

VALIDITY OF THE KOHN SOCIAL COMPETENCE
SCALE FOR USE WITH ELEMENTARY SCHOOL CHILDREN

by

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Morag E. Gornall, 1980

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Abstract

The Kohn Social Competence Scale (Kohn and Rosman, 1972a, 1972b), which measures a child's level of social-emotional functioning in the classroom, was designed for use with pre-school children. Factor analysis of the items revealed two orthogonal factors which were labelled Interest-Participation vs. Apathy-Withdrawal and Cooperation-Compliance vs. Anger-Defiance. The Kohn Social Competence Scale assesses a child's level of social-emotional functioning through teacher ratings of the child's interactions with peers and adults and the use the child makes of the classroom environment for learning.

Over the last fifty years, the two factors identified by Kohn and Rosman have repeatedly emerged from research into emotional disturbance in children (Kohn, 1977). These dimensions have been shown to have wide generality across age groups, settings, instruments and research methods (Kohn and Rosman, 1972b; Peterson, 1961; Walker, 1967).

Kohn's research (Kohn, 1977) has provided empirical evidence for the generality and clinical relevance of the two factor model of social-emotional functioning at both the preschool and elementary school levels. In addition, a third bipolar factor found by Schaefer and Aaronson (1966) in an elementary school population (labelled Task Orientation), has been demonstrated by Kohn (1977) to be a valid dimension with elementary school children, despite the high correlation between this factor and the Kohn factor Cooperation-Compliance vs. Anger-Defiance.

The purpose of the present study was to validate the Kohn Social Competence Scale for use with elementary school children. Not only would this provide additional evidence for the persistence of the two-factor model but would mean that the Kohn Social Competence Scale could ultimately be used by elementary school teachers.

The 64 item Kohn Social Competence Scale was used in the present study. In this version of the scale, items dealing with nap-time, snack-time, and other aspects of day-care inappropriate to the elementary school were eliminated from the 73 item version.

Teachers (n=117) from a local school district rated 210 grade two children and 189 grade five children on the Kohn Social Competence Scale. The children were randomly selected from within the grades two and five populations of the school district. Two grade levels were chosen for analysis to see if a difference in the factor structure existed between the primary and intermediate grades of the elementary school.

The matrices of Pearson product - moment correlations, computed from the item level data of both the grades two and five samples, were subjected to principal components analysis followed by a varimax rotation, to image analysis followed by varimax rotation, and to image analysis followed by an oblique Harris-Kaiser solution.

These analyses suggested that three oblique bipolar factors accounted for the variance in the item level data at both grade levels. The factors were identified as Cooperation-Compliance vs. Anger-Defiance, Interest-Participation vs. Apathy-Withdrawal and High vs. Low Task Orientation.

In the three factor solutions, factor I was confounded by the presence of the third factor. Since the purpose of the study was to validate the scale for use, it was decided to work with the first two factors only. The scale was reduced from 64 items to 44 items better to meet Thurstone's criteria for simple structure (Thurstone, 1947).

Directions for future research include an examination of the three and two-factor models in elementary school populations and an investigation of the correlates of the factors. Finally, Canadian elementary school norms might be collected for the 44 item Kohn Social Competence Scale.

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CHAPTER I

Introduction

The Kohn Social Competence Scale (Kohn and Rosman, 1972a, 1972b), which measures a child's level of social-emotional functioning, was designed for use with pre-school children. Factor analysis of the items revealed two orthogonal factors which were labelled Interest-Participation vs. Apathy-Withdrawal and Cooperation-Compliance vs. Anger-Defiance. Over the last fifty years, the two factors identified by Kohn and Rosman have repeatedly emerged from research into emotional disturbance in children (Kohn, 1977). These dimensions have been found to have wide generality across age groups, instruments and research methods (Kohn and Rosman, 1972b; Peterson, 1961; Walker, 1967). It was felt, therefore, that the two factors identified by Kohn and Rosman at the pre-school level, using the Kohn Social Competence Scale, might well be found in an elementary school population with the same instrument. This would provide further evidence for the generality of the two-factor model and would validate the Kohn Scale for use at the elementary school level.

The Scale

The Kohn Scale focuses on peer and teacher relationships and the child's interaction with his pre-school environment. The research

suggests that these relationships are among the best predictors of both present and future emotional stability (Cowan, Pederson, Babigian, Izzo and Trost, 1973; Mendick and Schulsinger, 1969; Roff, Sells and Golden, 1972; Rolf, 1976; White, 1975). Kohn, in his longitudinal study of social competence, found that the Kohn Social Competence Scale was valid and reliable at the pre-school level and that the two dimensions (Briefly described above) have long-term stability and predictive validity (Kohn, 1977).

The scale comes in two forms, a 73 item form and a 64 item form. The 64 item form was developed for use in half-day pre-school programs. Items dealing with nap-time, snack-time and other aspects of full-day pre-school were eliminated by the authors.

The Problem

In the present study, the validity of the 64 item Kohn Social Competence Scale for use with elementary school children was investigated. Cattell (1952) stated, "...the rediscovery of the same factors despite a) partially different test batteries b) populations of different age, education or dispersion c) independent factorizations and rotations, is a proof that they have an existence as something more than mere mathematical equivalents - that they are in fact functional unities in nature" (p.90). If the same two factors were found at the elementary school level as at the pre-school level, it would provide good evidence for the validity of the Kohn Social Competence Scale at the elementary school level. It would also provide additional evidence for the

persistence of the two-factor model of social-emotional functioning.

It was proposed, therefore, that a factor analysis be performed on the inter-item correlations of the 64 item Kohn Social Competence Scale, at the elementary school level. Two grade levels were used, grades 2 and 5, thereby providing a comparison between the factor patterns at the primary and intermediate levels, as well as the pre-school level.

Definition of Terms

In this section definitions are given of terms which occur frequently in the text.

Social Competence:

Social competence has been variously described in the literature. O'Malley (1977) has defined social competence as "productive and mutually satisfying interactions between a child and peers," while Anderson and Messick (1974) identified twenty-nine dimensions of social competence which include personal care factors, cognitive skills, motor skills, personal relationship skills, attitudes, motivation, consolidation of identity and control of self. In the present study which involved a classroom setting, "social competence" was defined conceptually as the ability to succeed in interpersonal relationships and the ability to use the classroom environment effectively for learning. The socially competent child will be well liked by both peers and adults.

Primary School Children:

Primary school children are those children who are enrolled in grades 1 through 3 of the public and private school systems. In the present study, grade 2 students were used as subjects.

Intermediate School Children:

Intermediate school children are those children who are enrolled in grades 4 through 7 of the public and private school systems. In the present study, students from grade 5 were used as subjects.

Pre-school Children:

Pre-school children are those children from ages 3 to 6 years who are not yet enrolled in kindergarten.

Hypotheses

It was hypothesized that the factor structure of the 64 item form of the Kohn Social Competence Scale used at the elementary school level would be the same as that found by Kohn and Rosman (1972b) at the pre-school level. More specifically, it was hypothesized that the same two orthogonal bipolar factors identified by Kohn and Rosman (1972b) at the pre-school level would be identified in a population of second grade elementary school children and in a population of fifth grade elementary school children.

Rationale of the Hypotheses

It was anticipated that factor analysis of the item level data of an elementary school population, using the Kohn Social Competence Scale, would reveal the same two factors as were found at a pre-school level, since these two factors have consistently emerged from behavioural research with children of different ages (Kohn, 1977). Previous research revealed that the two-factor model accounted for much of the variance in social-emotional functioning at the elementary school level (Digman, 1963; Peterson, 1961; Schaefer, 1971). Further, Kohn (1977) demonstrated the predictive validity of his two factors up to the fourth grade of the elementary school (Kohn, 1977). In his long term study spanning five years, Kohn demonstrated that a child who scored highly on Apathy-Withdrawal or Anger-Defiance in day-care was likely to be judged emotionally impaired and in need of treatment in elementary school. Similarly, good evidence was found for persistence of type of emotional impairment.

CHAPTER II

Review Of The Literature

Competence

White (1960) defined competence as the organism's "fitness or ability to carry on those transactions with the environment which results in its maintaining itself, growing and flourishing" (p.100). From an examination of the literature on animals and through his observations of young children, White (1960) suggested that the rudiments of competence emerged from the playful, exploratory activities of animals and young children. He noted that such activities continue even when all "deficit drives" have been satiated, and are thus based upon intrinsic motivation. The adaptive significance of such behaviour is that it promotes extensive growth and development of competence, beyond that which is learned through drive reduction. The results of activities based upon intrinsic motivation are rewarding to the individual and these cumulatively positive experiences build the individual's sense of competence.

Garmezy (1970, 1971) has explored the concept of competence or "invulnerability" in the high-risk child. Such children, in spite of familial and environmental disadvantages, contrive to develop social and intellectual strengths. These strengths consist of good peer

relations, academic achievement, commitment to education and life goals, and early success at work (Garmezy, 1970, 1971).

Williams (1979) described competence as "a term that connotes fitness, ability, confidence, experienced success in undertakings, realistic optimism, and sustained effort in dealing with one's physical and social environments" (p.167).

Thus, the concept of competence includes not only external criteria such as job success and good peer relations but also a "sense of competence" which is a fairly stable feature of the competent personality. Empirical examination of the concept of competence has been concentrated on identification of both external criteria of competence and the personal attributes of individuals considered to be competent.

Social Competence

Use of the term "social competence" has been variable and confused (O'Malley, 1977). Some authors confuse social competence with competence and thus include cognitive and motor skills in their definitions (Anderson and Messick, 1974). Others restrict the term "social competence" to mean strength in interpersonal relationships (O'Malley, 1977). This is the definition adopted in the present research.

This confusion over terms has arisen partly because of the dominance of three different research perspectives in the literature.

According to O'Malley (1977), these three perspectives are 1) the ethological viewpoint, 2) the social interaction theory viewpoint, and 3) the structure of personality viewpoint.

Ethologists view competence with a regard to the adaptive value of behaviour. For example, in the classroom, the child must adapt to classroom norms if (s)he is to "survive".

In terms of social interaction theory, the roles a person plays or his modes of action determine the responses of others. Depending on the situation a person will deploy a role from his repertoire, and if the interaction is to be maintained, an implicit or explicit agreement must be reached on any identities assumed. The socially competent individual maintains both his own identity and that of the other person in the interaction through the ability to take the role of the other, possession of a varied repertoire of lines of action, and the availability of personal resources to apply appropriate tactics in particular situations.

The "structure of personality" viewpoint defines social competence in terms of personality constructs (O'Malley, 1977). It has been found that two variously-named, orthogonal factor-analytic dimensions accounted for most of the variance in personality ratings (Becker and Krug, 1964; Peterson, 1960; Schaefer, 1961).

The Kohn Social Competence Scale (Kohn and Rosman, 1972b) emerged from this research perspective. Items were written to reflect the two orthogonal dimensions. The two-factor structure of the scale was subsequently validated through factor analysis. The Kohn Social Competence Scale, however, also reflects the other two research

perspectives identified by O'Malley. The items are based on the teachers' observations of the child's classroom behaviour, his/her ability to adapt to the classroom environment (ethological perspective), and on observations of the child's ability to interact both with the other children and the teacher (social interaction theory).

The Two-factor Model

Since the Kohn Social Competence Scale was developed from the two-factor model, the value of the scale is dependent upon the value of the model. For this reason, the two-factor model will be examined in some depth.

Over the past fifty years, two behavioural syndromes have repeatedly emerged both from research into emotional disturbance in children and from the classification systems used by clinicians in child guidance clinics and hospitals.

A summary of relevant research has been provided in Tables I and II. The children in the research studies summarized ranged in age from 3 to 18 years and have been selected from clinic, normal or delinquent sub-populations.

Clinic children - these children have I.Q.'s above 80, are free from organic brain damage, and have been diagnosed at child guidance centres or hospitals as having emotional and/or behavioural problems.

Delinquent children - these children have I.Q.'s above 80, are free from organic brain damage, and have been sentenced and/or institutionalized for law-breaking.

