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**SELF-ESTEEM: THE IMPACT OF A COURSE IN
GROWTH AND DEVELOPMENT ON
FIFTH GRADE STUDENTS**

A Research Project

Presented to

The Faculty of the School of Nursing

San Jose State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by

Mary Jang

December, 1999

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Self-Esteem: The Impact of a Course in Growth and Development on Fifth Grade Students

Puberty and adolescence are exciting yet troublesome times. The transition from child to adult is fraught with uncertainty and rebellion. Teenagers long to be independent in a society which does not grant them the privilege and resources to do so. Dramatic physical changes, hormonal effects, and new social roles lead to confusion and doubts about one's emerging sexual identity.

Teens in the United States have the highest pregnancy, abortion, and sexually transmitted disease rates among the developed countries (Clark, Cohall, & Joffe, 1998, p. 58). Every year, one in four females under 18 years of age becomes pregnant (Brown & Steele, 1995). The average age of menarche has declined from 14.8 years in 1890 to 12.5 years in 1988 (Wong, 1995, p. 885). The Youth Risk Behavior Surveillance System, developed by the Centers for Disease Control and Prevention, reports that 48% of all high school students have had sexual intercourse (Kann et al., 1998). A 1995 national survey showed that 39% of 15 year olds and 49% of 16 year olds have had sexual intercourse (Centers for Disease Control and Prevention, 1996).

From 1994 to 1996, the California state birth rate of adolescent

mothers, aged 15 to 19 years, was 67 per 1,000 female population; this rate is about one birth for every 15 female teens. The California Department of Health Services Year 2000 objective is 45 teen births per 1,000. Santa Clara County has a rate of 51 (California Department of Health Services, 1998). In 1995, the birth rate per 1,000 teens in Santa Clara County by ethnic group was: Hispanic, 114; African-American, 61; Native American, 56; Asian and Pacific Islander, 23; and White, 19. (Public Health Department of Santa Clara County, 1997).

Compared to adults, adolescent mothers deliver a higher percentage of low birthweight babies, obtain late or no prenatal care, and receive more public assistance. In 1992, the estimated welfare costs for teen pregnancies was \$25.1 billion. A savings of \$10 billion could have been made if these births were delayed until age 20 (Burnhill, 1994). Pregnancy is the number one reason cited by girls for dropping out of school (Stout & Kirby, 1993). The social and financial costs of teen births are staggering.

Literature Review

Stout and Kirby (1993) describe the four generations of sexuality education programs. First generation programs focused on knowledge of sexuality, birth control, and pregnancy risks and consequences. Second generation programs included basic knowledge plus values clarification,

decision making, and communication skills. The values were broad and general as "all people should be treated with respect and dignity." The third generation curriculum deviated from the first two; abstinence until marriage was the dominant message. Contraception was not mentioned to avoid the presentation of conflicting standards. Studies found that these three different types of programs did not alter onset of sexual activity, use of contraception, or rate of teen pregnancy (Kirby, Barth, Leland, & Fetro, 1991).

The fourth generation program represents a combination of the other three. Postponing the first intercourse act is smart, and effective contraception should always be used. Discussions, role playing, and group participation are learning strategies which help the student relate to these ideas. Two fourth generation programs, "Postponing Sexual Involvement" and "Reducing the Risk," are successful in delaying the onset of sex (Hubbard, Giese, & Rainey, 1998; Kirby et al., 1991). Use of birth control during the first sex act and frequency of contraceptive use were not affected (Kirby et al.). Research findings reinforce the necessity of reaching students before they initiate sexual activity.

School programs represent only a fraction of the many factors which affect knowledge, behavior, and attitudes. Mass media and peer pressure

leave stronger impressions on young minds. A 1996 survey by the Henry J. Kaiser Family Foundation and Children Now reveals that 57% of 10 to 12 year olds learn "a lot" about the issues of sex, AIDS, violence, and drugs from the entertainment media, 54% from parents, and 36% from friends. Teens, aged 13 to 15, claim that the media, friends, and parents are their sources of information; 61%, 60%, and 40% respectively. As children mature, messages from the entertainment media and peers become more powerful while parental influence decreases.

A 1996 study of the four major networks, ABC, CBS, NBC, and Fox, states that there are an average of 8.5 sexual interactions per hour of television programming during family hour (8 to 9 p.m.) (Kunkel, Cope, & Colvin, 1996). The overall amount of sexual messages increased 118% since 1986, and 270% since 1976.

Two studies have found correlations between watching more hours of "sexy" television and early onset of sexual intercourse (Brown & Steele, 1995, p. 22). Over 1/3 of adolescents polled (36% of boys and 32% of girls) feel that some teens have sex because television and movies make it seem normal for teens to have sex (Henry J. