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Opinions of Elementary Teachers Regarding the Effects of Hugging Students

John E. Graham III

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An Abstract Presented to the Faculty of the Graduate School of Lindenwood College in Partial Fulfillment of the Requirements for the Degree of Master of Arts

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Abstract

A survey was administered to 62 elementary teachers of the Wentzville R-IV School District in Wentzville, Missouri. The purpose was to assess the opinions of elementary teachers about the positive and negative effects of hugging students. The results of the survey showed that most teachers believed that the hugging of students was important to the students' growth and development. Most teachers held the opinion that hugging improves IQ (an intelligence test score), self-concept, and classroom performance. They also believed that hugging lowers anxiety and relates a message to the student of appreciation of the student's uniqueness. The teachers thought that the higher the grade the student was in, the less the student needed to be hugged. Teachers who hugged their students did not feel that students of either sex should be hugged more than those of the opposite sex.

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COMMITTEE IN CHARGE OF CANDIDACY:

Assistant Professor Nancy C. Higgins, Ph.D.,
Chairperson and Advisor

Professor James D. Evans, Ph.D.

Harry A. Bradley, M.Ed., M.S.W.

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CHAPTER I

INTRODUCTION

Hugging and touching a child start at birth. Sutherland (1980) states that experiencing physical contact with others is essential for a child's healthy physical, mental, and emotional growth. According to Malandro and Barker (1983), lack of physical contact to the infant may even result in death.

Sroufe, Fox, and Pancake (1983) studied the physical-contact seeking of children. They observed that deficient nurturing in the early years of life resulted in children having a greater need for physical contact from adults.

Although experimentation cannot be done with human infants on the deficiency of physical contact, it can and has been done on infant monkeys. Harlow (1964) experimented with rhesus monkeys to see how they would react when all physical contact was removed. Infant monkeys were isolated up to one year. The results were devastating in that infant monkeys became extremely emotionally disturbed.

Within the context of object relations theory, Horner (1984) goes a major step further than Harlow's experiments with rhesus monkeys to examine human relations and the psychopathology resulting from a deficiency in nurturing. Horner states that lack of

nurturing from birth to 5 months is likely to result in psychosis and that lack of nurturing from 6 months to 3 years old is likely to result in a personality disorder.

By examining what happens when an infant does not receive physical contact from others, one realizes how important physical contact is to a child's healthy development. One may also speculate that if infants need some form of physical contact, such as hugging, it is likely that primary school children may also need some type of physical contact. A study conducted by Rosen and D'Andrade (1959) found that primary school students who had physical interaction with their parents on tests requiring psychomotor skills showed increases in motivation and improvement in performance. Likewise, more recently, Clemes and Bean (1978) theorized that children who were touched moderately by parents and/or teachers would show improvements in self-esteem. Clemes and Bean state that touching is a way of giving children the feeling of "connectiveness," a sense of being part of the family or school system.

Although physical contact is usually thought of in a positive manner, some studies indicate that it may have negative effects in certain circumstances. Henley (1973, 1977) suggests that nonreciprocal touch is less a sign of warmth than of status--that the

higher the status the person has, the freer that person is to touch a lower status person. LaFrance (1985) states that in school settings females receive a different type of touch than males. Girls receive more "helpful" touches while boys receive more "friendly" contact. The resulting message to preschool girls is that contact is more likely to occur in a dependency relationship.

Children in the United States spend a good portion of their early years in school. The way they are touched or not touched may potentially have a significant effect on their development.

Statement of Purpose

The purpose of this study was to assess the opinions and practices of elementary school teachers with regard to hugging students. The study was conducted by administering a survey to elementary teachers in a school district in the Midwest. The survey assessed the frequency with which the teachers hugged their students, the opinions of the teachers concerning students' need to be hugged, and the teachers' views regarding the effects of hugging students.

CHAPTER II

LITERATURE REVIEW

Theories of Physical Contact Effects

The behaviorist view. Behavioral research suggests that the giving of physical contact generally can serve as a useful reinforcer by rewarding and shaping new desirable behavior in others. Articles by Kazdin and Klock (1973), Kazdin, Silverman, and Sittler (1975), and Lyon (1977) reported studies in which physical contact was successfully used as a positive reinforcer to change the behavior of mentally handicapped children. Martin (1974) polled 398 elementary school teachers and found physical contact to be the preferred form of positive reinforcement to change behavior among normal children. In Martin's study each teacher was given a copy of the Positive Reinforcement Observation Schedule, which was used to measure reinforcement preferences. Martin's instrument return rate was 77%. There were 14 different rankings of positive reinforcers. The first preferred positive reinforcer was physical contact. The second preferred positive reinforcer was the acceptance of ideas. The third was direct concrete reinforcement. (Martin does not explain what this was, but given that the study involved a school setting, one might assume that the reinforcer was

food, probably candy.) The fourth was concrete reinforcement (tokens). The fifth was being asked questions. Likewise, Christian (1983), in theorizing a hierarchy of behavior modification reinforcers for changing classroom behavior, ranked physical contact as the top choice. The ranking was based on teacher consultation and behavior modification planning.

The humanistic view. Humanists like Rogers (1954, 1969, 1970) and Maslow (1968) believe that humans are born with an inner nature made up of needs, capacities, talents, physiological balances, and anatomical equipment, and that when allowed to grow and have expression this nature will develop in healthy and productive ways. These inherent potentialities are set upon a course for expression unless blocked. They may be blocked, altered, or destroyed by environmental factors--culture, family, teachers, friends, and so on. For instance, Rogers (1969) talks of the awarding of approval and disapproval contingent upon the occurrence of desired behaviors. A child thus treated will develop a sense of being worthy only if he or she performs the behaviors which others desire. Unfortunately the behavior which others desire may conflict with one's inner nature. The environment and the important people in a child's life may interfere with the expression of the child's inner nature. According to

Rogers, unconditional positive regard should be given to a child, providing an environment of approval and respect for what the child is and allowing expression of his or her inner nature.

One part of expressing our inner nature is the giving and receiving of physical contact. According to Rogers (1970), physical contact can express anger or warm feelings. Rogers says a hug can express love, warmth, and joy. Rogers (1969) gives examples of teachers hugging their students, not because the teachers wish to shape the children's behavior, but because they prize the children as being unique individuals. Conveying this attitude through hugging opens the doors to the expression of the students' inner natures.

Effects of the Lack of Physical Contact: Deficient Nurturing

In studies conducted by Harlow (1958) and Harlow and Zimmermann (1959), newborn rhesus monkeys were raised without their mothers. For each newborn the real mother was replaced with two surrogate mothers. One surrogate mother was made from a block of wood covered with tan terry cloth, and the other surrogate mother was made of wire-mesh. Both surrogate mothers had nursing capability. The wire-mesh surrogate mother's body did not differ in any essential way from the terry cloth surrogate mother other than in

the quality of what Harlow called "contact comfort," which the terry cloth surrogate mother could supply. The infant monkeys spent much more time with the terry cloth surrogate mother than with the wire-mesh surrogate mother. When the infant monkey was placed in an unfamiliar area and was frightened by a mechanical toy making loud noises, the infant invariably rushed and clung tightly to the terry cloth mother which provided "contact comfort." The infant monkeys never ran to the wire-mesh mothers for comfort.