Normal children - these children have I.Q.'s above 80, have no signs of organic brain damage, and have not been diagnosed as having emotional or behaviour disorders nor been sentenced for breaking the law.

In Table I, examples are given of different labels used by clinicians to categorize the children in their research samples. Generally, these children have been classified into two groups: those with acting-out behaviour problems and those with shy-withdrawn behaviour problems. These two groups of children have been assigned different labels by different researchers.

Factor-analytic studies have supported the intuitive classifications of the clinicians. In Table II, it can be seen that in studies which used children from different populations, of different ages, and which used different factor analytic methods, two broad factors emerged, which are strikingly similar to those of the clinicians. In studies where more than two factors emerged, the first two factors are usually identical to the two factors under discussion. In populations of normal children, factors representing the range from healthy to disturbed functioning are revealed. These factors are bipolar.

It can be seen from Table II that the two-factor model has considerable generality across time, research methods, and populations. Rutter (1967) noted that the behavioural dichotomy identified by the two-factor model is "perhaps the most universal...of all the diagnostic distinctions made in child psychiatry" (p.164).

Table I. Classification by Clinicians on the Basis of Symptoms

Author(s)	Syndrome Labels		Population
Reich (1925)	Neurotic delinquent	Psychopathic delinquent	Delinquent
Paynter and Blanchard (1929)	Personality difficulty	Behaviour difficulty	Clinic
Ackerson (1931, 42)	Personality problems	Conduct problems	Clinic
Hewitt and Jenkins (1946)	Over-inhibited behaviour	Unsocialized aggression	Socialized delinquent behaviour
Lewis (1954)	Neurotic symptoms	Delinquent/psychotic/psychopathic symptoms	
Morris, Soroker and Burrows (1954)	Internal reactors	Mixed reactors	External reactors
Bennett (1960)	Neurotic	Delinquent	Clinic
Achenbach (1966)	Internalizing symptoms	Externalizing symptoms	Clinic
Robins (1966)	Non-antisocial behaviour	Antisocial behaviour	Clinic
Ricks and Berry (1970)	Withdrawn	Delinquent	Clinic
Rutter, Tizard and Whitmore (1970)	Neurotic disorder	Conduct or Antisocial disorder	Clinic
Shea (1972)	Internalizing symptoms	Externalizing symptoms	Clinic

Table II. Summary of Factor Analytic Studies Related to Children's Social and Behavioural Functioning

Authors	n	Gr/Age	Sex	Population	Source	Analytic Method	Outcome
Himmelweit (1952)	2113 1181	n.a. ^a n.a.	M F	Clinic	Behaviour Traits	Centroid Analysis	I)Neuroticism II)Intro- Extroversion
Peterson, Quay & Cameron (1959)	116 115	n.a. n.a.	M M	Delinquent Nondelinquent	Delinquency Rating Scales	Orthogonal Quartimax	I)Psychopathy II)Neuroticism IV)Inadequacy III)Family Dissonance V)Scholastic Maladjustment
Peterson (1961)	831	K-6	M/F	Normal	Teacher ratings of behaviour	Centroid & Kaiser Varimax	I)Conduct Problems II)Personality Problems
Digman (1963)	102	Gr.1-2	M/F	Normal	Teacher ratings of personality	1)Principal Axes & Varimax 2)Second Order	I)Successful vs. Unsucc. Socialization II)Intro-vs. Extroversion
Patterson (1964)	100	7-12 yrs.	M	Clinic	Behavioural observations	Wherry-Gaylord Procedure	I)Hyperactive II)Withdrawn III)Immature IV)Aggressive V)Anxious

Table II. (continued)

Authors	n	Gr/Age	Sex	Population	Source	Analytic Method	Outcome
Ogilvie (1969)	34	3-6 yrs.	M	Normal	Behavioural observations	n.a.	I)Peer interaction & ego strength vs. ego weakness II)Adult orientation & pride vs. self- doubt & hostility to adults
Kohn & Rosman (1972b)	407	3-6 yrs	M/F	Normal	Teacher ratings on Kohn Social Competence Scale	Principal Components Analysis Scree Test Kaiser Varimax	I)Interest- Participation vs. Apathy-Withdrawal II)Cooperation- Compliance vs. Anger-Defiance
Kaufman, Swan & Wood (1979)	194	3-13 yrs.	M/F	Clinic	Teacher & parent ratings of behaviour problems	Principal Factor Analysis Criterion for extraction n.a. Kaiser Varimax	I)Conduct Problem II)Inadequacy- Immaturity III)Personality Problem

^a n.a. - not available.

Validity of the Two-factor Model

Kohn (1977) suggested that the two factor model is useful only if it can be shown that the two factors are differentially related to other important variables such as parental care, sex differences, and achievement, and have different long-term outcomes.

Parental care. The research suggests that maternal over-protection or repression may result in withdrawn behaviour (Hewitt and Jenkins, 1946; Kohn and Rosman, 1971), while maternal rejection or neglect may result in acting-out behaviour in the child (Kohn and Rosman, 1971; Morris, Escoll and Wexler, 1956).

Sex differences. Acting-out problems have been found more commonly in boys than in girls, while problems of passivity and shyness have been found to be more prevalent amongst girls (Bremer, 1951; Cullen and Boundy, 1966; MacFarlane, Allen and Honzik, 1954; Rutter et al., 1970). Research also suggests that emotional problems tend to be more prevalent amongst boys than amongst girls (Bower, 1969; Rogers, 1942; Ullman, 1952; Wickman, 1928).

In a longitudinal study spanning the five years from preschool to fourth grade, Kohn (1977) found that while boys were more disturbed than girls on both Apathy-Withdrawal and Anger-Defiance, within-sex differences demonstrated that boys were more often impaired on Anger-Defiance while girls were more often impaired on Apathy-Withdrawal.

School achievement. With young children, underachievement has been linked with Apathy-Withdrawal rather than Anger-Defiance (Emmerich, 1977; Kohn, 1968; Richards and McCandless, 1972). However, Kohn (1977) reported that by the end of the second grade the data for girls showed a correlation between Anger-Defiance and under-achievement. He argued that since angry-defiant behaviour is less socially acceptable in girls, girls may develop a negative relationship with the teacher earlier than boys. On the other hand, angry-defiant behaviour is more socially acceptable in boys (Kagan, 1974), and a relationship between Anger-Defiance and low achievement may not manifest itself until a later age. With adolescents, antisocial behaviour has been associated with underachievement (President's Commission on Law Enforcement and Administration of Justice, 1967; Rutter et al., 1970). This latter finding suggests, then, that a relationship between acting-out behaviour and school achievement is not fully established in both sexes until adolescence.

Socio-economic status. Kohn (1977) reported that children from the lowest social class were found to have higher scores on the Apathy-Withdrawal dimension than were children from higher social classes. This relationship was found mainly in girls and apathy-withdrawal tended to increase as they matured. A relationship between social class and aggressive behaviour was not established.

Intelligence. Non-significant correlations of .11 and .08 were found between Stanford-Binet IQ scores and Apathy-Withdrawal and Anger-Defiance (Kohn, 1968). This result was found, however, with a population of children with extreme scores on Apathy-Withdrawal and Anger-Defiance.

Peer relationships. The research suggests that children who act out tend to have poor peer relations (Kohn and Parnes, 1974; Rolf, 1972; Shea, 1972). Shy, withdrawn children also have poor peer relations but less so than acting out children (Kohn and Parnes, 1974; Rolf, 1972). O'Connor, Dollinger, Kennedy and Pelletier-Smetko (1979) reported that anxious inhibited boys indulge in more prosocial behaviour than uninhibited boys. The interactions of angry-defiant children tend to be verbal and negative-hostile (Kohn and Parnes, 1974).

Race. In his longitudinal research where three quarters of the 1232 subjects were either Black or Puerto-Rican, Kohn (1977) reported that the scores of children from minority group backgrounds were no higher than white children on Anger-Defiance or Apathy-Withdrawal, over a five year period.

Long-term projections. The research suggests that children exhibiting non-antisocial behaviour problems (apathy and withdrawal) are likely to have relatively stable adult lives (Michael, Morris and

Soroker, 1957; Morris, Soroker and Burrows, 1954; Robins, 1966; Shea, 1972). Conversely, children exhibiting antisocial symptoms (anger-defiance) are more likely to have criminal records, psychiatric records, and a history of aggression and rule-breaking (Michael, Morris and Soroker, 1957; Morris, Escoll and Wexler, 1956; Robins, 1966; Shea, 1972). Extreme apathy and withdrawal, in combination with anti-social aggressive behaviour, may be most predictive of very serious adult pathology (Michael, Morris and Soroker, 1957; Ricks and Berry, 1970).

The above studies all indicate that antisocial behaviour shows greater long-term stability than withdrawn behaviour in groups of children referred for social and/or behavioural problems. Kohn (1977) reached the same conclusion after a five-year study of normal children.

An Alternative Model - Three Factors

In some factor-analytic studies, a third factor was found, the label of which varied from study to study. In studies involving classroom settings, this third factor has been characterized by passivity, laziness, and lack of interest in the environment (Kaufman, Swan and Wood, 1979; Pimm, Quay and Werry, 1967; Quay and Quay, 1965; Ross, Lacey and Parton, 1965; Schaefer and Aaronson, 1966). This factor has been labelled "Task Orientation" by Schaefer and Aaronson (1966).

While the Kohn Social Competence Scale was not designed to measure this third factor, Kohn acknowledged its importance in learning environments by measuring task orientation in his longitudinal study (Kohn, 1977) with the Schaefer Classroom Behaviour Inventory factor III, High vs. Low Task Orientation (Schaefer and Aaronson, 1966).

Kohn (1977) found that the dimensions of Cooperation-Compliance vs. Anger-Defiance and High vs. Low Task Orientation were correlated, since they both assessed the child's ability to function within the rules and limits of the classroom. However, a relationship was found between underachievement and Low Task Orientation but not between underachievement and Anger-Defiance. This suggested that the dimensions were independent to some extent. Similarly, the two dimensions were found to predict uniquely to the long-term persistence of a child's emotional impairment (Kohn, 1977).

Kohn (1977) suggested that a circumplex model could account for such additional factors without destroying the validity of the two-factor model. Schaefer (1961, 1971) and Emmerich (1977) have shown that when the items which make up the factor scores are plotted to show their relationships with the two factors, they tend to form a circle (Fig. 1).

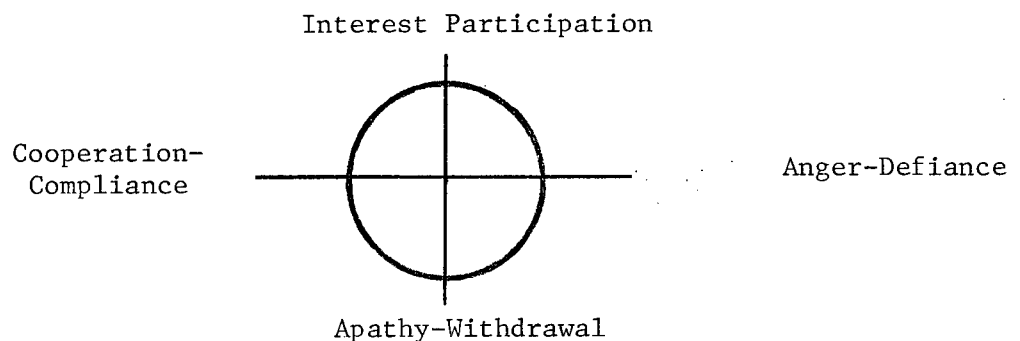


Figure 1. The Circumplex Model.

Emmerich stated that "behavioural changes on a particular gradient will be sequentially ordered in accordance with the proximity principle" (p.21). That is, a child identified as high on Interest-Participation, who did not remain so, would either become Cooperative-Compliant or Angry-Defiant, with the quality of the environment determining the direction of the change.

It is possible to add other independent axes e.g., High versus Low Task Orientation, to the circumplex model. It would thus assume a three-dimensional, spherical shape, since the Task Orientation dimension is orthogonal to the Interest-Participation vs. Apathy-Withdrawal dimension. Thus, additional personality concepts can be included in the model at different angles and at various points around the hypothetical ring which surrounds the two axes. The model can therefore become as complex, yet psychologically meaningful, as the research requires.

