the Individual Interview and Form C

Instrument	N	Mean	SD	Global Stage
Individual Interview	15	2.42	.58	2(3)[a]
Form C	15	2.85	.51	3

[a]Major Stage (Minor Stage)

Sample I. Interrater reliability was assessed for the scoring of the individual interviews from Sample III.

Construct validity was assessed by correlating the following factors with the total scores on the instrument: age, grade level, socioeconomic status, sex, mental ability ranks, and peer status. Finally, construct validity was examined by analyzing the correlation between scores on the multiple choice instrument and individual interview scores.

Age, grade level, mental ability ranks, and socioeconomic status were found to be significantly related to scores on the instrument. Peer group status and sex were not significantly related to scores on the instrument. There was a significant correlation between scores on the instrument and scores on the individual interviews.

Chapter V

Summary and Conclusions

Introduction

This study was developed based on the assumption that children's and adolescents' reasoning about peer group issues becomes more complex and differentiated with age. The most fundamental claims of social cognitive theorists are that social reasoning is developmental, that it is primarily governed by cognitive processes, and that there is a relationship between thinking and behavior. Most measures of social reasoning utilize an individual interview format about hypothetical story dilemmas. Due to the lack of a reliable, valid, objective measure of social reasoning, which could be group administered, the development of such an instrument was the main purpose of this study.

An initial 14-item sentence completion instrument was constructed around seven peer group issues Cooney and Selman (1980) found to be prevalent in children's and adolescents' reasoning about their peer groups. This instrument was administered to 50 people ranging in age from five to adult to obtain items used in the multiple-choice instrument. Item analysis performed on data from the pilot study resulted in a revised 14-item, multiple-choice instrument, which was administered to 420 fifth, eighth, and eleventh grade students from five geographical areas in Oklahoma.

The instrument was field tested for reliability and validity. Internal consistency reliability was computed as an analysis of the

relationship between test items and the total score. Construct validity was found by correlating the scores on the instrument with the demographic variables of age, grade, sex, socioeconomic status, and mental ability ranks. As a further test of construct validity, scores on the instrument were correlated with scores from a measure of peer status. Concurrent validity was determined by an analysis of the correlation between scores on the objective measure and scores on the Interpersonal Understanding Interview.

Findings and Conclusions

The internal consistency reliability of the revised multiple-choice instrument was found to be .66 (SD=6.4), which was somewhat less than the reliability of .76 (SD=8.5) obtained in the pilot study. The pilot study was a more heterogeneous sample with ages ranging from 7 to 18; whereas, the age range in the validation study was 10 to 18. It is possible the correlation decreased due to the restricted range of variance available in the validity sample (Golden, Sawicki, & Franzen, 1984).

There were low, but significant, correlations between age and grade level of the students and scores on the instrument (.34 and .38, respectively). Fifth grade students as a group obtained lower mean scores than eighth and eleventh grade students. Although the mean for the eleventh grade group was somewhat higher, there was not a significant difference between the means of eighth and eleventh grade students. Approximately two-thirds of the students in the eighth and eleventh grade groups obtained a mean global score of 3. This supports the theoretical hypothesis that Stage 3 reasoning about peer groups is associated with adolescence.

There was a great deal of variability of stage level scores within students and between student groups. In Samples I and II, fifth grade students' scores ranged form Stage 1 to Stage 3, and eighth and eleventh grade students' scores ranged from Stage 1 to Stage 4. It is interesting to note that Stage 4 reasoning was not found at the fifth grade level; however, Stage 1 reasoning was found at all grade levels.

Construct validity was further assessed by correlating the scores on the instrument with the selected variables of socioeconomic status, sex, and peer status. There was a very low (.18), but significant ($p = .06$), relationship found between socioeconomic status and scores on the instrument. There was not a significant relationship between scores on the instrument and sex. With a selected group of fifth grade students (N=41), there was not a significant correlation between peer status and scores on the instrument.

To test the discriminate validity of the instrument, a Kendall's tau correlation between scores on the instrument and mental ability ranks was performed. The correlation was .27 ($p<.001$). Although this relationship is in the low range, the internal consistency reliability (.60) was higher for this group, suggesting that social reasoning about peer groups is a domain that does not overlap a great deal with mental ability.

Concurrent validity was assessed by comparing stage level scores on the Interpersonal Understanding Interview about peer group organization to the average total scores on the instrument for fifteen students in grades five, eight, and eleven. There was a significant correlation (.80, $p<.001$) between the scores on the two measures. Students chose

items on the instrument at higher stages than the stages at which they produced statements on the interview.

Implications

The results of this study hold implications for researchers in the field of social cognitive development. The process of validating a measure of social reasoning about peer group issues is also an examination of the theory of social cognition. Construct validation of an instrument is determined by showing that the test is related to other measures and variables implied by the theoretical construct (Sechrest, 1984).