In later studies, Harlow (1964) reared infant monkeys without any contact with humans or animals whatsoever from birth on. The infant monkeys were isolated for periods that ranged from 3 months to 1 year. During this time, the infants saw no living creatures and became seriously emotionally disturbed. The monkeys huddled in the corners of their cages, clasped themselves, and rocked back and forth in response to all stimulation. When they were brought together with normally reared age-mates, the monkeys did not participate in the active chasing and playful romping that is characteristic of monkeys that are one year of age. When the normal monkeys took an aggressive lunge at them, the monkeys reared in isolation were unable to fight back. They withdrew, huddled, rocked, and bit themselves. Harlow's

experiments resulted in some markedly disturbed monkeys.

Humans, as well as monkeys, can become markedly disturbed by a lack of nurturing. According to Sutherland's (1980) theories, it is very important to a child's mental health to be nurtured during infancy by his or her mother (or primary caretaker), not only physically but also emotionally. Nurturing includes touching, cuddling, and hugging. Sutherland (1980) also states that lack of nurturing in infancy, depending on the degree, is a major contributor to the development of psychotic, personality, and neurotic disorders.

Another study examining effects of lack of nurturing was done by Hollender (1970). She examined the need for body contact or skin hunger among women. The subjects consisted of 27 paid volunteers and 27 patients hospitalized for acute psychiatric problems. Each subject's wish or need to be held or cuddled was evaluated on a continuum of "indifferent" to "intense." The evaluations were done by Hollender through interviews with the subjects. Hollender did not make any comparisons between paid and hospitalized subjects in her findings. She did make the following generalizations as a result of her study. She found that for a few women the wish or need to be held or cuddled was so great that it

resembled an addiction. Body contact usually provided feelings of being loved, protected, and comforted. The wish or need for it was affected by anxiety, anger, and depression. Sometimes the longing was regarded as childish by the women themselves. Direct and indirect ways were used to obtain the holding or cuddling desired. Sexual seduction and enticement were common indirect ways of eliciting physical contact from others. In Hollender's study, many of the women whose need to be held was so great that it resembled an addiction stated that they had been given very little physical contact by their parents during childhood.

The Need for Physical Contact

In an earlier study, Hollender, Luborsky, and Scaramella (1969) used interviews and a questionnaire, the Body Contact Scale, to investigate the correlation between the intensity of the need to be held or cuddled and the frequency with which sexual intercourse is bartered for this satisfaction. Their subjects were 39 female patients of the psychiatric section for the treatment of acute disorders at the Hospital of the University of Pennsylvania. The most common diagnosis among these patients was neurotic depression. It was found that in previous relationships, 21 had used sexual intercourse to entice a male to hold them.

Twenty-six patients had directly requested to be held. Nine patients who made a direct request had not used sex, and four women who had used sex had not made a direct request. Although the response patterns for the use of sexual intercourse or direct request were similar; the gradient from high to low scorers on the Body Contact Scale was sharper on the response pattern of the use of sexual intercourse than on the response pattern for direct request. Every high scorer on the Body Contact Scale used sex to be held, whereas the low scorers did not. Eleven of 19 moderate scorers used sex. This study indicates that for some adult women the desire for physical contact is so great that they will barter sexual intercourse to obtain tactile gratification.

Satisfying the need for physical contact may come not only from other people but also from oneself. Campbell and Rushton (1978) conducted a study using 15 measures of nonverbal communication that were coded from videotaped interactions between a female confederate and female college students (N = 46) ranging in age from 18 through 21 years. Three measures of extraversion and neuroticism had been administered to the subjects; their IQs had also been assessed. In addition, a Teacher Rating Scale for each student was completed by lecturers who knew the participants well. The Teacher Rating Scale

neuroticism measures. All measures of the three types of touches were significantly correlated with poor adjustment and seemed to be associated with the relief of anxiety. Gesturing outwards to others was negatively associated with touching oneself. This study suggests that touching relieves anxiety in poorly adjusted individuals, even if it comes from themselves.

Touching is also important when working with the blind. Curson (1979), a teacher of normal blind and of retarded blind children between the ages of 2 and 5 in a nursery school, observed the importance of early verbal communication and physical contact with blind children. The sighted child will respond to an assuring nod, an applauding gesture, a smile of approval. But the blind child needs to be touched, to be talked to directly, and to be addressed by name. The necessity for physical closeness creates a more intimate mother-substitute relationship than is usual in nursery schools for the sighted. Without the sense of sight, physical contact becomes an important means of communication between the primary caretaker and the blind child, as physical facial communication between the teacher and child will never take place.

Curson's (1979) nursery, like most, is bright and cheerful (not that the children can see this).

The wooden floors are covered with linoleum, some parts are carpeted and other parts covered occasionally with wool, cotton, and velvet to help the children orient themselves. Touching plays a big part in the nursery school. Even "feeling pictures" are displayed with leaves, shells, various shapes of wood, cork, and corrugated cardboard.

Curson (1979) states many mothers realize blind children need more physical contact, more cuddling, more playing with, and more talking with than sighted children. With a blind child whose posture and movements are slower than a sighted child's and less spontaneous--as a result of awkwardness and hesitation--the mother needs to stimulate, share, welcome, and praise the child's natural curiosity.

Every teacher in Curson's (1979) nursery school tries to make the schoolroom as welcoming and stimulating as possible. The smile from the teacher is unseen, so the teacher has to find ways of making physical contact with her children by touching. Touching by the teacher is one element that is not only necessary for the child's progress but also essential in the prevention of the feeling of isolation. Many children seek comfort from the nursery staff rather than socializing with other children in the nursery.

For the blind child, his body and the body of

his mother are his first toys. He plays with his hands and with his mother's hands; he pulls her hair; she touches his toes; she tickles his tummy; he feels his face; he puts his finger into her mouth. Through the mutual pleasure in touching, the infant gains knowledge of, and confidence in, his own body. He learns to value and use his body. For the blind child this is of crucial importance; and yet, in many cases, his mother is sad, too preoccupied with her grief and disappointment regarding her child's blindness to gain pleasure from playing with her baby and letting him play with her spontaneously (Curson, 1979).

Curson (1979) states that retarded blind children enjoy being cuddled and patted on the back, head, or knees. Once the children have accepted the teaching staff, they even seek physical comfort and closeness. Hands are held when walking. The children are kissed and cuddled in attempts to generate closeness. The touching these children receive relates a message of love and acceptance that is irreplaceable.

Not all nursery schools have children who have been given messages of love and acceptance. Sroufe, Fox, and Pancake (1983) studied 40 children from two consecutive classes at the University of Minnesota nursery school for the sighted. Using histories,

teacher ratings, rankings, and Q-sorts, the researchers assessed the physical contact seeking of the children and the guidance and discipline the children received from teachers. With this information the research confirmed that children who frequently needed a lot of touching and attention from the teachers showed deficient nurturing.