The Kohn Social Competence Scale

The Kohn Social Competence Scale was developed for use with pre-school children (Kohn and Rosman, 1972a, 1972b). The scale was designed to measure classroom behaviour in terms of a child's interpersonal functioning. The items cover the entire range from healthy to disturbed functioning and focus on the child's relationship with his peers, with his teacher, and the use the child makes of the classroom environment for learning.

The research suggests that peer relationships are of prime importance in the development of emotional stability (Cowen et al., 1973; Kirchner and Vondraceck, 1975; Kohn and Parnes, 1974; Mendick and Schulsinger, 1969; Morris, Escoll and Wexler, 1956; Roff, Sells and Golden, 1972; Rolf, 1976; Shea, 1972). A child's relationship with his teacher and his adaptation to the school environment have also been identified as important variables in a child's emotional development (Erikson, 1963; Richey and McKinney, 1978; White, 1975).

The Development of the Instrument

Chance (1959) described four categories of interpersonal relationships: positive active, positive passive, negative passive, and negative active. Using these four quadrants, Kohn and Rosman (1972b) wrote 200 items on the basis of their long experience with nursery schools and day cares. Items were rated by the teacher on a five point frequency scale ranging from "Hardly Ever or Never" to "Very Often or Always". Teachers' ratings are reliable (Miller, 1972; Roff, Sells and Golden, 1972; Yellott, Liem and Cowan, 1969) and valid (Bower, 1969).

After pretesting on 45 children, only items with "sufficient" interrater reliabilities were retained, leaving 90 items of the original 200 (Kohn and Rosman, 1972b). Unfortunately, Kohn and Rosman do not expand upon the criterion of "sufficient".

In order to determine the major dimensions of the Kohn Social Competence Scale, the 90 items were then subject to factor analysis

procedures (Kohn and Rosman, 1972b). Children attending six day care centres in New York City (n = 407) were rated independently by the two full-time teachers in each classroom.

From the correlation matrix of the items, fifteen centroid factors were extracted of which six, identified using the Scree Test (Cattell, 1966), were rotated by the Varimax procedure (Kaiser, 1958). It was found that the first two factors accounted for 76% of the total common variance. Thus, the authors chose to retain these two factors only. Both were bipolar and were labelled:

Factor I = Interest-Participation versus Apathy-Withdrawal

Factor II = Cooperation-Compliance versus Anger-Defiance

Use of the Social Competence Scale as part of a five year longitudinal study necessitated a slight revision of the scale (Kohn, 1977). Since communication with the participants in the longitudinal study was to be by mail, the instruments had to be self-administering. Fifteen pairs of teachers in fifteen pre-school classrooms were asked to complete the scale. Discrepancies between pairs of teachers were discussed and individual items and instructions were rewritten or eliminated to minimize ambiguities. The revised Social Competence Scale consisted of 73 items.

This 73 item scale was modified to 64 items for half-day pre-school and kindergarten programmes. Those items eliminated were those which were inappropriate to half-day programmes, dealing with nap time and snack time.

Reliability

With a population of 407 day-care children, interrater correlations between the two teachers in each classroom were .77 for factor I and .80 for factor II (Kohn and Rosman, 1972b).

Interrater reliabilities were as follows for four ratings made during the longitudinal study (Kohn, 1977):

Table III. Interrater Reliabilities

Factors	Rating 1 N = 1232	Rating 2 N = 1074	Rating 3 N = 556	Rating 4 N = 604
Social Competence Scale Factor I	.74	.71	.70	.79
Social Competence Scale Factor II	.76	.77	.76	.82

In terms of test - retest reliability, Kohn and Rosman (1972a) obtained correlations of .44 and .56 for factors I and II respectively when the children were rated after a one-year interval by different teachers in day care.

Validity

As evidence of the validity of the factors, the results of a hierarchical multiple regression analysis showed that pre-school Apathy-Withdrawal and Anger-Defiance scores were highly correlated ($p \leq .001$) with global impairment and referral ratings obtained five years later. Similarly, impairment on specific syndromes persisted. It was also found that preschool global impairment ratings accounted for only a small amount of variance five years later, after the syndrome measures had been partialled out. This suggests that the syndrome measures accounted for most of the behaviour traits that teachers felt were indicative of emotional disturbance (Kohn, 1977). As further evidence of validity boys attending public kindergarten and day care centres in New York City ($n = 287$) were rated by their classroom teachers on the Kohn Social Competence Scale and the Schaefer Classroom Behaviour Inventory (Kohn, 1977). Correlations between corresponding factors of the Kohn Social Competence Scale and the Schaefer Classroom Behaviour Inventory were .80 and .83 for factors I and II, respectively. Correlations between non-corresponding factors were higher than might have been expected, at least for Social Competence Factor I vs. Schaefer Factor II which was found to be .48. On the other hand, the correlation between Social Competence Factor II and Schaefer Factor I was .15.

Kohn (1977) demonstrated that two groups of children with known psychiatric disorders were scored more highly on Apathy-Withdrawal and

Anger-Defiance than the randomly selected day-care sample from the longitudinal study. Secondly, as evidence of validity, the day-care sample was divided into five reference groups on the basis of the teachers' perceptions of their emotional stability. The five reference groups were:

1. Well-functioning group
2. Moderately well-functioning group
3. Poorly functioning group
4. Remedial treatment group
5. Therapy group

Apathy-Withdrawal and Anger-Defiance scores of the three disturbed groups were significantly higher than the scores of the two healthy groups, both for boys and girls.

As further evidence for the validity of the syndrome measures, i.e., that changes in the syndrome scores truly reflect changes in the level of disturbance, syndrome scores were correlated with teachers' global impairment ratings at each grade level. For each syndrome, r values were found to be sizeable and stable, ranging from .41 to .76.

The Importance of Kohn's Research

Kohn's research has demonstrated the validity of the two-factor model of social-emotional functioning. It was shown (Kohn, 1977) that each dimension was a valid clinical indicator, that the dimensions were

relatively independent, and that they predicted uniquely to themselves and that they were differentially related to underachievement. The two syndromes were found to include almost the entire range of behaviour considered important to emotional impairment in a classroom setting. Secondly, Kohn's research demonstrated that Anger-Defiance and a third factor, Low Task Orientation, were correlated. However, they were found to be discriminable dimensions of children's functioning and to produce different predictions regarding longitudinal persistence of emotional impairment.

The two fundamental syndrome patterns identified by Kohn, and by much previous research, permit the identification of children in the population whose tendency towards problems in both emotional and cognitive functioning make them a target group for intervention.

Kohn's research has brought attention to an area which is only now becoming popular with researchers, the functioning of the socially competent individual. His research indicated that many children in the sample remained "socially competent" over five years, despite adverse home circumstances. The two syndrome patterns would allow the most competent children to be identified and their potential realized.

Kohn's research has helped to clarify the relationship between social-emotional functioning and correlates such as school achievement, sex, and social class. It has given some indication of the permanence of childhood emotional problems and the importance of emotional variables in a classroom environment.

Finally, Kohn's research has established the reliability and validity of the Kohn Social Competence Scale itself, and has underlined the utility of such an instrument in a pre-school setting.

Summary and Directions

The Kohn Social Competence Scale is unique in that it is a bipolar scale which reflects the two-factor model, a model which has been shown to have validity in the area of personality functioning. Not only does the Kohn Scale identify the two low-competent groups, it also identifies the very competent children. The Kohn Scale has been found to be both valid and reliable at the preschool level, and has reasonable predictive validity up to the fourth grade of elementary school.

The research strongly suggests that the two bipolar factors identified by the Kohn Scale at the preschool level may well exist at the elementary school level. If these two factors could be identified at the elementary school level then one would have good evidence for the validity of the Kohn Scale for use with elementary school children.

CHAPTER III

Method

Introduction

In this chapter a description is provided of the population and sample who participated in this research. This is followed by a brief description of the Kohn Social Competence Scale. A more complete description of the development and validation of the scale was provided in the previous chapter. The procedure followed to collect the data is next presented. Finally, the data analysis procedures used to determine the factorial composition of the Kohn Scale are discussed.

Population

The research was conducted in a Lower Mainland, B.C. community. While this community developed largely as a dormitory suburb for people who work in Vancouver, commercial and industrial development is now taking place rapidly.

As shown in Table IV, this population is middle-class, whereas Kohn's sample was drawn from a metropolitan population of low socio-economic status (Kohn, 1977).

Table IV. Selected Demographic Characteristics
of the Research Population

N = 90,000

Characteristics	
<hr/>	
Population density by sq.km.	1,523.5
Rental Housing	26.0%
Single Detached Houses	68.0%
Mother Tongue other than English	16.4%
Single Parent Families	9.6%
Population under 25 yrs.	48.0%
Males Unemployed	6.5%
Females Unemployed	9.1%
Males with a University Degree	8.1%
Females with a University Degree	4.1%

Note: 1976 Census, Statistics Canada (1976).

The Schools

Introductory meetings were held with the principals and teachers of 41 of the 43 elementary schools in the research community. The two remaining principals felt that their schools had participated in enough research at that time. Of the 41, 38 agreed to participate in the study.

Education and occupation are often used as indices of social class (Hollingshead, 1957). Kohn (1977), for example, used mother's level of education to determine the SES level of each child in his sample. Since occupation was not available for the population, level of mother's education was also used in the present study. The percentage

of women with university degrees is listed in Table V for each census tract of the school district. The range varies from 1.2% to 6.4%. In the present study, one to two percent was classified as low SES, three to four percent as middle SES, and five to six percent as high SES.

The number of participating schools in each census tract has been indicated in Table V.

Table V. Percentage of Women with University Degrees within each Census Tract, SES Categorization of Census Tracts, and Number of Schools Drawn from each Census Tract

Census Tracts	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Percent	3.4	6.0	4.8	5.7	2.6	7.3	3.8	6.4	4.0	4.1	1.8	3.4	1.3	3.1
SES	M	H	M	H	L	H	M	H	M	M	L	M	L	M
No. of Schools	1	2	2	2	2	3	3	3	2	5	2	4	1	6

These schools adequately represented the socio-economic structure of the community. Of the five non-participating schools, two were from high SES tracts, two were from middle SES tracts and one was from a low SES tract. It was felt that the sample had not been biased in any way by the non-participation of these schools.

The Teachers

Sixty-two grade 2 and 55 grade 5 teachers volunteered to take

part in the study. Together these two samples represented 78.5% of the 149 teachers contacted at the introductory school meetings.

The Students

The students rated by their teachers were randomly selected from the grade 2 classes (n = 210) and the grade 5 classes (n = 189) taught by the cooperating teachers. The selection of these students is described below in the procedure section.

Kohn Social Competence Scale

The Kohn Social Competence Scale (Kohn and Rosman, 1972a, 1972b) was extensively described in the latter part of Chapter II. However, a brief summary of relevant research, describing the Kohn Social Competence Scale, will be given here.

The Kohn Scale was developed in two forms: a 73 item form and a 64 item form. The 64 item form is used with half day day-care and kindergarten programmes. Items dealing with nap-time and snack-time were eliminated from the 73 item form to produce the 64 item form.

The 64 item form was used in the present study (see Appendix I). The items deal with the child's relationship with his peers, his relationship with the teacher, and the use the child makes of the classroom environment for learning. Teachers rate the child in question on each item using a five point "frequency" scale (1: Hardly Ever or Never to 5: Very Often or Always).

Kohn (1977) reported that for each of the two factors he found interrater reliabilities between .70 and .79 for factor I and between .76 and .82 for factor II. Test - retest stability correlations of .44 for factor I scores and .56 for factor II scores were found after a one year interval. As regards validity, it was demonstrated by Kohn and Rosman (1972b) that the two factors of the Kohn Social Competence Scale measure essentially the same behaviour as the corresponding factors of the Schaefer Classroom Behaviour Inventory (Schaefer and Aaronson, 1966) at the preschool level.