According to Enright and Lapsey (1980), a measurement of social cognitive development should exhibit the following criteria: (a) Stages should increase with age to reflect the developmental nature of the construct; (b) there should be high internal consistency of test items to show that a person's reasoning represents a structured whole; (c) high temporal stability with no regression to lower levels is needed to support the invariant construct; (d) empirical support of the hierarchial development of stages is needed; (e) the scale would be expected to differentiate between groups reflecting different levels of social behavior; and (f) there should be a higher within-scale correlation than the correlation between the scale and general intelligence.

A strong correlation was found between items on the instrument and the total score, (r (268) = .66, p<.001). This is similar to previous research in the moral development domain, where internal consistency reliabilities for objective measures have been reported to range from .49 to .89 (Page & Bode, 1980). However, this reliability coefficient

is not adequate for decision making in individual cases. In those cases, the individual interview may be a more reliable measure. The objective instrument may be useful in obtaining information about groups for planning intervention programs and could be used in research as a measure of social reasoning about peer group issues. However, it is not recommended for screening and evaluation in the public schools.

This was a cross-sectional study of different student groups by age and grade level. The significant correlation with age supports the theoretical belief that social cognitive growth is partly the result of maturation (Muuss, 1982). The present study agrees with the correlation (.39) between ages and scores from a group administration of the Interpersonal Understanding Interview (Kurdek, 1980). However, Damon (1977) found higher correlations between an individually administered measure of distributive justice reasoning and age (.51, .53, and .64). The higher correlations between age and scores on individually administered measures of reasoning may be an indication that group administered measures of reasoning are not as reliable as individual interviews.

Eleventh and eighth grade students had higher social reasoning scores about peer group issues than fifth grade students. This lends partial support for the claim that social reasoning is developmental, since the groups expected to have the highest scores did have the highest scores. The results of this study indicated stage by age trends of groups of students; however, a longitudinal study is needed to obtain evidence of developmental change in individual's reasoning about peer group issues.

Further studies need to be conducted using this instrument with individuals over periods of time to determine if stage level growth is continuous with no regression to lower stages. The present cross-sectional study indicated considerable variability of choices of stage level responses on the instrument. This may be an indication of measurement error in the instrument or an indication that simple stage theory does not account for the variability of thinking and reasoning about peer group issues within individuals and within groups. Rest (1979) believes when people reach a higher stage of reasoning, all stages below that level are also available and that factors such as social experience and education may influence the choice of statements about social reasoning.

In terms of test construction, less reliable items should be eliminated and other domains should be added to the peer group domain. This could be accomplished by utilizing the same procedure used in constructing this test, where items are originally generated on the basis of theory, but are retained on the basis of their psychometric properties. Also, to control for random responses and the endorsement of certain complex-sounding statements and value-laden words, distractor items may need to be added to the instrument.

More thought may want to be given to the issue of indexing, determining how to obtain the single or total score on the instrument for an individual. In the present study, the total score was a simple sum of the weighted ranks endorsed as best completing a sentence. A mean stage score was obtained by dividing the total score by the number of items on the instrument. An advantage to the simple sum of the ranks is that all variations in responses are included in the total score.

Other possibilities are a modal score, which is the stage level rank most frequently endorsed, or to assign a score based on the percentage of higher ranks endorsed.

Scores on the instrument were not significantly related to peer nominations of students who were thought to be good leaders and good group members. Kurdek and Krile (1982), found low correlations of .25 and .13 between peer group nominations and scores on the Interpersonal Understanding Interview. However, Enright, et al., (1980), found a significant correlation (r=.58) between positive peer group nominations and scores on the Distributive Justice Scale with kindergarten students, but not with third-grade students. Further research is indicated to determine if scores on the instrument are related to real life issues in peer groups as opposed to peer group nominations. Damon (1977) found a very high correlation between scores on an individual interview about leadership issues and the behaviors of individuals electing a captain for a team. Other researchers have studied children's social action strategies in groups and have devised coding schemes for assessing peer group interaction (Abrahami, Selman, & Stone, 1980). Scores on the instrument could be compared with children's and adolescents' real life social action strategies in peer groups.

There was a low, but significant, relationship found between socioeconomic status and scores on the instrument. This finding is similar to the .02, .08, .14, and .17, correlations found between objective measures of moral judgement and socioeconomic status (Gibbs, et al., 1982; Rest, 1979). However, Enright et al., (1980), found a higher correlation (.45) when comparing the scores from individual interviews and a measure of socioeconomic status taking into account

educational level along with father's and mother's occupation. Further research is indicated using parents' educational level along with occupational titles to assess socioeconomic status.

Further research is needed using the instrument with different cultural groups. The sample groups in the present study were selected from school districts whose populations were predominately Caucasian, and generalizations can be made only to those groups.

The strong correlation between scores on the individual interview and the objective instrument suggest the two measures share 64 percent of the variance. However, students tended to score higher on the objective instrument.

This supports the findings in the moral development domain on the relationship between objective measures and individual interview measures (Rest, 1979). Rest found correlations between scores on the Defining Issues Test and Kohlbergian tests of moral judgement to range from .28 to .78. He suggested that objective measures are essentially recognition tasks, and individual interviews are production tasks and that students can recognize higher stages of reasoning before they can spontaneously produce those stages in individual interviews.