Benefits of Physical Contact

Improving self-esteem. Clemes and Bean (1978) state that self-esteem can be improved by helping children develop a sense of "connectiveness" by being a part of their family or school system. When "connectiveness" problems occur in children, their comfort diminishes as more people are involved in a group activity. They will make little or no effort to join in family or group activities, and, if large numbers of people are present, will hang about the fringe of things without participating. They may spend a great deal of time by themselves. In school situations low "connectiveness" children usually do not volunteer much information about school or other activities and often appear to be shy and/or lazy. However, children with a low sense of "connectiveness" are not always shy and withdrawn. They may be inappropriately aggressive or demanding. In short, students with a low sense of "connectiveness" repeatedly create interpersonal

situations that do not get them the warm, caring, nurturing relationships they need.

The touching of children by parents and/or by teachers is one of the major ways to establish a sense of "connectiveness." According to Clemes and Bean (1978), touching affirms to the child that he/she is lovable, that other people care about him/her. When touching a child it is important to know when and how a child wants or needs to be touched. If a child pulls away, a less demanding touch should be used. Parents and teachers also need to respect a child's wish not to be touched, but should not be fooled by this rejection. Clemes and Bean also state that everyone wants to be touched if they are not threatened by the experience. One can reduce the threat by backing off, and then continuing to touch in brief, consistent ways. Children who are clingy need lots of touching, and they need to know that they do not always have to ask for it.

Lowering anxiety levels. Heidt (1981) studied 90 volunteer male and female subjects between the ages of 21 and 65, who had been hospitalized in a cardiovascular unit of a medical center in New York City. Subjects were divided into three groups. One group received therapeutic touch in which the nurse went into a physiological meditative state of relaxation (as measured by her alpha wave activity)

and was motivated by an interest in the needs of the patient before touching areas of physical discomfort in her patients. Another group received casual touch in which the nurse took the subject's apical and radial pulse and the pedal pulse rate in both feet. A third group received no touch. The nurse for this group sat beside each subject and talked with the subject without touching. One 5-minute treatment was given to each patient. All three groups had lower anxiety as measured by questionnaires given before and after treatment. But subjects who received therapeutic touch had a significantly greater reduction in posttest anxiety scores than those who received casual touch or no touch.

Improving classroom performance. Rosen and D'Andrade (1959) studied the origins of achievement motivation in 40 boys within their family and social class. The boys ranged in ages from 9 to 11. The 40 subjects were chosen from 140 boys who were administered a Thematic Apperception Test to measure their achievement motivation. Twenty of the boys had high achievement motivation scores and the other 20 had low achievement motivation scores. Within each achievement motivation category, half of the boys were lower class and the other half middle class. Experimental tasks were devised for the boys that involved their parents. The investigator wanted to

get parents involved in the experiment by deliberately building stress into the situation. The tasks were constructed to make the boys relatively dependent upon their parents for help, and the situations were arranged so that the parents either knew the solutions to the problem or were in a position to do the task better than their son. The boys were given five tasks to do: stacking blocks blindfolded, solving anagrams, making patterns, tossing rings, and solving the Maier Hatrack Problem (given two sticks and a C-clamp, the boy is instructed to build a rack strong enough to hold a coat and hat). Twelve categories were used in scoring the parent-child interaction: expresses warmth, shows positive tension release, gives explicit positive evaluation of performance, expresses enthusiasm, gives nonspecific directions, gives specific directions, asks for information, rejects information, expresses displeasure, gives negative evaluation of performance, shows negative tension release, and expresses hostility. No significant differences were found between the fathers of boys with high achievement motivation and the fathers of boys with low achievement motivation for any of the categories. The mothers of boys with high achievement motivation scored significantly higher than the mothers of boys with low achievement

motivation in the category of warmth. The category of warmth assessed the degree to which a parent gave love, comfort, and affection to his or her son while the son was working on the experimental tasks. Although Rosen and D'Andrade did not indicate whether the parental giving of love, comfort, and affection included touching, it is possible that touching was a component of this behavior. If so, it may be speculated that a mother's affectionate touching of her son while he is working on a task may contribute to the development of achievement motivation. And improving achievement motivation may be the key to improving classroom performance.

Physical Contact: A Necessity for Healthy Development

In talking about contact, Lowen (1958) states that only the child really feels or knows how much contact he or she needs. Some need more; some less. A baby expresses his or her needs through crying or by gestures. The child who cries needs at least some attention. Lowen also states that letting a child cry without responding to his or her needs creates in the child symptoms of despair and hopelessness. If the parents do not respond regularly, the baby or child stops crying. However, the child's earlier symptoms of despair and hopelessness persist until manifested in psychopathology. If the actual needs of the child are met (not what the mother "thinks"

the child needs), the result is a happy, healthy child, a satisfied child with bright eyes, a glowing complexion, a lively manner, and a fighting spirit (Lowen, 1958).

In his theory of bioenergetics, Lowen (1958) looks at the person whose needs, including the need for physical contact, have not been met. One need is the expression of love, which usually includes the need for physical contact. Lowen states that the emotion of love is an energy and that people who block or lock in this energy by armoring--defined as the placing of tension in the muscles--are stopping the expression of this emotion. Lowen states the emotion of love is defended in the neck and jaw in the form of muscular tension. The neck feels stiff and the jaw is set with an expression of pride and determination.

A major follower of Reich (1949), Lowen (1980) further contends that "holding in," a condition in which the patient physically holds in feelings in his or her muscles, is an unconscious ego defense against feelings that have been perceived as dangerous in the past. Before doing therapy Lowen and Reich, psychiatrists, make physical contact with patients by loosening the patients' muscles to release the energy cantained in the bound up feelings.

Reich (1949) states that orgone biophysics is

concerned with the central problem of the therapist, that of releasing the emotions bound up in the muscles. Reich defines "emotion" as the "protruding" or "moving out" of a sensation or sensations. A pleasurable stimulus causes an "emotion" of the protoplasm to move from the center towards the periphery. An unpleasant stimulus causes an "emotion" to move from the periphery to the center of the organism. The two basic effects are pleasure and anxiety. Emotion is mostly an expressive plasmatic motion. Biophysical plasma excitement results in a sensation, and a sensation is expressed in a plasmatic motion. Orgone energy is what moves when the body fluids are charged. The therapist works on the orgone energy of the patient by producing memories, dissolving defense mechanisms, or stopping muscle spasms.

A patient will block feeling through muscular armoring, layers of interlaced muscular tension. Each layer of muscular tension is created by the impulse to express the feeling. Every warding off of a conscious or unconscious impulse serves the function of warding off a more deeply repressed impulse. The patient avoids certain kinds of contact with others to defend against the possibility of disappointment (Reich, 1949).

The expression of the armored individual is that

of "holding back." The shoulders are pulled back, the thorax is pulled up, the chin is held rigidly, the respiration is shallow, the lower back is arched, the pelvis is retracted and "dead," and the legs are stiff. These bodily signs express some of the main attitudes of the patient's "holding back" (Reich, 1949).

The chest is the main area of the armoring. Chest armoring develops early in the life of the child with traumatic experiences from parental relationships of mistreatment, frustrations in love, and disappointments (Reich, 1949).