Further, Kohn (1977) found that day-care children with known psychiatric disorders scored significantly higher on Apathy-Withdrawal and Anger-Defiance than day-care children without such disorders (Kohn, 1977). In addition, the day-care sample was divided into five groups on the basis of teacher ratings of "global impairment"; that is, whether the child was functioning "well", "moderately well" or "poorly" in the day-care centre and whether the child was receiving (or required) psychological, remedial or other specialized help. The Kohn Social Competence Scale effectively discriminated among these five reference groups.

Finally, as evidence of validity, the five year longitudinal study demonstrated that at every age level boys were more disturbed than girls. This is consistent with the research which suggests that emotional impairment is more widespread amongst boys than amongst girls (Bower, 1969; Rogers, 1942; Ullman, 1952; Wickman, 1928). Sex

differences were largest on the Anger-Defiance syndrome. The literature suggests that acting-out behaviour is more prevalent among boys (Bremer, 1951; Rutter et al., 1970).

Procedure

Permission was granted by the Superintendent of the cooperating school district for the researcher to approach the principals and teachers of the elementary schools. The initial contact with the principals was made by letter from the Director of Instruction of the school district. This letter explained that the researcher would be approaching the principals concerning her research and briefly outlined the research project.

Contact between the researcher and the schools was made by telephone. Through the principals, meetings with the principals and the grades 2 and 5 teachers were organized either at recess, lunchtime or after school.

The purpose of this introductory meeting was to explain the research to the teachers and the time and work involved if they were willing to participate. The principals and the teachers were, in addition, given an explanatory letter and consent form (see Appendix II). A research proposal abstract was left with each school (see Appendix III). It was explained that the researcher would visit the school again in a few days and pick up completed consent forms and class lists of cooperating teachers from the secretary of the school.

Six children, three boys and three girls, were randomly selected from each class of the consenting teachers. Of these, one boy and one girl served as "reserves" in case parents of the remaining four children refused permission. Teachers were instructed to replace a boy with a boy and a girl with a girl. Less than six children were picked if a teacher specifically asked to rate only two or three children.

A package of materials, including a letter of instructions (see Appendix IV), the names of the selected children, parent consent letters in envelopes (see Appendix V), and four Kohn Social Competence Scales were given to consenting teachers.

The teachers gave the four selected children a parent consent letter to take home. When a child brought back the consent form giving his parents' permission, the teacher would then fill out a Kohn Scale on that child. If a child's parents refused to give their consent, then one of the "back up" children was given a letter to take home. The teachers were asked to leave a message with the secretary of their school if they were unable to get parent consent for four children.

Each scale required about twenty minutes to complete. The child's anonymity was guaranteed in that the teachers did not include the child's name on the completed scale, nor was the teacher provided with any means of scoring the scale.

After one or two weeks the researcher visited the school. If the completed scales had not been left with the secretary and if there was no message from the teacher that (s)he was having problems, a

reminder letter was left in the teacher's mail box (see Appendix VI) stating that the researcher would collect the completed scales in one more week. A thank-you letter was given to each teacher when the completed scales had been collected. Of the 468 scales distributed, 399 were returned completed. This represents an 85.3% response rate.

Data Analysis

Item scores from the completed scales were directly keypunched onto computing cards and a 100 percent verification was performed.

The basic data analyses strategy used to identify the factorial composition of the scale is summarized in Table VI.

Table VI. Data Analysis Strategy

Procedure	Method of Data Analysis
Step 1: Identification of Common Factors	a) Principal Components b) Image Analysis & Varimax
Step 2: a) Rotation to Interpretable Simple Structure	a) Varimax b) Image Analysis & Varimax
b) Transformation to Interpretable Simple Structure	Image Analysis & Harris-Kaiser (Three and Two factors)
Step 3: Deletion of Items followed by Transformation to Simple Structure:	Image Analysis & Harris-Kaiser (Three and Two factors)

Initially, the analyses were performed on all sixty-four items. Based on the results of these initial analyses, varying numbers of items were deleted in an attempt to improve the obtained solution. The final analysis was performed on an item pool of 44 items. Further description of this deletion process is provided in the presentation of results.

Separate analyses were performed for grades 2 and 5. Analyses were completed on the AMDAHL 470 computer maintained by the Computing Centre, University of British Columbia, and using the Alberta General Factor Analysis Program (AGFAP) (Hakstian and Bay, 1973).

CHAPTER IV

Results

Introduction

In this chapter, the results of the analyses described in the previous chapter are presented. As indicated, the grade 2 analyses were completed prior to the grade 5 analyses and are consequently discussed in greater detail. It was hoped that the later analyses of the grade 5 data would provide a replication of the results obtained for grade 2.

Determining the Number of Factors

To determine the number of common factors, two basic analyses were conducted. These were Principal Components and Image Analysis, the latter followed by a varimax solution.

Application of the Kaiser-Guttman Rule, Scree Test (see Figure 2) and percent variance accounted for by the Principal Components revealed 12, 3 and 2 factors, respectively. The Image-Varimax procedure suggested by Kaiser (1963) revealed three factors.

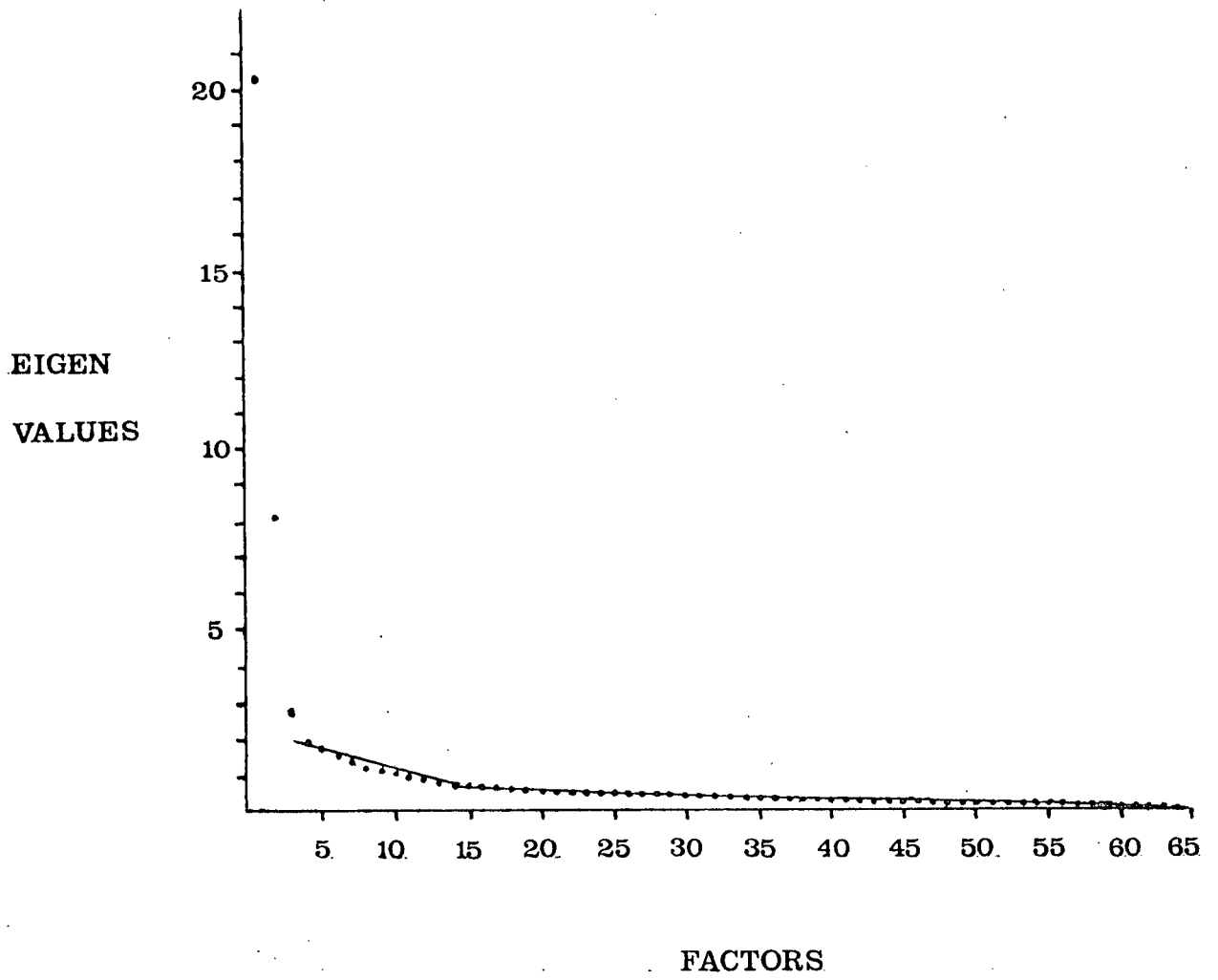


Figure 2 : Scree Test

Rotation/Transformation to Interpretable Simple Structure

Several rotations and transformations were performed in an attempt to obtain a solution which satisfied Thurstone's criteria for simple structure (Thurstone, 1947) and which was most clearly interpretable. First, a varimax rotation of a number of factors, as identified above or in earlier reported research, was performed. The rationale for the numbers of factors rotated and the number of interpretable factors obtained are summarized in Table VII.

Table VII. Rationale for Number of Factors Rotated
and Number of Interpretable Factors Obtained.

Type of Extraction	Rule/Rationale	No. of Factors Rotated	No. Interpretable
P.C.	Kaiser-Guttman Rule	12	3
	Kohn's research (a)*	6	3
	Scree Test; Published research	3	3
	Percent variance; Kohn's research (b)	2	2
Image	Kaiser's procedure	3	3
	Kohn's research (b)	2	2

- *(a) Kohn rotated
(b) Kohn found interpretable

In order to determine which factors were meaningful, an examination was made of the salient item loadings on each factor. The criterion for salience in the present study was set at ± 0.4 . Factors

which contained only one item were considered to be unique factors and were consequently deleted. It can be seen from Table VII that two or three factors appear to account for the common variance. However, none of the two or three factor solutions was satisfactory in terms of Thurstone's criteria of simple structure. There were many double and non-loading items.

Oblique Transformation

It was felt that an oblique transformation might provide a more satisfactory solution. Therefore, both two and three image factors were transformed using the procedure developed by Harris and Kaiser (1964). Two levels of obliquity were examined, corresponding to the independent clusters and proportional solutions suggested by Harris and Kaiser. All transformations were found to be unsatisfactory, however, due to the continued presence of double and non-loading items.

Deletion of Items

In order to meet Thurstone's criteria of simple structure it was decided to remove the items which (i) did not "load" on either the two or three factor solutions (i.e., that did not belong to the common factors) and (ii) items of complexity greater than one (i.e., items which "loaded" on more than one factor). The remaining items were analysed with an Image Analysis followed by a Harris-Kaiser transformation (again varying the degree of obliqueness).

For the case of two factors, a satisfactory, interpretable solution was obtained for the proportional transformation solution with 58 items. The correlation between the factors was low (Table VIII).

Table VIII. Correlation Matrix of Factors
(Two factors - 58 items)

Factors	<u>Factors</u>	
	I	II
I	1.00	-0.22
II	-0.22	1.00

The three factor solutions reached simple structure with 48 items for two levels of obliquity. Because of the lower correlation of factor III with the first two factors in the proportional solution (see Table IX) the proportional solution was retained for subsequent analyses (Table IX). The inclusion of this third factor weakened factor I in that only one item reached significance at the positive pole, in both solutions.

On the basis of an examination of the significant items loading on each factor, factor I was labelled Cooperation-Compliance vs. Anger-Defiance and factor II was labelled Interest-Participation vs. Apathy-Withdrawal. In the three factor solutions, factor III was labelled High vs. Low Task Orientation.

Table IX. Correlation Matrices of Factors
(Three Factors - 48 items)

Factors	Independent Solution (c = 0.00)			Proportional Solution (c = 0.50)		
	I	II	III	I	II	III
I	1.00	-0.01	-0.60	1.00	0.02	-0.34
II	-0.01	1.00	0.60	0.02	1.00	0.33
III	-0.60	0.60	1.00	-0.34	0.33	1.00

Analysis of Grade 5 Data

Analysis of the grade 5 data followed the same sequence as the analysis of the grade 2 data. The results at each step of the grade 5 analyses parallel the corresponding results for grade 2. At both grade levels it was apparent that a two or three factor solution would best account for the variance in the item level data. If, however, identical items were to be used at both grade levels, then it must be shown that the same factors emerged from analyses of the grades 2 and 5 data using these items. A search was undertaken, then, for a set of items which, when factored would produce identical factors at the grade 2 and 5 levels.