This part of the study needs to be replicated to determine if this shared variance is due to the two measures assessing the same construct, or if the shared variance is due to interviewing and scoring bias. Interrater reliability obtained on scores from a random sample of profiles indicated 73 percent agreement on global stage rankings by issue. This is somewhat lower than the interrater reliability reported in the literature (Selman, 1980). The difference in the experience of the raters may have accounted for the differences. When there was not

exact agreement on stage scores, the second rater tended to underscore relative to the scoring of the criterion rater (the author). The first rater conducted the interviews and had knowledge of the age and grade levels of the interviewees which may have influenced the scoring.

Methods of child rearing and methods of discipline used at home and school may influence the development of interpersonal skills and social cognition (Muuss, 1982). Further research might include an examination of the relationship between child rearing methods and scores on the instrument.

The instrument could be further tested as a pre- and post-measure of experimentally induced change in children's and adolescents' reasoning about peer group issues. Educational intervention groups promoting discussion and debate about social issues stimulate interpersonal growth in social cognition (Muuss, 1982).

The objective instrument had higher within-scale correlations than the correlations between the scale and the demographic variables of age, sex, socioeconomic status, and mental ability. The higher within-scale correlations suggest the instrument is measuring a distinct domain related to, but separate, from these variables. Since one study does not establish construct validity, more research is needed to validate the instrument as a measure of social cognitive development.

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APPENDIXES

APPENDIX A

STAGE SCORES DERIVED

FROM MEAN STAGE SCORES

Appendix A

Stage Scores Derived From Mean Stage Scores (Selman, 1980)

Mean Stage Score	Stage
0.00 - 0.24	0
0.25 - 0.49	0(1)
0.50 - 0.74	1(0)
0.75 - 1.24	1
1.25 - 1.49	1(2)
1.50 - 1.74	2(1)
1.75 - 2.24	2
2.25 - 2.49	2(3)
2.50 - 2.74	3(2)
2.75 - 3.24	3
3.25 - 3.49	3(4)
3.50 = 3.74	4(3)
3.75 - 4.00	4

Major Stage (Minor Stage)

APPENDIX B

SENTENCE COMPLETION

Appendix B

Sentence Completion

Name_____School_____

Age_____Date_____Boy_____Girl_____Teacher_____Grade_____

Instructions: Complete the following sentences with the first thing that comes to your mind and everything you think of while writing that down.

These incomplete sentences are about people getting together in groups. The words group, team, and club can mean the same thing in your responses.

1. People get together in groups and on teams because_____

_____

_____

_____

2. The best way to get a group together is_____

_____

_____

_____

3. A good group member is one who_____

_____

_____

_____

4. In order to keep a group together_____

_____

_____

_____

5. Group members should agree_____

_____

_____

_____

6. A good club member tries to fit in by_____

_____

_____

_____

7. Important rules for a group or team_____

_____

_____

_____

8. Rules are important for a group because_____

_____

_____

_____

9. The best way for a group to decide what to do would be to_____

_____

_____

_____

10. Teams can work out their problems by_____

_____

_____

_____

11. A team needs a leader_____

_____

_____

_____

12. A good leader is someone who_____

_____

_____

_____

13. People get kicked off the team because_____

_____

_____

_____

14. The team might break up because_____

_____

_____

_____

APPENDIX C

FORM A

Appendix C

FORM A

School_____Grade_____Age_____Boy_____Girl_____

Father's Occupation_____Mother's Occupation_____

INSTRUCTIONS: Please mark the answer you believe best completes the following sentences. Mark only one answer.

1. People get together in groups and on teams because:

   (a) they like each other.
   (b) they do fun activities in groups and on teams.
   (c) they want to play a game.
   (d) they are alike and they like the same things.
   (e) different kinds of people make a better group or team.

2. The best way to get a group together is:

   (a) to look for some people.
   (b) ask them if they want to be in a group.
   (c) to get people who are interested in the same things.
   (d) to start with some friends and have them pass it on and have other people join.
   (e) to get people with different ideas.

3. A good group member is one who:

   (a) can work well with others and still be themselves.
   (b) is strong.
   (c) respects the group's suggestions and decisions.
   (d) obeys what the captain says.
   (e) gets along with each person in the group.

4. In order to keep a group together:

   (a) there must be a reason for people to stay together.
   (b) you have to work together and get along with each other.
   (c) you need to hold hands.
   (d) you need to teach them the rules and tell them to follow them.
   (e) you have to work as a group to settle differences.

5. Group members should agree:

   (a) with each other.
   (b) to play together.
   (c) on what is best for the group.
   (d) to do what you are doing that day.
   (e) on the same things.

6. A good club member tries to fit in by:

   (a) doing what they are told.
   (b) agreeing with each other.
   (c) being tall.
   (d) being themselves.
   (e) acting like everybody else.

7. Important rules for a group or team are:

   (a) to maintain order, so the group or team can work.
   (b) no fighting and be nice.
   (c) don't run off.
   (d) to work together as a group
   (e) to get along with everybody else.