Reich (1949) also talked about the psychomotor discharge of energy as well as the charged orgone energy which was discussed earlier. According to Reich, the patient who represses wishes and fears is constantly seeking motor discharge through real persons and situations. Reich discharged muscular tension by making physical contact with the patient, and thereby mobilizing and discharging energy from the "locked in" muscles. Although teachers are not therapists and children are not patients, an elementary teacher is in the situation where he or she can relieve the psychomotor tension of a child through hugging.

Differences in the Way Boys and Girls Are Touched

Studies by Goldberg and Lewis (1969) suggest

that there are sex differences in initiating and receiving physical contact at a very early age. Within the first few months, boys receive more touching, holding, and rocking from their mothers than girls do (Lewis, 1972). After about 6 months, the pattern changes and girls are handled and touched by their mothers more than boys are (Clay, 1968).

Patterns of touching between preschool children and male and female teachers were studied by Perdue and Conner (1978). The types of physical touching and the frequency with which touching occurred between preschool children and teachers were observed in four classrooms, each containing one male and one female teacher. Four types of touches were identified: friendly (touches that occurred as an expression of nurturance or approval or as part of a game), helpful (touches that occurred while a teacher was helping a child or a child was helping a teacher), attentional (touches intended to focus or control behavior), and incidental (touches that did not belong to any of the preceding categories and were typically of an accidental nature). When male teachers touched girls, the touch was more likely to be a helpful touch. But when male teachers touched boys, the touch was more likely to be of a friendly nature. There were no statistically significant differences in the relative frequency with which

female teachers gave helpful, friendly, incidental, or attentional touches to boys and to girls. Teachers did touch children of their own sex more than those of the opposite sex.

Because the subject sample employed in the Perdue and Connor (1978) study was very small, the generalizability of the study's results is limited. However, the results suggest an interesting speculation. It is generally recognized that preschools and elementary schools are predominately staffed with female instructors. If teachers have a tendency to touch children of their own sex more frequently than those of the opposite sex, as was the case in Perdue and Connor's study, then female students may be touched more frequently by their teachers than male students.

Negative Effects of Physical Contact

Usually touch is seen as a positive expression, but LaFance (1985) suggests that some touching may have unintended negative effects. For example, one of the findings of Perdue and Connor's (1978) research was that male teachers tended to give helpful touches to preschool girls and friendly touches to preschool boys. LaFrance thinks that the good intention of giving preschool girls helpful touches may have the undesirable result of teaching the girls early in life that physical contact is more

likely to occur within a dependency relationship. LaFrance has also pointed out that in Henley's (1973, 1977) studies of status and sex, touch may be less of a sign of affection than of status. In the interaction between two people of different social status, the higher-status person touches the lower-status person more frequently. LaFrance states that there is a striking tendency for women to be touched more by men than the reverse. That nonreciprocal touch may be thought of as a sign, although subtle, of the greater status given to men. LaFrance states that a higher status person is always freer to touch a lower status person than a lower status person is to touch a higher status person. This pattern exists, for example, in teacher/student, doctor/patient, and executive/secretary relationships. LaFrance also states that the subtle nonreciprocal touching patterns reflecting status differences may start in preschool and continue throughout life.

Teachers Touching Students: A Controversial Issue

Mazor and Pekor (1985) state that teachers of young children are faced with the challenge of effectively and sensitively combining the physical nurturance of children with awareness and respect for children's autonomy and body integrity. Sensationalistic accounts of sexual abuse have

unfortunately made for public mistrust. Mazor and Pekor also state that fewer than one percent of all reported child abuse cases occur at school. However the statistics in no way diminish the horror of a child being abused in a class or program for children. Neither do they negate the concerns of parents and professionals. Mazor and Pekor state that because teachers' physical affection and guidance of young children may be under scrutiny, professionals are seeking additional ways of conveying their intentions to parents in a clear and supportive way. Professionals are now starting to base their physical interactions with children upon developmental principles. These developmental principles can and should be shared with parents.

Statement of Hypotheses

The hypotheses of this study were as follows:

1. Elementary teachers who are "huggers" (hug students) think K (kindergarten), 1st, 2nd, 3rd, 4th, and 5th graders should be hugged. This hypothesis is based on the theory that being touched from birth is essential to the development of a healthy, mentally stable child. This theory has been supported by Sutherland's (1980) study of object relations theory, Malando and Barker's (1983) studies of the effects of lack of physical contact, and Harlow's (1958) study of rhesus monkeys.

2. Teachers who hug students feel that hugging students improves the students' self-concepts, IQ levels, and classroom performance and that it lowers anxiety levels. This hypothesis is based on Clemes and Bean's (1978) work on improving self-esteem. It also stems from Curson's (1979) work with the normal and retarded blind, Rosen's and D'Andrade's (1959) study, and Rogers' (1954) work.

3. Teachers who hug students feel both male and female teachers should hug students. This hypothesis is based on Mayor and Pekor's (1985) discussion of the need for developmental physical interaction between students and their teacher.

4. Teachers who hug students feel students in lower grades should be hugged more than students in higher grades. This hypothesis is based on the idea that children need less contact as they mature, as suggested in object relations theory by Horner (1984).

5. There is no significant correlation between the number of years a teacher has taught and whether the teacher does or does not hug students. The reason for this hypothesis was to see if there was a correlation between the era in which teachers were educated (possibly being influenced by humanistic or behaviorist points of view), as determined by the years they have taught, and their tendency to hug

students.

6. Teachers who are "huggers" will not think boys should be hugged more than girls or girls should be hugged more than boys. The purpose of this hypothesis was to see if teachers had biases in their preference towards the hugging of boys and girls.

7. Teachers who feel hugging some children at school improves the children's self-concepts also feel that hugging some children improves their IQ levels, lowers their anxiety levels, and improves their classroom performance. They also think that hugging is necessary for children's healthy development and that hugging relates a message of appreciation of the children's uniqueness. This hypothesis was based on (a) Rosen's and D'Andrade's (1959) study of how warmth expressed by parents improved their child's performance, (b) Heidt's (1980) experiment in which anxiety levels in cardiovascular patients were lowered as a result of the patients' areas of discomfort being touched, and (c) Rogers' (1954) theories about the benefits of unconditional positive regard, which suggest that unconditional positive regard would provide a student with an environment of approval and respect that would enable the student to express his or her inner nature.

CHAPTER III

METHOD

Subjects

The subjects were 62 elementary school teachers who were employees of Wentzville R-IV public schools in Wentzville, Missouri. Fifty-nine of the subjects were female and 3 were male. The sample included 7 kindergarten teachers, 13 first grade teachers, 12 second grade teachers, 11 third grade teachers, 11 fourth grade teachers, and 8 fifth grade teachers. All of the teachers had contained classrooms, i.e., each teacher taught all subjects for his or her class except music, art, and physical education.

Questionnaire

A survey instrument called the "Hugging Questionnaire" was developed by the author of this study to assess the opinions of elementary teachers about the developmental need for hugging in an elementary classroom setting. The questionnaire (see Appendix A) consisted of 25 questions. The first 13 questions employed a 7-point scale. Subjects were asked to circle one number, 1 through 7, that matched the appropriate response. The responses were scaled as follows: 1 = never, 2 = very seldom, 3 = seldom, 4 = sometimes, 5 = frequently, 6 = almost always, and 7 = always. Questions 8, 9, 10, and 11 each had a

part "b" which asked the subjects to indicate the percentage of children they thought would experience improvement in a particular area of functioning as a result of hugging at school.

The next 11 items in the questionnaire asked the subjects to circle a number between 1 and 7 to show their degree of agreement with each of 11 statements pertaining to their professional philosophies and opinions on the effects and practice of hugging in the classroom. The rating scale was as follows: 1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = not sure, 5 = somewhat agree, 6 = agree, and 7 = strongly agree. Question number 25 was a fill-in-the-blank item: "How many years have you taught in elementary schools?". A space for comments was included at the end of the questionnaire.

Procedure

The study was begun during the second week of the 1986-87 academic year for Wentzville public schools. On Monday of that week a cover letter (see Appendix B), the Hugging Questionnaire, and an envelope were placed in the school mailboxes of 64 elementary school teachers. The cover letter asked the teachers to complete their questionnaires, put them in the envelopes, and return them to their school secretary by Friday of the same week. All of

the questionnaires were coded so that the teachers completing them could be identified. This was done only so that it would be possible to make follow-up contacts with teachers who did not return their questionnaires. During the third week of the school year a follow-up letter (see Appendix C) and a second copy of the Hugging Questionnaire were sent to teachers who had not returned the first questionnaire. Again the teachers were asked to complete and return the questionnaires. During the fourth week of school, the follow-up letter and the questionnaire were sent once more to teachers who had not yet returned their questionnaires. During the fifth week, the teachers who still had not submitted questionnaires were contacted personally. They were given another copy of the questionnaire and asked to complete it. After this no further attempts were made to have the remaining teachers complete the survey.

CHAPTER IV

RESULTS

Scoring and Analysis

Data were obtained from 62 subjects. Fifty-four teachers were categorized as "huggers" and 8 teachers were categorized as "non-huggers." This was done according to the way teachers answered Question 1 of the Hugging Questionnaire, "Do you hug the children in your classroom?" If the teacher answered 1, 2, or 3, that teacher was classified as a "non-hugger." If the teacher answered 4, 5, 6, or 7, that teacher was classified as a "hugger." The rating scale used was: never (1), very seldom (2), or seldom (3), sometimes (4), frequently (5), almost always (6), or always (7).

The Pearson product-moment correlation coefficient was used to examine the relationship between how the elementary teachers responded to Questions 2 through 25 of the questionnaire and their reported frequency of hugging students (Question 1). The Pearson product-moment correlation coefficient was also used to examine the relationships of the scores to Questions 8b (about self-concept), 9b (about IQ), 10b (about lowering anxiety level), 11b (about improving classroom performance), 12 (about female teachers hugging students), 13 (about male teachers hugging

students), and 25 (about the number of years of teaching experience) to the scores of each of the other statements on the survey. All correlations were tested for significance at the .05 level or beyond. A percentage analysis of responses to each question was also carried out. A Friedman two-way analysis of variance by ranks for repeated measures was used on the frequencies of answers given for questions 2 through 7 to see if the teachers felt that children should be hugged less frequently as they advanced to progressively higher grade levels.

Summary of Tables

Table 1 shows the intercorrelations among selected questions on the Hugging Questionnaire using Pearson product-moment correlation coefficients. The remaining tabulated data appear in Appendix D. Table D-1 provides data on how elementary teachers responded to Questions 1 through 24 using a 7-point scale rating for each question. Table D-2 presents a percentage analysis of the responses to Questions 1-24. Table D-3 shows the percentage estimates given in response to Questions 8B, 9B, 10B, and 11B. Table D-4 shows each subject's response to Question 1 using a 7-point scale rating. Table D-5 shows the mean scores for the ratings of Questions 2 through 7.

Table 1

Intercorrelations (Pearson r's) Among Selected Questions on the Hugging Questionnaire

Question	Critical Questionnaire Items						
	1	8B	9B	10B	11B	12	13	25
1		.391**	.292	.485***	.341**	.678***	.618***	.000
2	.664***	.249	.048	.199	.123	.460***	.516***	.078
3	.643***	.207	.125	.161	.187	.497***	.441***	.025
4	.668***	.398**	.178	.416**	.393**	.595***	.552***	.000
5	.608***	.366**	.152	.342**	.282	.577***	.528***	.102
6	.579***	.409**	.168	.377**	.368**	.609***	.557***	.000
7	.533***	.463***	.291	.410**	.415**	.581***	.600***	-.047
8A	.594***	.757***	.279	.472***	.440***	.550***	.597***	-.191
8B	.391**		.374**	.615***	.559***	.509***	.544***	-.118
9A	.371**	.174	.681***	.226	.260	.270	.318*	.055
9B	.292	.374**		.365**	.381**	.220	.312*	.029
10A	.425**	.508***	.344**	.683***	.564***	.503***	.492***	-.146
10B	.485***	.615***	.365**		.738***	.552***	.597***	-.101
11A	.473***	.434***	.303*	.475***	.706***	.431***	.459***	-.196
11B	.341**	.559***	.381**	.738***		.414**	.488***	-.222
12	.678***	.509***	.220	.552***	.414**		.805***	-.097
13	.618***	.544***	.312*	.597***	.488***	.805***		-.113
14	.311*	-.036	.198	.329*	.360**	.401**	.314*	.091
15	.541***	.420**	.244	.326*	.351**	.462***	.520***	-.026
16	.553***	.460***	.439**	.366**	.521***	.589***	.511***	-.207
17	-.149	-.056	.134	-.171	-.152	-.112	-.123	.227
18	-.102	-.079	.095	-.159	-.194	-.056	-.134	.280
19	-.043	.220	.130	.024	.060	.162	.129	-.111
20	.171	.173	.204	.045	-.028	.266	.210	-.120
21	.080	.055	.062	.011	.086	.153	.066	.000
22	-.332**	-.276	-.227	-.391**	-.292*	-.337**	-.416**	.079
23	-.076	-.016	.065	-.269	-.148	-.083	-.107	.100
24	-.318*	-.350**	-.205	-.443***	-.294*	-.372**	-.450***	.101
25	.000	-.118	.029	-.101	-.222	-.097	-.113	

*$p < .05$ **$p < .01$ ***$p < .001$

Data Analyses for Specific Hypotheses

All correlations referred to hereafter may be found in Table 1 unless otherwise specified.

Hypothesis 1. The scores from Question 1 (Do you hug the children in your classroom?) correlated significantly with the scores of Questions 2 (r = .664, $p < .001$), 3 (r = .643, $p < .001$), 4 (r = .668, $p < .001$), 5 (r = .608, $p < .001$), 6 (r = .579, $p < .001$), and 7 (r = .533, $p < .001$). The correlations indicate that, relative to "non-huggers," teachers who were classified as "huggers" were stronger in the conviction that students should be hugged from K (kindergarten) through 5th grade.

Hypothesis 2. Scores from Question 1 correlated significantly with scores from Questions 8A (r = .594, $p < .001$) and 8B (r = .391, $p < .01$), showing a preference for hugging is related to the belief that hugging improves self-concept. On the average the teachers in this study estimated that 68% of elementary students would have a better self-concept as a result of hugging (see Appendix D, Table D-3 for the percentage estimate reponses).