Deletion of Items: (grades 2 and 5)

A pool of non-loading items, some belonging to the grade 2 data, some belonging to the grade 5 data and some belonging to both,

was formed. The number of items in this pool varied according to the method of analysis being used. This pool of items was then analysed separately using the grade two sample and the grade 5 sample. Principal Components plus Varimax, Image plus Varimax and Image plus Harris-Kaiser proportional solutions were used.

All of the three factor solutions were unsatisfactory in that removal of the non-loading items resulted in a large number of additional non-loading and double-loading items in the factor solutions. Secondly, the correlations between factors I and III and II and III were felt to be higher than was desirable (Table X).

Table X. Correlation Matrices of Factors
(Three Factors - Grades 2 and 5)

Factors	Grade 2			Factors	Grade 5		
	I	II	III		I	II	III
I	1.00	0.02	-0.35	I	1.00	-0.12	-0.44
II	0.02	1.00	0.34	II	-0.13	1.00	0.39
III	-0.35	0.34	1.00	III	-0.44	0.39	1.00

Finally, in all of the three factor solutions, the positive pole of factor I was weakened by the presence of the third factor. In the grade 2 solutions the positive pole of factor I was represented by only one significant item. Only two items reached significance in the grade 5 solutions. After consideration of the difficulties outlined above it was

decided at this point to work with the two factor solutions only, since the purpose of the study was to validate the scale for use.

A satisfactory solution was achieved (in terms of Thurstone's simple structure) with two factors using a pool of forty-four items. The correlations between the factors were found to be low for grade 2 and satisfactory for grade 5 (Table XI).

Table XI. Correlation Matrices of Factors
(Two Factors - 44 items)

Factors	Grade 2		Factors	Grade 5	
	I	II		I	II
I	1.00	-0.13	I	1.00	-0.30
II	-0.13	1.00	II	-0.30	1.00

The two factors were clearly identifiable as Kohn's factors II and I respectively, as was seen from the five most salient items at each pole of the two factors at each grade level. Table XII includes the ten variables from each factor for the grade 2 data, as an example.

It was felt that factor I represented Cooperation-Compliance vs. Anger-Defiance and that factor II represented Interest-Participation vs. Apathy-Withdrawal. The complete factor solution, including the factor pattern and structure, is presented in Appendix VII for both grade levels.

Table XII. Ten Most Salient Items from
each Factor - Grade 2

Factor	Item	Item No.
I (+)	Child can accept teacher's ideas for play or ways of playing	19
	Child cooperates with rules and regulations	27
	Child is open to the ideas and suggestions of other children	45
	Child puts things away carefully	55
	Child responds well when the activity is planned or directed by the teacher	57
	Child expresses open defiance against authority	35
	Child is hostile or aggressive with other children	39
	Child is quarrelsome	47
	Child is bossy and dominating with other children	49
	Child is unwilling to play with other children except on his own terms	56

II (+)	Child shows enthusiasm about work or play	10
	Other children copy this child's ideas for play	12
	Child feels comfortable enough with other children to express his own desires or opinions	16
	Child's ideas have impact on many children in the classroom	23
	Child succeeds in getting others interested in what he is doing	53
	Child shies away & withdraws when approached by other children	8
	Child is bossed & dominated by other children	22
	Child appears at a loss in unstructured free-play types of activities	36
	Child demonstrates little interest in things and activities	44
	Child shows interest in only a few types of things	54

Item Analysis

If the forty-four item solution was to be accepted as the final solution, then it was necessary to show that the scale still had adequate reliability with the reduced number of items. An item analysis (LERTAP) was performed on the grades 2 and 5 data using only the forty-four retained items.

At the grade 2 level, Hoyt's estimate of reliability was found to be 0.95 for factor I and 0.93 for factor II. The Cronbach's Alpha for the composite was 0.51. The lowered reliability for the composite suggests that the two factors are, indeed, measuring different components.

At the grade five level, Hoyt's estimate of reliability was 0.95 for factor I and 0.94 for factor II. The composite reliability was once again lower, being 0.73.

These reliability estimates were felt to warrant acceptance of the forty-four item two factor solution as the final solution for the grades 2 and 5 data. A copy of the forty-four item Social Competence Scale for the Elementary School, complete with scoring instructions, is provided in Appendix VIII. The scale has two subtests, or factors. Factor I contains 23 items while factor II contains 21 items. At present, this scale may only be used for research purposes.

CHAPTER V

Discussion

Introduction

The Kohn Social Competence Scale was developed from a two-factor model of children's social-emotional functioning. This two-factor model has been shown to have persistence across time and generality across populations, ages of children, and research methods (Digman, 1963; Kohn, 1977; Peterson, 1961; Robins, 1966; Rutter et al., 1970).

The Kohn Social Competence Scale was developed for use with pre-school children. Factor analysis of the items revealed two factors which were labelled Cooperation-Compliance vs. Anger-Defiance and Interest-Participation vs. Apathy-Withdrawal. In the present study an attempt was made to validate the scale for use with elementary school children. Consequently, 210 grade 2 children and 189 grade 5 children were rated by their classroom teachers using the Kohn Social Competence Scale. Factor analysis of the item level data suggested that a two or three factor solution appeared appropriate at both grade levels. In both solutions, the first two factors corresponded to those identified by Kohn.

In the three-factor solutions, the third factor was identified as High vs. Low Task Orientation. It was moderately correlated with

both factors I and II (see Chapter IV). However, inclusion of the third factor confounded the solution for factor I in that only one or two items reached significance at the positive pole of this dimension. In the two-factor solutions, both factor I and factor II were well-represented by salient items at both poles. It was decided to accept a two-factor solution as the final solution. The scale was reduced from 64 items to 44 items better to meet Thurstone's criteria for simple structure (Thurstone, 1947).

Two-factor Solution

The first two factors which emerged from the data analyses at both grade levels were identifiable as Kohn's two factors, Cooperation-Compliance vs. Anger-Defiance and Interest-Participation vs. Apathy-Withdrawal. In addition, they appear very similar to the two factors identified by previous researchers working with children's emotional and behavioural functioning (Digman, 1963; Ogilvie, 1969; Peterson, 1961). The results of the present study support Peterson's (1961) contention that "the generality of these factors appears to be enormous" (p. 206).

The low, inverse correlation found between the two factors supports the circumplex model described in chapter II. A child who was initially identified as high on Interest-Participation would move in the direction of Cooperation-Compliance or Anger-Defiance should behavioural change occur. Kohn's research suggests (Kohn, 1977) that behavioural change tends to be in a negative direction.

The reliability of the two factors was found to be satisfactorily high. The reliability of the composite, however, was lower. This result provides further evidence that the two factors are measuring reasonably independent variables and that to add a child's two factor scores together would provide a less meaningful score than to consider the two factor scores separately. The reduction of items from 64 to 44, with no loss of reliability, can only be of benefit to the classroom teacher with limited time. The items which were retained represent a subset of the original items. This subset is valid and reliable in an elementary school setting.

The replication of the two-factor structure of the Kohn Social Competence Scale at both grade levels in the present study suggests that this scale has been effectively validated for use with Canadian elementary school populations. Until concurrent validation studies are completed, however, this scale must be used for research purposes only. The results of the present study provide support for the two-factor model of children's social-emotional functioning in a population of normal children.

Limitations of the Study

The study was limited in that the population from which the samples were taken was a lower mainland, B.C. school district, with a higher S.E.S. level than Kohn's sample (Kohn, 1977). However, the fact that the same two factors were found in this school district as were found in a U.S. pre-school, inner-city metropolitan area population,

where more than half of the children came from one-parent families and where nearly half the families earned less than \$5,000 (U.S.) per year, can only provide evidence for the validity of the Kohn Social Competence Scale.

A second limitation occurred in that parent consent forms were required for the study. Some teachers remarked to the researcher that the parents of the "more interesting" children were refusing to give their consent. When questioned about these children, the teachers suggested that they were the ones who were having social and behavioural problems in school. This is reflected in that the frequency distribution of the children's scores were negatively skewed, the majority of the scores clustering at the average to positive end of the spectrum.

Similarly, some teachers tended to leave completion of their scales until it was too late and by the end of term had completed only one or two scales. Also, some teachers decided after doing one or two scales that they had done enough. This somewhat spoiled the randomness of the sample, as the teachers may have completed only those they found easiest or most interesting before they decided that they had done enough.

However, these are not serious limitations in that the two factors emerged as bipolar. This could not happen unless the entire range of behaviour was represented in the sample. It may be that factor I might have emerged more clearly in the three factor solution, however, if this problem had not arisen.

Implications for Future Research

The three-factor solution. The three-factor solution was abandoned in favour of a two-factor solution in the present study because of the large number of non-loading and double-loading items, the moderately high correlation between factors I and III, and II and III, and the weakness shown in the positive pole of factor I (Chapter IV). However, throughout the factor solutions at both grade levels, three interpretable, bipolar factors consistently appeared. The first two factors were identical to those in the two-factor solution, while the third factor was labelled High vs. Low Task Orientation. Other studies in classroom settings, which involved teachers' ratings of normal children, have isolated three factors very similar to those found in the present study (Kaufman, Swan and Wood, 1979; Schaefer and Aaronson, 1966). Kohn (1977) also acknowledged the importance of task orientation in elementary school settings. Further research is necessary to decide whether a two or three-factor model best accounts for the variance of children's social-emotional functioning in the elementary school. A replication of the present study without the limitations described above would be useful in this respect. The scale might also be validated with the addition of more items written to reflect cooperative, compliant behaviour.

Validation studies. In order that the 44-item Kohn Social Competence Scale might be used in elementary schools, validation studies

must be undertaken to determine the relationship between the factors and other important variables such as achievement, socio-economic status, family background, sex, IQ, self-concept, referral, and other measures of social-emotional functioning. Knowledge of such relationships would allow a meaningful interpretation of a child's score on the Kohn Scale. Once the concurrent validity of the scale has been established, then appropriate norms should be collected.

Practical applications. Research should be undertaken to discover if the Kohn Social Competence Scale might prove useful in identifying socially competent children for gifted and talented programmes. It might also prove to be suitable as a measure of adaptive behaviour when considering a child for special class placement or for mainstreaming purposes.

Research could be undertaken to ascertain whether the two low-competent groups identified by the Kohn Scale require different therapeutic environments and whether the scale is useful in differentiating between the child with learning problems and the child whose learning problems are confounded by an emotional problem.

Finally, an investigation could be undertaken to discover whether the Kohn Social Competence Scale could be used to identify those children who are at risk in developing social and/or behavioural problems and whether use of the Kohn Scale may be helpful to teachers in their

referral decisions. The level of training required of the teacher and psychologist to administer and interpret the scale must also be examined before the scale is used for anything other than research purposes.

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APPENDIX I

64 Item Kohn Social Competence Scale

- 60 -
The Kohn Social Competence Scale

This scale is designed to assess the degree of competence with which a child masters various aspects of the school day. It consists of 64 statements about a child's behaviour. You are asked to rate each statement in terms of the frequency with which you have observed the behaviour during the most recent week.

The ratings consist of five different categories of frequency ranging from "Hardly Ever or Never" to "Very Often or Always". Please circle the number (1,2,3,4,5) which corresponds to the category which, in your judgement, is most descriptive of this child's behaviour for the most recent week.

Please do not consult with anyone concerning your ratings. We are interested in responses which are based on your knowledge of and experiences with the child.

These records are being used as part of an individual research project and are strictly confidential.