8. Rules are important for a group because:

   (a) someone might take my things.
   (b) they keep some kind of order to the work the group is doing.
   (c) if there were no rules, there would be no group.
   (d) they keep things fair.
   (e) somebody might get hurt.

9. The best way for a group to decide what to do would be to:

   (a) flip a coin.
   (b) have each person give ideas and decide on the best one for the group.
   (c) use your brain to think up something.
   (d) have one person call out what you are going to do.
   (e) decide on one thing everyone wants to do.

10. Teams can work out their problems by:

   (a) asking their coaches.
   (b) going to another person's house.
   (c) listening to other's ideas and deciding on those best for the team.
   (d) discussions.
   (e) talking to each other.

11. A team needs a leader:

   (a) to tell them what to do.
   (b) who understands what thhe group wants to do.
   (c) to tell them to be quiet.
   (d) to be the head of the group.
   (e) to keep things fair.

12. A good leader is someone who:

(a) knows the way around in case they go somewhere.
(b) is respected and will do what the group wants.
(c) shares the failures and responsibilities with the group.
(d) is smart and knows what they are doing.
(e) is fair and can work things out.

13. People get kicked off the team because:

(a) they did not bring something they were supposed to bring.
(b) they cannot live up to the rules of the group
(c) they do not obey the rules.
(d) they do not cooperate.
(e) they want things their way.

14. The team might break up because:

(a) of fighting.
(b) the members might live too far away.
(c) they do not like each other.
(d) one of their friends quit, and they might want to quit too.
(e) team members with different ideas form their own teams.

APPENDIX D

FORM B

Appendix D

FORM B

School_____Grade_____Age_____Boy_____Girl_____

Father's Occupation_____Mother's Occupation_____

INSTRUCTIONS: Please mark the answer that you believe best completes the following sentences. Mark only one answer.

1. People get together in groups and on teams because:

   (a) they want to associate together and share the responsibilities as a whole.
   (b) they want to.
   (c) they like the sport, or they like the group they are joining.
   (d) they can learn together and meet other people.

2. The best way to get a group together is to:

   (a) call up people and say, "I want to get a club together."
   (b) have a reason people would want to be in the club, a common interest.
   (c) get a couple of friends together and form a group.
   (d) tell individuals about the good aspects of the goup and suggest some values you think they would be interested in.

3. A good group member is one who:

   (a) takes part and helps in any way to better the group.
   (b) obeys all the rules.
   (c) can work well with others and still keep his/her own personality intact.
   (d) gets along with the other people in the group.

4. In order to keep a group together:

   (a) you have to work together and get along with each other.
   (b) members should get along and have a common interest.
   (c) teach them all the rules and tell them to follow them.
   (c) there must be a reason for the members to stay together.

5. Group members should agree:

   (a) on the same things.
   (b) to do what you are doing that day.
   (c) on the basic ideals but differ on specific things.
   (d) on what is best for the group and not for themselves.

6. A good club member tries to fit in by:

   (a) being nice to the other people.
   (b) helping each other.
   (c) helping and adapting.
   (d) being themselves and not forcing others to conform.

7. Important rules for a group or team are:

   (a) to pull together with each other and not against one another.
   (b) no fighting, no skipping practice.
   (c) to be supportive of each member and strive to strengthen the group.
   (d) to do what is necessary to keep the group together.

8. Rules are important for a group because:

   (a) if there were no rules, there would be no group.
   (b) if they didn't have rules, they would not get along, or they would fight all the time over little things not important.
   (c) they need them to keep people from getting hurt.
   (d) if you don't have rules, you've got chaos with no kind of order in your work or whatever you are doing.

9. The best way for a group to decide what to do would be to:

   (a) not fight about it.
   (b) take a majority vote.
   (c) have each person give an opinion, and to narrow it down to the best solution.
   (d) draw from a hat.

10. Teams can work out their problems by:

   (a) talking to each other.
   (b) talking to the leaders of the team.
   (c) discussing them.
   (d) identifying them, discussing solutions, and implementing the solutions.

11. A team needs a leader:

   (a) so no one will get out of line.
   (b) who can take responsibility and keep things in order.
   (c) to hold the team together.
   (d) not necessarily to be in charge, but to keep order and to have someone to talk for you to other people, to be the head of the group.

12. A good leader is someone who:

    (a) cooperates well with others.
    (b) has concern for the group and always strives to do what is best for the majority.
    (c) takes control of the group, sets rules, and the other team members follow them.
    (d) understands, is fun, responsible, and can see from any point of view.

13. People get kicked off the team because:

    (a) they have selfish goals different from the ones established by the majority.
    (b) they don't try, and they don't care.
    (c) they don't follow the rules.
    (d) they can't live up to the team's rules.

14. A team might break up because:

    (a) of a fight.
    (b) one of the friends might quit, and they might want to quit too.
    (c) of rivalry about leadership; different groups might form.
    (d) most people on the team do not get along with one another and they have arguments all the time.

APPENDIX E

INTRODUCTION FOR YOUNG CHILDREN

APPENDIX E

INTRODUCTION FOR YOUNG CHILDREN

(Jaquette, 1979)

Directins: Many younger children may have little information about the concepts of groups. Before reading the multiple-choice items, it is suggested that a short discussion be held to familiarize the children with the words group, club, and team.