Scores from Question 1 correlated significantly with scores from Question 9A (r = .371, $p < .01$), indicating that the tendency to hug students was positively related to the belief that hugging would

improve the students' IQ. On the average the teachers estimated that 22.5% of students would improve their IQ as a result of being hugged at school.

Scores from Question 1 correlated significantly with scores from Questions 10A (r = .425, p < .01) and 10B (r = .485, p < .001), indicating that a preference for hugging is related to the belief that hugging reduces students' anxiety. On the average the teachers in the study estimated that 60.2% of elementary students would have lower anxiety levels as a result of being hugged at school (see Appendix D, Table D-3 for the percentage-estimate reponses).

Scores from Question 1 correlated significantly with scores from Questions 11A (r = .473, p < .001) and 11B (r = .341, p < .01), suggesting that teachers who prefer to hug students believe that hugging improves classroom performance. On the average the teachers in the study estimated that 52.6% of elementary students would have improved classroom performance as a result of being hugged (see Appendix D, Table D-3 for the percentage-estimate reponses).

Hypothesis 3. Scores from Question 1 correlated positively and significantly with scores from Questions 12 (r = .678, p < .001) and 13 (r = .618, p < .001). The correlations indicate that a preference for hugging is associated with the

conviction that both female and male teachers should hug students.

Hypothesis 4. To assess the decreasing trend in the mean scores of Questions 2-7 (see Appendix D, Table D-5), a Friedman two-way analysis of variance by ranks for repeated measures was used to analyze responses given to Questions 2, 3, 4, 5, 6, and 7. A chi square of 122.083, $p < .001$, was obtained, indicating that the higher the grade students are in, the less teachers feel that the students need to be hugged.

Hypothesis 5. The number of years of teaching experience and hugging patterns were examined. There were no significant correlations between the number of years taught and scores from Questions 1 through 24.

Hypothesis 6. The scores from Question 1 correlated negatively and significantly with the scores from Questions 22 ($r = -.332$, $p < .01$) and 24 ($r = -.318$, $p < .05$). This indicates that the teacher who hugs students tends not to feel that children of either sex should be hugged more than children of the other. Teachers who do not hug students tend to feel girls should be hugged more than boys.

Hypothesis 7. The scores from Question 8B correlated significantly with scores from Questions

9B (r = .374, p < .01), 10B (r = .615, p < .001), 11B (r = .559, p < .001), and 15 (r = .420, p < .05). The correlations indicate that teachers who felt hugging students improves their self-concepts (Question 8B) also felt it improves IQ (Question 9B), lowers anxiety levels (Question 10B), improves classroom performance (Question 11B), and relates a message to the children of appreciation of their uniqueness (Question 15). No significant correlation existed between Question 8B and the statement that hugging is necessary for a child's healthy development (Question 14).

CHAPTER V

DISCUSSION

The basic purpose of this study was to assess teachers' opinions about teachers hugging students in elementary school and to find out if teachers perceive any benefits or disadvantages to hugging students. In assessing the teachers' opinions about hugging students, seven hypotheses were tested. Six hypotheses were supported by the research. One hypothesis was partially supported by the research.

Hypothesis 1. Elementary teachers who are "huggers" think K, 1st, 2nd, 3rd, 4th, and 5th graders should be hugged. This hypothesis was supported by this study. The results indicate that, relative to "non-hugging" teachers, "huggers" are more likely to endorse the practice of hugging students at all elementary grade levels.

In speculating as to why "huggers" are more likely to favor hugging at all elementary grade levels, one possibility might be that "huggers" use hugging as a positive reinforcer (Christian, 1983; Martin, 1974). Martin's and Christian's studies both ranked physical contact as the most preferred reinforcer of teachers. Another possible reason that "huggers" tend to think children in all elementary grades should be hugged might be that those teachers use hugging to show what Rogers (1969) calls

unconditional positive regard. The "huggers" may be hugging their students not because they wish to shape the students' behavior, but because they prize the students as unique individuals. In showing unconditional positive regard, huggers are providing an environment of approval, which would convey respect for what the students are, and, thus, encourage them to express their inner natures.

Hypothesis 2. Teachers who hug students feel that hugging students improves the students' self-concepts, IQ levels, and classroom performance and that it lowers anxiety levels. This hypothesis was supported by the present data. Sixty-eight percent of the teachers believed that hugging students improves the students' self-concepts. This belief is consistent with Clemes and Bean's (1978) theory that touching establishes a sense of "connectiveness." The sense of "connectiveness" helps the students feel they are part of the school system, affirming to the students that they are lovable and that other people care about them. Hence, hugging-related feelings of "connectiveness" could improve the students' self-conepts.

The opinion of 22.5% of the teachers that hugging students improves IQ may indicate humanistic thinking on the part of those teachers. They may think as Rogers (1969) did that hugging students is

one part of helping students express their inner natures. Those teachers may think that hugging opens the doors to developing or releasing the inherent potentialities of the inner nature, and they may regard IQ as one of the potentialities that can be enhanced as a result of hugging.

The opinion of 52.6% of the teachers that hugging improves classroom performance is consistent with Rosen and D'Andrade's (1959) study of the achievement motivation of elementary-aged boys. In this study, when a mother expressed warmth towards her son as he performed an experimental task, the son showed higher achievement motivation and better performance.

The opinion of 60.2% of the teachers that hugging lowers anxiety levels receives some support from Heidt's (1981) study of cardiovascular patients. Patients who were touched by a nurse showed a significant reduction in anxiety.

Hypothesis 3. Teachers who hug students feel both male and female teachers should hug students. The hypothesis was supported by the results of this study. "Huggers" did not think that hugs should be given only by male teachers or only by female teachers, but by both.

One possible explanation for why "huggers" think both male and female teachers should hug students is

that "huggers" may think students need physical nurturing. Elementary teachers are in a position to create a curriculum that incorporates the giving or the denying of physical nurturing to students. "Huggers" may think the exclusion of one sex from hugging students would deprive some students of needed physical nurturing.

Hypothesis 4. Teachers who hug students feel students in lower grades should be hugged more often than students in higher grades. This hypothesis was supported by the results of this study.

A possible speculation regarding these results is that "huggers" may be saying less physical nurturing is necessary as a child becomes older. This is consistent with Horner's (1984) theory of object relations, which states that the younger a child is, the greater the psychopathology caused by lack of physical and emotional nurturing. As a child grows older, the need for physical contact allegedly lessens.

Hypothesis 5. There is no significant correlation between the number of years a teacher has taught and whether the teacher does or does not hug students. The hypothesis was supported in that no significant correlation was found between the number of years a teacher had taught and whether the teacher reported hugging or not hugging students. This

finding suggests that teaching experience does not make a teacher more or less prone to hug students. Consequently, one may speculate that hugging may be a function of a teacher's attitudes towards students. In particular, hugging may be a demonstration of an attitude that Rogers (1969) calls genuineness. Based on Rogers' descriptions of genuineness, in the context of a teacher/student relationship genuineness on the part of a teacher would involve prizing a student and his or her feelings and opinions. Hugging is one way a teacher might display this attitude. If hugging is indeed an expression of genuineness and genuineness is not something that changes with teaching experience, it may be that genuineness is a personality characteristic of teachers who hug. An alternative possibility is that for some teachers genuineness (and hugging) maybe a product of relationship skills training that the teachers have had.