RATING INSTRUCTIONS

- 1) Base your rating on the child's behaviour during the most recent week. Consider only what the child did during that time period and try to disregard prior behaviour and actions.
- 2) Please do not compare the children you have been asked to rate with each other. Try to rate each child independently.
- 3) Base your ratings on how you have observed the child functioning in the classroom.
- 4) Some items contain a number of specific behaviours which are only slightly different from each other. Do not hesitate to make a rating even though the child does not exhibit all of the specific behaviours.
- 5) Please respond to every item. Do not leave any blanks.
- 6) Please do not hesitate to use extreme points where appropriate.
- 7) Consider each question independently. Children may exhibit seemingly contradictory behaviour.

THANK YOU VERY MUCH INDEED FOR YOUR HELP AND COOPERATION

School:

Sex of Child:

Teacher:

Grade:

	HARDLY EVER OR NEVER	SELDOM	SOME- TIMES	OFTEN	VERY OFTEN OR ALWAYS
1. CHILD SEEMS EAGER TO TRY NEW THINGS.	1	2	3	4	5
2. CHILD SEEKS ADULT ATTENTION BY CRYING.	1	2	3	4	5
3. CHILD EASILY LOSES INTEREST AND FLITS FROM ONE ACTIVITY TO ANOTHER.	1	2	3	4	5
4. CHILD IS RESPONSIBLE IN CARRYING OUT REQUESTS AND DIRECTIONS.	1	2	3	4	5
5. CHILD SEEKS PHYSICAL CONTACT WITH TEACHER.	1	2	3	4	5
6. CHILD ADDS FREELY (VERBALLY OR NONVERBALLY) TO TEACHER'S SUGGESTIONS.	1	2	3	4	5
7. WHEN MAKING A CHANGE FROM ONE ACTIVITY TO ANOTHER, CHILD RESISTS ENTERING THE NEW ACTIVITY.	1	2	3	4	5
8. CHILD SHIES AWAY AND WITHDRAWS WHEN APPROACHED BY OTHER CHILDREN.	1	2	3	4	5
9. CHILD RESPONDS WITH IMMEDIATE COMPLIANCE TO TEACHER'S DIRECTION.	1	2	3	4	5
10. CHILD SHOWS ENTHUSIASM ABOUT WORK OR PLAY.	1	2	3	4	5
11. CHILD FROWNS, SHRUGS SHOULDERS, POUTS OR STAMPS FOOT WHEN SUGGESTION IS MADE BY TEACHER.	1	2	3	4	5
12. OTHER CHILDREN COPY THIS CHILD'S IDEAS FOR PLAY.	1	2	3	4	5
13. EXCESSIVE PRAISE AND ENCOURAGEMENT FROM TEACHER IS REQUIRED FOR CHILD TO PARTICIPATE IN ACTIVITIES.	1	2	3	4	5
14. OTHER CHILDREN SEEM UNWILLING TO PLAY WITH THIS CHILD.	1	2	3	4	5
15. CHILD IS UNWILLING TO CARRY OUT REASONABLE SUGGESTIONS FROM TEACHER EVEN WHEN HAVING DIFFICULTY.	1	2	3	4	5
16. CHILD FEELS COMFORTABLE ENOUGH WITH OTHER CHILDREN TO BE ABLE TO EXPRESS HIS OWN DESIRES OR OPINIONS.	1	2	3	4	5
17. CHILD HITS TEACHER.	1	2	3	4	5
18. CHILD IS FEARFUL IN APPROACHING OTHER CHILDREN.	1	2	3	4	5
19. CHILD CAN ACCEPT TEACHER'S IDEAS AND SUGGESTIONS FOR PLAY OR WAYS OF PLAYING.	1	2	3	4	5
20. CHILD GETS WILLING COOPERATION FROM MOST OTHER CHILDREN.	1	2	3	4	5

	HARDLY EVER OR NEVER	SELDOM	SOME- TIMES	OFTEN	VERY OFTEN OR ALWAYS
21. CHILD GIVES THE APPEARANCE OF COMPLYING WITH TEACHER'S SUGGESTIONS, BUT DOES NOT DO SUGGESTED ACTIVITY.	1	2	3	4	5
22. CHILD IS BOSSED AND DOMINATED BY OTHER CHILDREN.	1	2	3	4	5
23. CHILD'S IDEAS HAVE IMPACT ON MANY CHILDREN IN THE CLASSROOM.	1	2	3	4	5
24. CHILD REBELS PHYSICALLY, FOR EXAMPLE: HAS TEMPER TANTRUMS, HITS, KICKS, ETC.	1	2	3	4	5
25. CHILD EASILY GETS ATTENTION OF OTHER CHILDREN.	1	2	3	4	5
26. CHILD HAS DIFFICULTY DEFENDING HIS OWN RIGHTS WITH OTHER CHILDREN.	1	2	3	4	5
27. CHILD COOPERATES WITH RULES AND REGULATIONS.	1	2	3	4	5
28. CHILD DAWDLES WHEN REQUIRED TO DO SOMETHING.	1	2	3	4	5
29. IN PLAY WITH OTHER CHILDREN, CHILD CAN SHIFT BETWEEN LEADING AND FOLLOWING, DEPENDING ON THE SITUATION.	1	2	3	4	5
30. CHILD REACTS NEGATIVELY TO TEACHER'S IDEAS AND SUGGESTIONS FOR PLAY ACTIVITIES.	1	2	3	4	5
31. CHILD IS UNABLE TO OCCUPY HIMSELF WITHOUT OTHER CHILDREN DIRECTING ACTIVITIES FOR HIM.	1	2	3	4	5
32. CHILD IS WILLING TO TURN TO OTHER CHILDREN FOR HELP AND ASSISTANCE.	1	2	3	4	5
33. CHILD ACTIVELY DEFIES TEACHER'S RULES AND REGULATIONS.	1	2	3	4	5
34. CHILD CAN GIVE IDEAS TO OTHER CHILDREN AS WELL AS GO ALONG WITH THEIR IDEAS.	1	2	3	4	5
35. CHILD EXPRESSES OPEN DEFIANCE AGAINST AUTHORITY	1	2	3	4	5
36. CHILD APPEARS AT A LOSS IN UNSTRUCTURED FREE-PLAY TYPES OF ACTIVITIES.	1	2	3	4	5
37. CHILD EASILY MAKES THE CHANGE FROM ONE ACTIVITY TO THE NEXT.	1	2	3	4	5
38. CHILD SEEMS TO ENJOY BOTH PLAY WITH OTHERS AND BY HIMSELF.	1	2	3	4	5
39. CHILD IS HOSTILE OR AGGRESSIVE WITH OTHER CHILDREN, FOR INSTANCE: PUSHES, TAUNTS, BULLIES, ETC.	1	2	3	4	5
40. CHILD CAN BE INDEPENDENT OF ADULT IN OVERCOMING DIFFICULTIES WITH OTHER CHILDREN OR ACTIVITIES.	1	2	3	4	5

	HARDLY EVER OR NEVER	SELDOM	SOME- TIMES	OFTEN	VERY OFTEN OR ALWAYS
41. CHILD HAS TO BE A LEADER IN ORDER TO PARTICIPATE IN ACTIVITIES WITH OTHER CHILDREN.	1	2	3	4	5
42. CHILD PARTICIPATES IN A HALF-HEARTED WAY	1	2	3	4	5
43. CHILD TAKES POSSESSION OF OTHER CHILDREN'S EQUIPMENT WITHOUT THEIR PERMISSION.	1	2	3	4	5
44. CHILD DEMONSTRATES LITTLE INTEREST IN THINGS AND ACTIVITIES.	1	2	3	4	5
45. CHILD IS OPEN TO THE IDEAS AND SUGGESTIONS OF OTHER CHILDREN.	1	2	3	4	5
46. CHILD IS RESPONSIBLE IN FOLLOWING THROUGH ON ROUTINES, FOR EXAMPLE: GETTING DRESSED OR UNDRESSED, WASHING HANDS, ETC.	1	2	3	4	5
47. CHILD IS QUARRELSOME.	1	2	3	4	5
48. CHILD CAN COMMUNICATE HIS NEEDS TO THE TEACHER.	1	2	3	4	5
49. CHILD IS BOSSY AND DOMINATING WITH OTHER CHILDREN.	1	2	3	4	5
50. CHILD SPENDS TIME SITTING AROUND, LOOKING AROUND, OR WANDERING AROUND AIMLESSLY.	1	2	3	4	5
51. CHILD CAN REMAIN ALERT AND INTERESTED IN AN ACTIVITY.	1	2	3	4	5
52. CHILD PREVENTS OTHER CHILDREN FROM CARRYING OUT ROUTINES.	1	2	3	4	5
53. CHILD SUCCEEDS IN GETTING OTHERS INTERESTED IN WHAT HE IS DOING.	1	2	3	4	5
54. CHILD SHOWS INTEREST IN ONLY A FEW TYPES OF THINGS.	1	2	3	4	5
55. CHILD PUTS THINGS AWAY CAREFULLY.	1	2	3	4	5
56. CHILD IS UNWILLING TO PLAY WITH OTHER CHILDREN EXCEPT ON HIS OWN TERMS.	1	2	3	4	5
57. CHILD RESPONDS WELL WHEN THE ACTIVITY IS PLANNED OR DIRECTED BY THE TEACHER.	1	2	3	4	5
58. CHILD DISRUPTS ACTIVITIES OF OTHERS.	1	2	3	4	5
59. CHILD SEEKS ADULT AID FOR EACH STEP OF ACTIVITY	1	2	3	4	5
60. CHILD CAN PARTICIPATE ACTIVELY IN STRUCTURED ACTIVITIES AS WELL AS FREE-PLAY TYPE ACTIVITIES	1	2	3	4	5
61. CHILD RESISTS GOING ALONG WITH THE IDEAS OF OTHER CHILDREN.	1	2	3	4	5
62. CHILD EASILY GIVES UP WHEN CONFRONTED WITH A DIFFICULTY.	1	2	3	4	5
63. CHILD CAN BE INDEPENDENT OF ADULT IN HAVING IDEAS ABOUT OR PLANNING ACTIVITIES.	1	2	3	4	5

	HARDLY EVER OR		SOME TIMES	OFTEN	VERY OFTEN OR ALWAYS
	NEVER	SELDOM			
64. CHILD HAS TROUBLE KEEPING TO THE RULES OF THE GAME. (DISREGARD WHEN CHILD DOES NOT KNOW OR UNDERSTAND RULES).	1	2	3	4	5

THANK YOU VERY MUCH INDEED FOR GIVING
YOUR TIME AND INTEREST. YOUR HELP IS GREATLY
APPRECIATED.

APPENDIX II

Principal's Letter and Consent Form

Teacher's Letter and Consent Form

THE UNIVERSITY OF BRITISH COLUMBIA
2075 WESBROOK MALL
VANCOUVER, B.C., CANADA
V6T 1W5

FACULTY OF EDUCATION

Education Clinic

Dear :

You have already discussed the research outlined here with the researcher and/or have read a research proposal. As you may remember the purpose of the research is to validate the Kohn Social Competence Scale for use with elementary school children.

This scale has certain advantages which have led me to believe that it would be of value both to teachers and psychologists.

Firstly, it relies upon teacher judgements and thus taps the teacher's knowledge of the child. It emphasizes the child's peer relationships and his relationship with the teacher. Research suggests that peer relationships are amongst the best predictors of adjustment. Finally, it separates out two different groups of low-competent children (termed Apathetic-Withdrawn and Angry-Defiant). Once again, research suggests that these two groups have different needs and have different long-term outcomes. Similarly, the child low on both dimensions has been found to be most in need of help.

More specifically, use of this scale with elementary school children may lead to better identification of gifted and talented children, as well as low-competent children, so that their needs might be met more effectively. It may separate out those children whose learning problems are confounded by an emotional problem. It may help with more accurate referral and remediation. Finally, it should replace or complement the use of less reliable projective techniques in the identification of emotional disturbance.

The children to be used as subjects will be selected through purely random methods. Confidentiality will be maintained in that the child's name will not be used on the questionnaire nor will the teachers be given directions on how to score the scale. Once the questionnaires have been coded onto computing cards, the selection list and the questionnaires will be destroyed.

Should you give permission for your school to take part in this study, four children will be selected from each grade 2 and grade 5 classroom in your school. The teachers will be asked to send parental consent forms home with the selected children. These forms will be supplied by the researcher.