Read or paraphrase the following introduction:

How many of you know what a club is? What do you know about clubs? Clubs are groups of kids that get together almost everyday to plan what they would like to do. Sometimes they have meetings, elect leaders, wear uniforms, and sometimes have secret passwords, so only members can get in. Sometimes clubs hold their meetings in a special club house, but other times they just meet in the woods or over at one member's house.

Clubs are only one kind of group that kids are part of. Can you think of another groups kids might have? There are the Girl and Boy Scouts, 4-H Club, teams that play sports, musical groups, your classroom, and just the regular neighborhood group of kids. All these different groups are alike in one way: they are all made up of lots of kids that get together to do things together.

APPENDIX F

FORM C

Appendix F

FORM C

School_____Grade_____Age_____Boy_____Girl_____

Father's Occupation_____Mother's Occupation_____

INSTRUCTIONS: Please mark the answer that you believe best completes the following sentences. Mark only one answer.

1. People get together in groups and on teams because:

   (a) they like each other.
   (b) they do fun activities in groups and on teams.
   (c) they want to play a game.
   (d) they are alike, and they like the same things.
   (e) different kinds of people make a better group or team.

2. The best way to get a group together is to:

   (a) call up people and say, "I want to get a club together."
   (b) have a reason people would want to be in the club, a common interest.
   (c) look for some people.
   (d) get a couple of friends together and form a group.
   (e) tell individuals about the good aspects of the group and suggest some values in which you think they would be interested.

3. A good group member is one who:

   (a) is strong.
   (b) takes part and helps in any way to better the group.
   (c) obeys all the rules.
   (d) can work well with others and still keep his/her own personality intact.
   (e) gets along with the other people in the group.

4. In order to keep a group together:

   (a) there must be a reason for people to stay together.
   (b) you have to work together and get along with each other.
   (c) you need to hold hands.
   (d) you need to teach them the rules and tell them to follow them.
   (e) you have to work as a group to settle differences.

5. Group members should agree:

   (a) with each other.
   (b) to play together.
   (c) on what is best for the group.
   (d) to do what you are doing that day.
   (e) on the same things.

6. A good club member tries to fit in by:

   (a) doing what he or she is told.
   (b) agreeing with each other.
   (c) being tall.
   (d) being themselves.
   (e) acting like everybody else.

7. Important rules for a group or team are:

   (a) to maintain order so the group or team can work.
   (b) no fighting and be nice.
   (c) don't run off.
   (d) to work together as a group.
   (e) to get along with everybody else.

8. Rules are important for a group because:

   (a) someone might take my things.
   (b) they keep some kind of order to the work the group is doing.
   (c) if there were no rules, there would be no group.
   (d) they keep things fair.
   (e) somebody might get hurt.

9. The best way for a group to decide what to do would be to:

   (a) flip a coin.
   (b) have each person give ideas and decide on the best one for the group.
   (c) use your brain to think up something.
   (d) have one person call out what you are going to do.
   (e) decide on one thing everyone wants to do.

10. Teams can work out their problems by:

   (a) asking their coaches.
   (b) going to another person's house.
   (c) listening to other's ideas and deciding on those best for the team.
   (d) discussions.
   (e) talking to each other.

11. A team needs a leader:

   (a) to tell them what to do.
   (b) who understands what the group wants to do.
   (c) to tell them to be quiet.
   (d) to be the head of the group.
   (e) to keep things fair.

12. A good leader is someone who:

    (a) knows the way around in case they go somewhere.
    (b) is respected and will do what the group wants.
    (c) shares the failures and responsibilities with the group.
    (d) is smart and knows what they are doing.
    (e) is fair and can work things out.

13. People get kicked off the team because:

    (a) they did not bring something they were supposed to bring.
    (b) they cannot live up to the rules of the group.
    (c) they do not obey the rules.
    (d) they do not cooperate.
    (e) they want things their way.

14. The team might break up because:

    (a) of fighting.
    (b) the members might live too far away.
    (c) they do not like each other.
    (d) one of their friends quit, and they might want to quit too.
    (e) team members with different ideas form their own teams.

APPENDIX G

HYPOTHETICAL STORY DILEMMAS

Appendix G

THE BASEBALL TEAM

(Adapted from the Hockey Club Story,

Jacquette, 1979)

The Jets and the Cougars were two baseball teams that got together every week for a game of baseball. In baseball you try to hit the ball and run to first, second, third and home bases without getting "out". The team that makes the most runs wins. When the Jets and the Cougars got together to play, the Jets won every single game. In fact, the Jets were a much better team. They had uniforms, better players, they worked better together, and they had better spirit. The Cougars weren't too good. They tried hard, but they just couldn't seem to work very well together. One of their big problems was that they didn't have a very good pitcher. Scott was playing pitcher for the Cougars now, but almost every time the Jets went to bat against him they would score. During a time-out the Cougars got together and agreed that they had to get a better pitcher if they were to have any chance at all against the Jets. But who could they get? They talked about it among themselves until Scott remembered a friend of his, Mike, who had just gotten over a broken ankle. Mike had pitched on a team before and was very good, so the Cougars went off to ask him to join their team.