Hypothesis 6. Teachers who are "huggers" will not think boys should be hugged more than girls or girls should be hugged more than boys. The results supported this hypothesis. "Huggers" seemed to be open-minded in the sense that they thought boys and girls should be hugged equally, whereas "non-huggers" tended to think girls should be hugged more than boys. Thus, the more strongly teachers tended to

advocate hugging students, the less sex bias they professed regarding the practice of hugging.

A speculation as to why "huggers" express less sex bias regarding the hugging of students is that they may think the need to be hugged is not any greater in girls than in boys; i.e., they may regard the need to be hugged as being equal in girls and boys.

"Non-huggers," on the other hand, do think girls should be hugged more than boys. Interestingly, even though "non-huggers" think girls should be hugged more than boys, little sex bias in the actual hugging of students may take place because "non-huggers" are not the ones who hug the students.

Hypothesis 7. Teachers who feel hugging some children at school improves the children's self-concepts also feel it improves IQ levels, lowers anxiety levels, and improves their classroom performance. They also think that hugging is necessary for children's healthy development and that hugging relates a message of appreciation of the children's uniqueness. The hypothesis was partially supported by the results of this research. There were no data to support the idea that teachers think hugging at school is necessary for a child's healthy development. But overall, "huggers" had a positive view of hugging. "Huggers" thought hugging not only improves self-concepts but also improves IQ levels,

lowers anxiety levels, improves classroom performance, and relates a message of appreciation of the children's uniqueness.

Limitations of the Study

There were several limitations to this study. The research was limited to one midwestern population of elementary school teachers at Wentzville, Missouri. The population size was small, making it hard to form generalizations about other populations of elementary teachers. Also, the population of Wentzville Elementary was limited to mostly females. There was not a big enough sampling of males to compare male opinions with female opinions.

Male and female teachers who hugged students may have used rationalizations in reflecting their beliefs that hugging is beneficial to students. There is a possibility that teachers may have been justifying their own behaviors as they responded to the Hugging Questionnaire. This would have distorted the results. Thus, the opinions offered by "huggers" about the beneficial effects of hugging should be viewed with extreme caution.

A cause-and-effect type of research was not allowed by the circumstances. This researcher had wanted to do actual classroom research that compared children who were hugged with others who were not hugged. However, upon consulting with my principal,

and, in turn the principal's consulting with my assistant superintendent regarding the possibility of such research, I was denied permission to conduct that kind of study. The reason given was that parents would have had to be notified, and the administration did not think parents would understand why some teachers hugged children and other teachers did not. It is hoped that this research will open the doors to experimental research on the effects of hugging in the classroom.

Recommendations for Future Research

I recommend that actual classroom experimentation take place concerning the benefits and disadvantages of teachers hugging their students. The results of this study indicate that hugging students by teachers is believed to be beneficial to the students' cognitive and affective development. If future research does show that hugging is beneficial to elementary students, the school curriculum will need revising to include hugging as an educational tool.

Appendix A

The Hugging Questionnaire

Please indicate the degree in which each of the following statements occurs by circling the appropriate number (1 through 7).

	Never	Very Seldom	Seldom	Sometimes	Frequently	Almost Always	Always
1. Do you hug the children in your classroom?	1	2	3	4	5	6	7
2. How often does a kindergarten child need to be hugged at school?	1	2	3	4	5	6	7
3. How often does a first grader need to be hugged at school?	1	2	3	4	5	6	7
4. How often does a second grader need to be hugged at school?	1	2	3	4	5	6	7
5. How often does a third grader need to be hugged at school?	1	2	3	4	5	6	7
6. How often does a fourth grader need to be hugged at school?	1	2	3	4	5	6	7
7. How often does a fifth grader need to be hugged at school?	1	2	3	4	5	6	7
8a. Does hugging some children at school improve their self-concept?	1	2	3	4	5	6	7

8b. In your opinion, what percentage of children would have a better self-concept as a result of hugging at school? _____% (fill in the blank)

		Never	Very Seldom	Seldom	Sometimes	Frequently	Almost Always	Always
9a.	Does hugging some children at school improve their IQ level?	1	2	3	4	5	6	7
9b.	In your opinion, what percentage of children's IQ would improve as a result of hugging at school?	_____% (fill in the blank)						
		Never	Very Seldom	Seldom	Sometimes	Frequently	Almost Always	Always
10a.	Does hugging some children at school reduce their anxiety level?	1	2	3	4	5	6	7
10b.	In your opinion, what percentage of children would have lower anxiety levels as a result of hugging at school?	_____% (fill in the blank)						
		Never	Very Seldom	Seldom	Sometimes	Frequently	Almost Always	Always
11a.	Does hugging some children at school improve classroom performance?	1	2	3	4	5	6	7
11b.	In your opinion, what percentage of children would have improved classroom performance as a result of hugging at school?	_____% (fill in the blank)						
		Never	Very Seldom	Seldom	Sometimes	Frequently	Almost Always	Always
12.	Should female teachers hug children in grades kindergarten through fifth?	1	2	3	4	5	6	7
13.	Should male teachers hug children in grades kindergarten through fifth?	1	2	3	4	5	6	7

Please indicate your degree of agreement with each of the following statements by circling the appropriate number.

	Strongly Disagree	Disagree	Somewhat Disagree	Not Sure	Somewhat Agree	Agree	Strongly Agree
14. I believe that hugging is necessary for a child's healthy development.	1	2	3	4	5	6	7
15. Hugging by the teacher relates a message to the child of appreciation of the child's uniqueness.	1	2	3	4	5	6	7
16. Every child should get at least two hugs from the teacher everyday.	1	2	3	4	5	6	7
17. Slow learners need to be hugged more than the other students.	1	2	3	4	5	6	7
18. Slow achievers need more hugging than other children.	1	2	3	4	5	6	7
19. There is a need for more research on the effects of teachers hugging children.	1	2	3	4	5	6	7
20. Public schools should allow actual research in the classroom on the effects of the teachers hugging students.	1	2	3	4	5	6	7
21. Girls are hugged more than boys in elementary school.	1	2	3	4	5	6	7

	Strongly Disagree	Disagree	Somewhat Disagree	Not Sure	Somewhat Agree	Agree	Strongly Agree
22. I feel girls should be hugged more than boys.	1	2	3	4	5	6	7
23. Boys are hugged more than girls in elementary school.	1	2	3	4	5	6	7
24. I feel boys should be hugged more than girls.	1	2	3	4	5	6	7

25. How many years have you taught in elementary schools? ____ years (fill in the blank)

Comments:

Appendix B

Cover Letter of the Hugging Questionnaire

Dear Teachers,

To hug or not to hug, that is the question. There is very little research on the benefits of teachers hugging students. Your opinion really counts! I would greatly appreciate your taking a few minutes to fill out this survey.

Your help and cooperation is very important to me, as this is part of my master's thesis project. I promise to give each of you a copy of the results, as you may find it interesting as well as helpful.