Principal's Consent Form

I consent to the participation of _____ School in the validation study. I am aware that the children's names will not be used on the questionnaires and that the questionnaires will be returned anonymously to the University of British Columbia. I understand that confidentiality of data will be maintained and that individual scores will not be calculated or released. I also understand that participation by my school is voluntary and may be terminated at any time.

Signature

I am unwilling to have _____ School involved in the validation research study.

Signature

THE UNIVERSITY OF BRITISH COLUMBIA
2075 WESBROOK MALL
VANCOUVER, B.C., CANADA
V6T 1W5

FACULTY OF EDUCATION

Education Clinic

Dear :

You have already listened to a description of the research outlined here and/or have read a research proposal. As you may remember, the purpose of the research is to validate the Kohn Social Competence Scale for use with elementary school children.

This scale has certain advantages which have led me to believe that it would be of value both to teachers and school psychologists.

Firstly, it relies on teacher judgements and thus taps the teacher's knowledge of the child. It emphasizes the child's peer relationships and his relationship with the teacher. Research suggests that peer relationships are amongst the best predictors of adjustment. Finally, it separates out two different groups of low competent children (termed Apathetic-Withdrawn and Angry-Defiant). Once again, research suggests that these two groups have different needs and have different long term outcomes. Similarly, the child low on both dimensions has been found to be in most need of help.

More specifically, use of this scale with elementary school children may lead to better identification of gifted and talented children, as well as low competent children, so that their needs might be met more effectively. It may separate out those children whose learning problems are confounded by an emotional problem. It may help with more accurate referral and remediation. Finally, it should replace or complement the use of less reliable projective techniques in the identification of emotional maladjustment.

The children to be used as subjects will be selected through purely random procedures. Confidentiality will be maintained in that the child's name will not be used on the questionnaire nor will you be given directions on how to score the scale. Once the questionnaires have been coded onto computing cards, the selection list and the questionnaires will be destroyed.

Should you agree to take part in this study, four children will be selected from your classroom. You will be asked to send parental consent forms home with the selected children. These will be supplied by the researcher.

Those children whose parents consent for them to take part will be rated by you on the Kohn Social Competence Scale. Each scale will take about 15-20 minutes to complete, so you will probably spend about 1½ hours in total on this task.

Teacher's Consent Form

I, _____, consent to take part in the validation study at _____ School. I am aware that the children's names will not be used on the questionnaires and that the questionnaires will be returned anonymously to the University of British Columbia. I understand that confidentiality of data will be maintained and that individual scores will not be calculated or released. I also understand that participation in this project is voluntary and may be terminated at any time.

Signature

I am unwilling to be involved in the validation research study.

Signed

School

APPENDIX III

Research Proposal Abstract

Validity of the Kohn Social Competence Scale
for use with Elementary School Children

Proposal Abstract

Background

The Kohn Social Competence Scale (Kohn and Rosman, 1972a, 1972b), which measures a child's level of social-emotional functioning, was designed for use with preschool children. Factor analyses of the items revealed two orthogonal factors which were labelled Interest-Participation vs. Apathy-Withdrawal and Cooperation-Compliance vs. Anger-Defiance. Over the last fifty years, the two factors identified by Kohn and Rosman have repeatedly emerged from research into emotional disturbance in children. These factors have emerged despite differences in research methods, populations, and the ages of the children involved (Kohn, 1977). This suggests that these two dimensions have considerable validity in the area of personality research.

The two low-competent syndromes of Apathy-Withdrawal and Anger-Defiance have repeatedly been found to have different long term outcomes, and it has been found that they require different therapeutic environments (Kohn, 1977).

The Kohn Scale focuses on peer and teacher relationships. Research suggests that peer relationships are amongst the best predictors of mental health, both present and future (Cowen, Pederson, Babigian, Izzo and Trost, 1973).

Kohn's research suggests that the Kohn Scale is valid and reliable at the preschool level and that the two dimensions have long term stability and predictive validity (Kohn, 1977).

Such a scale would prove valuable to elementary school teachers and counsellors.

Purpose

The purpose of the present study is to validate the Kohn Social Competence Scale for use with elementary school children. The Kohn Scale was developed in two forms: a 73 item form and a 64 item form. The 64 item form is considered appropriate for use with elementary school children; items dealing with nap-time, snack-time and other aspects of preschool inappropriate to elementary school have been eliminated.

If the same two factors were found at the elementary school level as at the preschool level, then one would have good evidence for the validity of the Kohn Scale at the elementary school level. It would also provide additional evidence for the persistence of the two-factor model of social-emotional functioning.

Two grade levels, grades 2 and 5, will be used in this study. There is some evidence to suggest that a third factor may be involved in school-related research, particularly with older children (Kohn, 1977). For this reason, separate analyses will be performed on the data for grades 2 and 5 to see whether a difference in the factor structure exists between the primary and intermediate levels in the elementary school. The third factor appears to be involved with task orientation, that is, the ability of the child to concentrate on the task in hand.

Procedures

Principals of individual schools will be contacted, and a meeting will be organized with the principal and grades 2 and 5 teachers within each school. At this meeting, the researcher will explain the research and provide the school with a copy of the proposal abstract. The principal and the teachers will be provided with explanatory letters and consent forms to sign when they have decided to participate.

A sampling frame of all grades 2 and 5 children from participating schools will be constructed. The sample will be stratified according to sex and the major demographic features of the district. This will be for analysis purposes only, not for reporting. From this sample, 250 grade 2 children and 250 grade 5 children will be randomly selected. Approximately four children

will be sampled from within each classroom.

Participating teachers will be provided with parent consent forms for those children selected from within their classrooms. The teachers will then fill out Kohn Social Competence Scale questionnaires on those children whose parents permit them to take part in the study. The child's privacy will be guaranteed in that the teachers will not include the child's name on the questionnaire, nor will the teacher be provided with instructions for scoring the scale. The completed questionnaires and the selection list will be destroyed once the data have been coded onto computing cards.

It should be noted here that the items on the Kohn Scale deal with specific classroom behaviour. The teacher will not be asked to make subjective judgements about individual children's "emotional" condition.

Completed questionnaires will be collected by the researcher. The questionnaires will then be coded onto computing cards by U.B.C. computing centre personnel.

A factor analysis will be performed on the data for grade 2 children, grade 5 children, and, if appropriate, for the complete sample.

This study involves no interference by outside agencies in the classroom. Since each scale takes about 15-20 min. to complete, teachers will be involved in about 1½ hours of work.

Outcomes, Importance of Project

General: 1) Use of the Kohn Scale at the elementary school level may lead to better identification of high and low competent children and thus to a more efficient use of resources.

Specific: 1) The Kohn Scale may be used to separate out those children whose learning problems are compounded by an emotional problem.

2) The Kohn Scale may help to separate out the two different low competent syndromes and thus help to meet their needs more effectively.

3) The Kohn Scale may help in the identification of gifted and talented children and thus help to meet

their needs more effectively.

- 4) The Kohn Scale may help in decision-making concerning the placement of retarded children.
- 5) The Kohn Scale may supplement or replace the use of unreliable projective techniques.
- 6) The Kohn Scale may help to identify those children who are likely to present problems later but who are not yet doing so.
- 7) The Kohn Scale may help teachers decide which children to refer for further assessment.
- 8) The Kohn Scale may lead to more efficient referral of Apathetic-Withdrawn children, especially girls.
- 9) The Kohn Scale may provide a structured framework within which to discuss classroom behaviour.

References

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Kohn, M. Social Competence, Symptoms and Underachievement in Childhood: A Longitudinal Perspective. John Wiley and Sons, Toronto, 1977.

APPENDIX IV

Letter of Instructions for Teachers

APPENDIX V

Parents' Letter and Consent Form

THE UNIVERSITY OF BRITISH COLUMBIA
2075 WESBROOK MALL
VANCOUVER, B.C., CANADA
V6T 1W5

FACULTY OF EDUCATION

Education Clinic

Dear Parent or Guardian:

A questionnaire has been developed which deals with how a preschool child gets on with the teacher and the other children in the classroom, and how effectively the child uses the preschool environment. This questionnaire is filled out by the teacher on the basis of his/her knowledge of the child.

Should this scale prove to be useable at the elementary school level, it would help teachers decide which children to refer to the school psychologist or counsellor and would help everyone in planning a remediation program. The scale would help in the identification of the gifted and talented, as well as those with problems, and would help to ensure that their needs were met. The scale would help to identify those children whose learning problems are complicated by emotional difficulties and would also help in the placement and programming of retarded children.

The items on the questionnaire focus on specific classroom behaviour. The teacher is not asked to make subjective judgements about children.

To validate this scale, the questionnaire must be administered by teachers to a large number of elementary school children and analyses performed to see how the items work with children of this age.

Your child has been selected by purely random procedures to be one of those children on whom a scale will be filled out. Your child's name will not be included on the questionnaire, nor will the teacher be given any means of working out your child's score. The purpose of the study is simply to see how the items work, not to obtain scores on individual children. There will be no way that anyone will be able to trace your child's questionnaire back to your child.

This research project is being undertaken as a master's thesis in the division of Educational Psychology at the University of British Columbia. It has been endorsed by the superintendent of this school district and by the principal and teachers of your school.

Your consent to allow your child to be a participant in this research

Parent Consent Form

I consent to _____'s participation in the validation study at _____ School. I am aware that my child's name will not be used in his/her questionnaire and that the questionnaire will be returned anonymously to the University of British Columbia. I understand that confidentiality of data will be maintained and that individual scores will not be calculated or released. I also understand that participation in this project is voluntary and may be terminated at any time.

Signature

I am unwilling to have _____ involved in the validation research study.

Signature

APPENDIX VI

Teachers' Reminder Letter

APPENDIX VII

Factor Pattern and Factor Structure:

Grades 2 and 5

Table A. The Primary Pattern of Items with Coefficients Greater Than or Equal to ± 0.4

Item No.	Factor			
	I		II	
	Gr. 2	Gr. 5	Gr. 2	Gr. 5
1			0.663	0.644
2	0.508	0.492		
3			0.611	0.577
4			-0.505	-0.609
5			0.704	0.667
6	0.556	0.627		
7			0.705	0.703
8	0.466	0.541		
9			0.738	0.712
10			-0.463	-0.485
11	-0.506	-0.480		
12			0.480	0.536
13	0.634	0.587		
14			-0.703	-0.670
15			0.801	0.789
16	0.579	0.652		
17			-0.568	-0.706
18	-0.754	-0.752		
19			0.512	0.549
20	0.657	0.615		
21			-0.471	-0.455
22	0.659	0.736		
23			0.570	0.603
24	0.825	0.805		
25			-0.522	-0.569
26	0.826	0.851		
27	0.762	0.540		
28			-0.492	-0.624
29	0.715	0.699		
30			-0.587	-0.678
31	-0.594	-0.467		
32	0.804	0.843		
33			0.487	0.558
34	0.843	0.731		
35	0.691	0.770		
36			0.659	0.716
37			-0.501	-0.580
38	-0.480	-0.488		
39	0.786	0.725		
40	-0.607	-0.450		
41	0.750	0.769		
42	0.655	0.576		
43			0.610	0.441
44	0.708	0.703		

Table B. The Primary Structure of Items with Coefficients Greater Than or Equal to ± 0.4

Item No.	Factor			
	I		II	
	Gr. 2	Gr. 5	Gr. 2	Gr. 5
1			0.665	0.686
2	0.543	0.572		-0.416
3			0.577	0.547
4			-0.504	-0.585
5		-0.417	0.730	0.732
6	0.561	0.685		
7			0.711	0.718
8	0.497	0.632		-0.468
9			0.721	0.694
10			-0.455	-0.471
11	-0.554	-0.562	0.430	0.422
12	-0.454	-0.482	0.531	0.632
13	0.667	0.684		-0.501
14			-0.676	-0.659
15			0.782	0.799
16	0.579	0.641		
17			-0.563	-0.700
18	-0.769	-0.786		
19			0.551	0.617
20	0.673	0.687		-0.426
21			-0.485	-0.519
22	0.665	0.755		
23		-0.487	0.608	0.695
24	0.822	0.820		
25		0.436	-0.550	-0.648
26	0.817	0.833		
27	0.718	0.460		
28	0.422	0.464	-0.539	-0.707
29	0.719	0.709		
30		0.431	-0.622	-0.746
31	-0.620	-0.557		0.443
32	0.785	0.843		
33		-0.444	0.520	0.641
34	0.821	0.659		
35	0.707	0.795		
36			0.652	0.697
37	0.458	0.471	-0.553	-0.668
38	-0.512	-0.556		
39	0.787	0.755		
40	-0.649	-0.556		0.493
41	0.758	0.795		
42	0.646	0.620		
43			0.627	0.418
44	0.729	0.755		

APPENDIX VIII

The Kohn Social Competence Scale for the Elementary School (44 items)

The Kohn Social Competence Scale for the Elementary School

This scale is designed to assess the degree of competence with which a child masters various aspects of the school day. It consists of 44 statements about a child's behaviour. You are asked to rate each statement in terms of the frequency with which you have observed the behaviour during the most recent week.