But the Jets overheard the Cougars talking about Mike, and they thought he might want to join a winning team. So the Jets ran over to Mike's house, just as Mike was saying he would really like to join a team. The Jets try to get him on their team by offering him a uniform a trip to a real baseball game, and a chance to be co-captain. The Cougars tried to get Mike on their team by telling him that he could

really help their team, that Scott, his good friend, was on their team, and that he would be a great player on the Cougars, but only average on the Jets.

Mike agrees with some of the reasons for both teams, but can't decide which team to join.

WHO COMES FIRST--YOU OR THE GROUP?

(Jacquette, 1979)

Six members of a rock band are trying to work on a new piece of music. But as usual, Marty, their star musician, is not there. Most of the band agrees that Marty is important to them; some say because he's is a good musician, others because he holds the band together by his joking around. But as the group gets to talking, some of the members start getting angry over Marty's not putting in equal time. One member says, "I've had it with him and this band, too. If he isn't staying for jam sessions, neither am I." Others agree and things start to look pretty shaky with some arguing that the group should get rid of Marty and others insisting that they need him because he keeps them together. Finally one of the group agrees to talk to him.

Marty appears at the next practice session, but only to tell the group that he's off to make a date for the weekend. The band explodes with bitter feelings toward Marty and starts to question whether the group can stay together at all. Finally they decide to give Marty an ultimatum: Either he commits himself to the group totally, or there won't be any group at all.

Marty is faced with a real problem: Should he give up some of his outside interests and devote more time to the group or leave the group in shambles?

APPENDIX H

INTERVIEW QUESTIONS

Appendix H

Interview Questions
The Baseball Story

(Jacquette, 1979)

1. What do you think the problem is in this story?

*2. Do you belong to any groups like those baseball teams? How about other kinds of clubs or sport teams or school groups? What about a group of your friends that hang around together; is that kind of like a group? What kind of things do you do? (Use this information for probing personal knowledge of remaining group relations issues.)

I. Formation

A. Why Join or Form Groups?

*1. What do you think Mike should do, join the Jets or the Cougars? Why?

*2. Why do you think Mike and the rest of the kids want to be part of a group like a baseball team? Anything besides just playing baseball?

B. How Are Groups Formed--How Does One Join?

*3. Do you think it would be easy or hard to become a member of a group that has already been together, like those clubs or sports teams? Why?

4. The Cougars don't have a good club yet. If you were made captain what would you do to really get their club going? What does it take to turn just a bunch of kids into a really good club?

*5. Sometimes when a person joins a group, like a club or sports team, there are things they have to do before they are let in called initiations. Why do you think groups do that?

C. What type of Person as a Group Member?

6. What kind of person do the Cougars need on their baseball team? Anything besides being a good player?

*7. What kind of person makes a good member of a club or sports team?

II. Cohesion

*1. Some sports teams or regular clubs just can't seem to stay together. What do you think it will take to keep the Cougars together as a group?

*2. Do you think something like team spirit would help the Cougars stay together and get their club going? Why? What is team spirit, anyway? (If S does not know the concept, say: a feeling that they are all part of the same group.) How would you get team spirit going on the Cougars? Why do you think it is important for a group to have team spirit?

*3. Would it help the Cougars if they were all loyal to their club? Why? Would Mike's loyalty to the Cougars be pretty important? Why? What is loyalty anyway? (If S does not know, say: a feeling that each person will stick with the group no matter what.) Do you think loyalty would help a group stay together? Why?

*4. What makes members of a group, like these sports clubs get along well? What about a regular club that has meetings and things, what makes them get along really well?

III. Conformity

*1. Before the Jets got together as a club everybody acted differently. But now they all act alike, they are all show-offs. What do you think makes them all act the same?

*2. One problem that sometimes happens in clubs and other groups is that a person might go along with what the group is doing, even though he doesn't really want to, just because the rest of the group is doing it. Why does that happen?

*3. Is it better when people in a club are pretty much the same or when they are different from each other? In what ways should they be the same? In what ways should they be different?

4. Is it good or bad when one member of a club is different from everyone else in the group

IV. Rule Orientation

*1. Would it help the Cougars get going if they made rules for their club? Why? Why might rules help a group?

2. Why would you need rules when you have a club, but not when it is just between two friends?

3. What kind of rules should a group have? Why those?

*4. Should all members of the club obey the rules? Why?

V. Decision-Making and Organization

*1. What is the best way to decide what rules the Cougars' club might have? Should the leader decide or should everybody help decide? Why?

*2. How would the Cougars decide what they are going to do, like who they are going to play or when they are going to practice?

3. Is voting a good way for a club to decide on things? Why? Is it better when everyone votes the same or is it enough to have a majority? (If S does not understand, say: where a little more than half the members vote one way.) Why might it be better if everyone votes the same way?