Please fill out the questionnaire; put it in the enclosed envelope; seal it; and return it to your secretary, or put it in my mailbox.

Sincerely,

John Graham
First Grade Teacher

Appendix C

Second Cover Letter of the Hugging Questionnaire

Dear Teachers,

I know last week was a busy one and you may not have had time to complete the survey.

I have enclosed another survey should you have misplaced the first one.

Would you please fill out the questionnaire; put it in the enclosed envelope; seal it; and return it to your secretary, or put it in my mailbox.

It is important that you answer all the questions. Even if you are not sure of your answer, circle the one that best describes your thoughts.

Thank you,

John Graham

Appendix D

Supplementary Tables

Table D-1

Frequencies of Elementary Teachers' Responses by Rating for Questions 1-24 of the Hugging Questionnaire

		Ratings						
Q	No Response	1	2	3	4	5	6	7
1	0	0	6	2	15	25	6	8
2	0	0	0	0	7	44	4	7
3	1	0	0	0	12	39	3	7
4	0	0	0	1	24	29	5	3
5	0	0	1	4	33	17	4	3
6	0	0	4	11	32	11	1	3
7	1	1	9	9	31	8	1	2
8A	2	0	1	0	15	12	25	7
9A	4	8	7	11	30	1	1	0
10A	2	0	1	1	10	31	14	3
11A	0	0	1	0	27	19	15	0
12	0	0	1	0	23	22	10	6
13	1	0	6	4	23	15	8	5
14	1	0	1	1	5	7	24	23
15	0	0	1	1	6	10	34	10
16	1	1	20	8	16	6	5	5
17	0	1	16	5	13	15	11	1
18	0	1	13	5	13	17	12	1
19	0	0	3	2	11	10	26	10
20	0	1	4	4	19	16	14	4
21	1	1	5	6	17	13	14	5
22	0	9	38	9	6	0	0	0
23	0	4	28	12	16	1	0	1
24	0	9	39	7	6	1	0	0

Note. Q = Question.

Table D-2

Percentage Analysis of Responses to Questions 1-24 of the Hugging Questionnaire

Q	No Response	Rating 1	2	3	4	5	6	7
1	0%	0%	9.7%	3.2%	24.2%	40.3%	9.7%	12.9%
2	0%	0%	0%	0%	11.3%	71.0%	6.5%	11.3%
3	1.6%	0%	0%	0%	19.4%	62.9%	4.8%	11.3%
4	0%	0%	0%	1.6	38.7%	46.8%	8.1%	4.8%
5	0%	0%	1.6%	6.5%	53.2%	27.4%	6.5%	4.8%
6	0%	0%	6.5%	17.7%	51.6%	17.7%	1.6%	4.8%
7	1.6%	1.6%	14.5%	14.5%	50%	12.9%	1.6%	3.2%
8A	3.2%	0%	1.6%	0%	24.2%	19.4%	40.3%	11.3%
9A	6.5%	12.9%	11.3%	17.7%	48.2%	1.6%	1.6%	0%
10A	3.2%	0%	1.6%	1.6%	16.1%	50%	22.6%	4.8%
11A	0%	0%	1.6%	0%	43.5%	30.6%	24.2%	0%
12	0%	0%	1.6%	0%	37.1%	35.5%	16.1%	9.7%
13	1.6%	0%	9.7%	6.5%	37.1%	24.2%	12.9%	8.1%
14	1.6%	0%	1.6%	1.6%	8.1%	11.3%	38.7%	37.1%
15	0%	0%	1.6%	1.6%	9.7%	16.1%	54.8%	16.1%
16	1.6%	1.6%	32.3%	12.9%	25.8%	9.7%	8.1%	8.1%
17	0%	1.6%	25.8%	8.1%	21.0%	24.2%	17.7%	1.6%
18	0%	1.6%	21.0%	8.1%	21.0%	27.4%	19.4%	1.6%
19	0%	0%	4.8%	3.2%	17.7%	16.1%	41.9%	16.1%
20	0%	1.6%	6.5%	6.5%	30.6%	25.8%	22.6%	6.5%
21	1.6%	1.6%	8.1%	9.7%	27.4%	21.0%	22.6%	8.1%
22	0.%	14.5%	61.3%	14.5%	9.7%	0%	0%	0%
23	0%	6.5%	45.2%	19.4%	25.8%	1.6%	0%	1.6%
24	0%	14.5%	62.9%	11.3%	9.7%	1.6%	0%	0%

Note. Q = Question.

Table D-3

Elementary Teachers' Percentage-Estimate Responses to Questions 8B, 9B, 10B, and 11B of the Hugging Questionnaire

Subject	Question 8B	9B	10B	11B	Subject	Question 8B	9B	10B	11B
1	95	15	95	50	32	80	0	10	10
2	95	50	85	80	33	30	5	50	30
3	95	50	95	50	34	80	75	80	75
4	90	70	80	70	35	*	50	50	50
5	40	20	75	75	36	100	0	75	25
6	80	50	75	50	37	75	30	75	80
7	100	30	75	50	38	85	20	90	90
8	95	45	85	45	39	18	13	50	18
9	40	20	60	60	40	50	10	30	20
10	75	50	75	50	41	5	0	2	5
11	50	20	70	70	42	10	0	50	*
12	100	78	100	90	43	90	5	80	50
13	99	*	75	75	44	100	0	100	80
14	90	*	95	95	45	50	5	50	20
15	95	15	75	60	46	100	20	10	10
16	100	25	40	80	47	40	25	40	30
17	25	1	30	10	48	70	60	20	60
18	100	63	98	75	49	50	30	75	50
19	30	20	10	15	50	70	0	15	15
20	70	5	40	50	51	100	90	90	90
21	50	*	*	10	52	30	1	30	10
22	95	10	95	80	53	50	25	10	50
23	20	10	50	40	54	25	*	25	75
24	80	10	70	50	55	100	10	95	80
25	75	50	100	75	56	100	0	75	100
26	75	5	95	95	57	10	0	10	10
27	90	20	75	75	58	85	0	90	90
28	50	25	60	50	59	40	3	50	30
29	75	25	25	25	60	50	10	40	50
30	70	*	*	25	61	40	10	20	50
31	90	5	90	90	62	80	0	30	40

Note. * = No response.

Table D-4

Elementary Teachers' Response Ratings for Question 1 of the Hugging Questionnaire

Subject	Response Rating	Subject	Response Rating
1	5	32	4
2	6	33	2
3	5	34	4
4	5	35	3
5	5	36	4
6	7	37	5
7	5	38	5
8	5	39	4
9	7	40	4
10	4	41	4
11	5	42	4
12	7	43	6
13	5	44	6
14	5	45	4
15	5	46	4
16	5	47	3
17	7	48	5
18	7	49	5
19	7	50	5
20	5	51	6
21	4	52	4
22	5	53	2
23	4	54	2
24	4	55	5
25	7	56	5
26	5	57	2
27	5	58	6
28	5	59	5
29	6	60	2
30	5	61	4
31	7	62	2

Table D-5

Mean Scores for the Ratings of Questions 2 through 7 on the Hugging Questionnaire

Question	Mean
2	5.177
3	5.082
4	4.597
5	4.452
6	4.048
7	3.869

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