The ratings consist of five different categories of frequency ranging from "Hardly Ever or Never" to "Very Often or Always". Please circle the number (1, 2, 3, 4, 5) which corresponds to the category which, in your judgement, is most descriptive of this child's behaviour for the most recent week.

Please do not consult with anyone concerning your ratings. We are interested in responses which are based on your knowledge of and experiences with the child.

RATING INSTRUCTIONS

- 1) Base your rating on the child's behaviour during the most recent week. Consider only what the child did during that time period and try to disregard prior behaviour and actions.
- 2) Please do not compare the children you have been asked to rate with each other. Try to rate each child independently.
- 3) Base your ratings on how you have observed the child functioning in the classroom.
- 4) Some items contain a number of specific behaviours which are only slightly different from each other. Do not hesitate to make a rating even though the child does not exhibit all of the specific behaviours.
- 5) Please respond to every item. Do not leave any blanks.
- 6) Please do not hesitate to use extreme points where appropriate.
- 7) Consider each question independently. Children may exhibit seemingly contradictory behaviour.

THIS SCALE MAY BE USED FOR RESEARCH PURPOSES ONLY

THANK YOU VERY MUCH INDEED FOR YOUR HELP AND COOPERATION

Child's name or I.D.: _____ Teacher: _____
 Sex of Child: _____ School: _____
 Grade: _____

	HARDLY EVER OR NEVER	SELDOM	SOME- TIMES	OFTEN	VERY OFTEN OR ALWAYS
1. CHILD SEEMS EAGER TO TRY NEW THINGS.	1	2	3	4	5
2. CHILD EASILY LOSES INTEREST AND FLITS FROM ONE ACTIVITY TO ANOTHER.	1	2	3	4	5
3. CHILD ADDS FREELY (VERBALLY OR NONVERBALLY) TO TEACHER'S SUGGESTIONS.	1	2	3	4	5
4. CHILD SHIES AWAY AND WITHDRAWS WHEN APPROACHED BY OTHER CHILDREN.	1	2	3	4	5
5. CHILD SHOWS ENTHUSIASM ABOUT WORK OR PLAY.	1	2	3	4	5
6. CHILD FROWNS, SHRUGS SHOULDERS, POUTS OR STAMPS FOOT WHEN SUGGESTION IS MADE BY TEACHER.	1	2	3	4	5
7. OTHER CHILDREN COPY THIS CHILD'S IDEAS FOR PLAY.	1	2	3	4	5
8. CHILD IS UNWILLING TO CARRY OUT REASONABLE SUGGESTIONS FROM TEACHER EVEN WHEN HAVING DIFFICULTY.	1	2	3	4	5
9. CHILD FEELS COMFORTABLE ENOUGH WITH OTHER CHILDREN TO BE ABLE TO EXPRESS HIS OWN DESIRES OR OPINIONS.	1	2	3	4	5
10. CHILD IS FEARFUL IN APPROACHING OTHER CHILDREN.	1	2	3	4	5
11. CHILD CAN ACCEPT TEACHER'S IDEAS AND SUGGESTIONS FOR PLAY OR WAYS OF PLAYING.	1	2	3	4	5
12. CHILD GETS WILLING COOPERATION FROM MOST OTHER CHILDREN.	1	2	3	4	5
13. CHILD GIVES THE APPEARANCE OF COMPLYING WITH TEACHER'S SUGGESTIONS, BUT DOES NOT DO SUGGESTED ACTIVITY.	1	2	3	4	5
14. CHILD IS BOSSED AND DOMINATED BY OTHER CHILDREN.	1	2	3	4	5
15. CHILD'S IDEAS HAVE IMPACT ON MANY CHILDREN IN THE CLASSROOM	1	2	3	4	5
16. CHILD REBELS PHYSICALLY, FOR EXAMPLE: HAS TEMPER TANTRUMS, HITS, KICKS, ETC.	1	2	3	4	5
17. CHILD HAS DIFFICULTY DEFENDING HIS OWN RIGHTS WITH OTHER CHILDREN.	1	2	3	4	5
18. CHILD COOPERATES WITH RULES AND REGULATIONS.	1	2	3	4	5
19. IN PLAY WITH OTHER CHILDREN, CHILD CAN SHIFT BETWEEN LEADING AND FOLLOWING, DEPENDING ON THE SITUATION.	1	2	3	4	5

	HARDLY EVER OR NEVER	SELDOM	SOME- TIMES	OFTEN	VERY OFTEN OR ALWAYS
20. CHILD REACTS NEGATIVELY TO TEACHER'S IDEAS AND SUGGESTIONS FOR PLAY ACTIVITIES.	1	2	3	4	5
21. CHILD IS UNABLE TO OCCUPY HIMSELF WITHOUT OTHER CHILDREN DIRECTING ACTIVITIES FOR HIM.	1	2	3	4	5
22. CHILD ACTIVELY DEFIES TEACHER'S RULES AND REGULATIONS.	1	2	3	4	5
23. CHILD CAN GIVE IDEAS TO OTHER CHILDREN AS WELL AS GO ALONG WITH THEIR IDEAS.	1	2	3	4	5
24. CHILD EXPRESSES OPEN DEFIANCE AGAINST AUTHORITY.	1	2	3	4	5
25. CHILD APPEARS AT A LOSS IN UNSTRUCTURED FREE-PLAY TYPES OF ACTIVITIES.	1	2	3	4	5
26. CHILD IS HOSTILE OR AGGRESSIVE WITH OTHER CHILDREN, FOR INSTANCE: PUSHES, TAUNTS, BULLIES, ETC.	1	2	3	4	5
27. CHILD HAS TO BE A LEADER IN ORDER TO PARTICIPATE IN ACTIVITIES WITH OTHER CHILDREN.	1	2	3	4	5
28. CHILD PARTICIPATES IN A HALF-HEARTED WAY.	1	2	3	4	5
29. CHILD TAKES POSSESSION OF OTHER CHILDREN'S EQUIPMENT WITHOUT THEIR PERMISSION.	1	2	3	4	5
30. CHILD DEMONSTRATES LITTLE INTEREST IN THINGS AND ACTIVITIES.	1	2	3	4	5
31. CHILD IS OPEN TO THE IDEAS AND SUGGESTIONS OF OTHER CHILDREN	1	2	3	4	5
32. CHILD IS QUARRELSOME.	1	2	3	4	5
33. CHILD CAN COMMUNICATE HIS NEEDS TO THE TEACHER.	1	2	3	4	5
34. CHILD IS BOSSY AND DOMINATING WITH OTHER CHILDREN.	1	2	3	4	5
35. CHILD PREVENTS OTHER CHILDREN FROM CARRYING OUT ROUTINES.	1	2	3	4	5
36. CHILD SUCCEEDS IN GETTING OTHERS INTERESTED IN WHAT HE IS DOING.	1	2	3	4	5
37. CHILD SHOWS INTEREST IN ONLY A FEW TYPES OF THINGS.	1	2	3	4	5
38. CHILD PUTS THINGS AWAY CAREFULLY.	1	2	3	4	5
39. CHILD IS UNWILLING TO PLAY WITH OTHER CHILDREN EXCEPT ON HIS OWN TERMS.	1	2	3	4	5
40. CHILD RESPONDS WELL WHEN THE ACTIVITY IS PLANNED OR DIRECTED BY THE TEACHER.	1	2	3	4	5
41. CHILD DISRUPTS ACTIVITIES OF OTHERS.	1	2	3	4	5
42. CHILD RESISTS GOING ALONG WITH THE IDEAS OF OTHER CHILDREN.	1	2	3	4	5

	HARDLY EVER OR NEVER	SELDOM	SOME- TIMES	OFTEN	VERY OFTEN OR ALWAYS
43. CHILD CAN BE INDEPENDENT OF ADULT IN HAVING IDEAS ABOUT OR PLANNING ACTIVITIES.	1	2	3	4	5
44. CHILD HAS TROUBLE KEEPING TO THE RULES OF THE GAME. (DISREGARD WHEN CHILD DOES NOT KNOW OR UNDERSTAND RULES).	1	2	3	4	5

THANK YOU VERY MUCH INDEED FOR GIVING
YOUR TIME AND INTEREST. YOUR HELP IS GREATLY
APPRECIATED.

Scoring the 44 Item Kohn Social Competence

Scale for the Elementary School

The Social Competence Scale for the Elementary School consists of 44 statements describing different ways in which the elementary school child may interact with various aspects of the elementary school day.

Factor I items are presented in Table 1.

Table I (23 items)

11(+)	31(+)	40(+)	6(-)	13(-)	20(-)	24(-)	27(-)	32(-)	35(-)	41(-)	44(-)
18(+)	38(+)	2(-)	8(-)	16(-)	22(-)	26(-)	29(-)	34(-)	39(-)	42(-)	

Factor II items are presented in Table 2.

Table 2 (21 items)

1(+)	5(+)	9(+)	15(+)	23(+)	36(+)	4(-)	14(-)	21(-)	28(-)	37(-)
3(+)	7(+)	12(+)	19(+)	33(+)	43(+)	10(-)	17(-)	25(-)	30(-)	

The value for some items is positive and for others, negative. This is due to the fact that both factors of the Social Competence Scale are bipolar.

Each child receives two scores on the Social Competence Scale, a Factor I score and a Factor II score. The Factor I score is the algebraic sum of the scores of all the Factor I items. The Factor II score is the algebraic sum of the scores of all the Factor II items. A negative, as well as a positive score is possible.

Use of the scoring form

Scoring is greatly facilitated by use of the scoring form. This form has 44 boxes numbered to match the corresponding items on the 44 item Social Competence Scale. The boxes are arranged so that scores for positive and negative items for each factor will be in separate columns. There is therefore no need for the scorer to record the sign or separate the items according to factor, if the scoring form is used.

For each item, copy into the appropriate box on the scoring form the number circled by the rater. When all of the numbered boxes have been filled in, a total for each column is obtained and written in the empty Factor I or Factor II box at the bottom of the column. The Factor I totals are then subtracted from each other to obtain a total score for Factor I and the Factor II totals are subtracted from each other to obtain a total score for Factor II.

Scores for Factor I will range between +7 and -85. Scores for Factor II will range between +51 and -33.

Prorating

If an item was not rated on the original form, a red circle should be placed in the appropriate box on the scoring form. The prorated score for this box can be obtained as follows:

1. Add the scores in all the other numbered boxes in that column.
2. Divide the sum by the number of scores added together.

The resulting quotient is written inside the red circle and added to the rest of the scores in that column. Total Factor I and II scores are then obtained as indicated above. THIS PROCEDURE IS NOT LEGITIMATE WHEN MORE THAN A FEW ITEMS ARE MISSING.

Scoring Form for the Kohn Social Competence

Scale for the Elementary School

Name or I.D. _____

Scored by _____

Checked by _____

Factor I

+ -

11	2
18	6
31	8
38	13
40	16
	20
	22
	24
	26
	27
	29
	32
	34
	35
	39
	41
	42
	44

Factor II

+ -

1	4
3	10
5	14
7	17
9	21
12	25
15	28
19	30
23	37
33	
36	
43	

FI - =

FII - =