4. What should the Cougars do if all the members don't agree on what is the best plan to beat the Jets?

*5. What makes the Jets as a team-work together better? What things would make the Cougars work well together? Would team-work help? What is team-work in a group, anyway?

VI. Leadership

*1. Would it be better if the Cougars had a captain (or leader) or if everyone was the same? Why?

*2. Why might having a leader help a group?

3. Could a club have more than one kind of leader? How is that possible?

4. What sort of person would make a good leader for the Cougars?

5. Do you think the Cougars might have any problems if they had a leader? Why?

VII. Termination

A. Why Exlude a Member?

*1 Why might a member be thrown off a club?

2. Sometimes a group will scapegoat one person, throw all the blame on him, even though it's not all his fault. Why does that happen?

B. Why Groups Break Up

1. If the Cougars keep losing all their games with the Jets, do you think their club might break up? Why?

*2. What things would make a club break up?

* Mandatory probes

Interview Questions - Who Comes First?

(Jacquette, 1979)

1. What do you think the problem is in this story?

*2. Do you belong to any groups like a band? How about clubs, sports teams or school groups? What about a group of your friends that hang around together, is that kind of like a group? What kind of things do you do? (Use this information for probing personal knowledge of remaining group relations issues.)

I. Formation

A. Why Join or Form Groups?

*1. What do you think Marty should do, stay in the band and give up some of his other interests or go his own way and let the band fall apart? Why?

*2. Why do you think Marty and the rest of the band want to be in a group? Anything besides just playing music? Why do people like to be in a group in general?

B. How Are Groups Formed--How Does One Join?

*3. Do you think it would be easy or hard to become a member of a group that was already together, like a club or friends that hang around together? Why?

4. When the band first started out it was just a bunch of people wanting to play music. What does it take to turn that bunch into a real close group? Why? Anything else? Do you think it would be easy or hard to get a group, like a band or club started? Why? What kind of problems might you run into?

*5. Sometimes when a person joins a group there are things they have to do before they are let in called initiations. Why do you think groups do that?

What Type of Person as a Group Member?

6. If the band wanted to replace Marty, what kind of person should they get? Anything other than being a good player? Why would those things be important?

*7. What kind of qualities should you look for in a person who will make a good member of a group?

II. Cohesion

*1. What do you think it will take to keep the band together? Why? What keeps a group of friends together, what keeps it from just falling apart?

*2. Do you think something like team spirit or group spirit would help the band stay together? Why? What is team or group spirit? (If S does not know concept, say: a feeling that they are all part of the same group.) How do you get group spirit going? Why is it often important to have group spirit in a group?

*3. It seemed like Marty's loyalty to the band was pretty important to everyone. Why would that be? Is a member's loyalty usually pretty important to a group? Why? What is loyalty anyway? (If S does not know concept, say: a feeling that each person will stick with the group no matter what.) Does loyalty help a group stay together? Why?

4. What makes members of a group like the band get along well? What makes friends who are all part of a group that hangs around together get along well?

III. Conformity

*1. One problem that sometimes happens in groups is that a person will go along with the group, even though he doesn't really want to, just because the rest of the group is doing it. Why does that happen, anyway?

*2. Is it better when people in groups are pretty much the same or when they are different from each other? In what ways should they be the same? In what ways should they be different?

3. Is it good or bad when one member is different from everyone else in the group?

IV. Rule Orientation

*1. Does it sometimes help a group, like the band, to have some kind of rules? Why might rules help a group?

2. Why would you need rules when you have a group, but not when it is just between two friends?

3. What kind of rules should a group have?

*4. Should all members of the group obey the rules? Why?

V. Decision-making and Organization.

*1. What is the best way to decide what rules a club might have? Should the leader decide or should everybody help decide? Why?

*2. How should the band decide what they are going to do, like where they are going to play and how often they are going to rehearse?

3. Is voting a good way for a group to decide? Why? Is it better when everyone votes the same or is it enough to have a majority (where a little more than half vote one way)? Why might it be better if everyone votes the same way?

4. What should a group do if all the members don't agree on what is the best plan?

*5. What things make a team or band work well together? Would teamwork help? What is teamwork in a group?

VI. Leadership

*1. Is it better when a group like a club or band has a leader or when everyone is the same? Why?

*2. Why might a leader be important to a group?

3. Could a group have more than one kind of leader?

4. What sort of person makes a good leader for a group?

*5. Are there any problems in having a leader for a group?

VII. Termination

A. Why Exclude a Member

*1. For what reasons might someone be thrown out of a group?

2. If everyone thinks Marty is a goof-off, what do you think will happen to him? What happens to a person when everyone thinks something bad of him?

*3. Sometimes a group will scapegoat one person, throw all the blame on him, even though it's not all his fault. Why is that, anyway?

B. Why Groups Break Up

1. Could Marty's not showing up for practices and meetings make the group break up? Why?

2. Why was it that when Marty wasn't there the other members of the band started getting mad at each other?

*3. What things make a group break up?

*Mandatory probes

APPENDIX I

DIRECTIONS FOR

SOCIOMETRIC SURVEY

Appendix I

Directions for administering sociometric survey

The sociometric survey should be administered after the multiple-choice instrument. The students will need the multiple-choice instrument to fill out the coding information.

Give students a list of class members' names with an alphabetical code beside each name (e.g. A-John Jones, B-Cary Care, etc.). If there are more than 26 students, go to double codes (e.g. AA) This may be written on the chalkboard if lists are not available. Ask students to write the code for their own name on the multiple-choice form and the sociometric form.

Read sociometric questions to students and ask them to choose members of their class who fit the description and fill in the code rather than the person's name. Emphasize that 1st choice means their most preferred, second most preferred, etc. Students may choose the same names/codes for different questions, but a name/code can be listed only once for each question.

Ask students to keep their choices confidential, and not to say names aloud while making their choices.

APPENDIX J

SOCIOMETRIC QUESTIONS

Appendix J

Sociometric Questions

Code_____

Name three people in this class you believe are good group members. They are the people you would like to work with in a group.

1st Choice Code_____

2nd Choice Code_____

3rd Choice Code_____

Name three people in this class you believe are good leaders of groups and teams. These are the people you would like to be in charge of your group or team.

1st Choice Code_____

2nd Choice Code_____

3rd Choice Code_____

APPENDIX K

COVER LETTER TO SCHOOL ADMINISTRATORS

Dear ,

Those of us who work in the schools find ourselves dealing with children's and adolescents' peer group interactions on a daily basis. For my doctoral dissertation at Oklahoma State University, I am studying fifth, eighth, and eleventh grade students reasoning about peer group interactions. The information from this study may be helpful for teachers, counselors, and administrators to better understand children's and adolescents' behavior in groups.

I need fifth, eighth, and eleventh grade students' responses to the enclosed multiple-choice instrument designed to survey children's and adolescents' ideas about their peer groups. Your school has been selected at random to participate in the study. Individual students and school districts will not be identified in the results. I will supply a letter which can be used to obtain parental permission for students to participate in the study if you deem this necessary.

The instrument can be administered to intact classrooms of students by teachers or myself and will take approximately thirty minutes to complete. Please complete the enclosed stamped, addressed postcard indicating your preference and return it to me within the next week.

Sincerely,

Greta Slaton

Enclosures (2)

APPENDIX L

REPLY POSTCARD

_____My school will participate in the study. Teachers will administer the instrument. Please call me at _____ to make arrangements for mailing the instruments.

_____My school will participate in the study. I would prefer that you come and administer the instruments. Please call me at _____ to set a date for the data collection.

_____My school will not participate in the study.

Name_____

School_____

APPENDIX M

PARENTAL PERMISSION LETTER

Dear Parent:

For my doctoral dissertation at Oklahoma State University, I am studying students' ideas about their peer groups. Your child's school has been selected at random to participate in the study.

Students will be asked to complete a fourteen-item survey by marking the response they believe best completes a sentence about peer group organization. An example of a question on the survey is:

People get together in groups because:

(a) they want to do a certain activity.
(b) they like the group.
(c) they can learn more in a group.
(d) they can meet other people.

Students will not be asked to put their names on the surveys. They will be asked to give their age, grade, and parents' occupation. All information will be kept confidential. Individual students and school districts will not be identified in the results.

Please complete the form below and return it to your child's chool.

Sincerely,

Greta Slaton

- -

I (do do not) give permission for my child _____

to participate in the study about peer group organiation.

Signed_____
Parent or Guardian

VITA 2

Greta Pritchett Slaton

Candidate for the Degree of

Doctor of Education

Thesis: DEVELOPMENT AND VALIDATION OF AN OBJECTIVE INSTRUMENT MEASURING INTERPERSONAL REASONING IN CHILDREN AND ADOLESCENT PEER GROUPS.

Major Field: Counseling and Student Personnel

Biographical: Born in Idabel, Oklahoma, October 16, 1943, the daughter of Bruce and Opal Pritchett

Education: Graduated from Valliant High School, Valliant, Oklahoma, in May 1960; received Bachelor of Science degree in Elementary Education from Southeastern State College in 1963; received Master of Education in Guidance and Counseling from Southeastern State College in 1971, enrolled in doctoral program at Oklahoma State University, 1981-1985; completed requirements for the Doctor of Education degree at Oklahoma State University in July, 1985.

Professional Experience: Cashier, Southeastern State College, 1963-64; first and second grade teacher, Achille Public Schools, 1964-65; first grade teacher, Chinle Public Schools, Chinle, Arizona, 1965-1970; Counselor/prescriptive-teacher, Cushing Regional Education Service Center, 1973-74; elementary school counselor, Cushing Public Schools, 1974-75; elementary school counselor, Western Heights Public Schools, 1975-1981; elementary school counselor, Stillwater Public Schools, 1981-83; graduate teaching assistant, Department of Applied Behavioral Studies in Education, Oklahoma State University, 1983-85. Assistant Professor, Department of Psychology and Special Education, Northeastern State University, 1985.

Organizations: American Association of Counseling and Development; Association for Counselor Education and Supervision; American School Counselor Association.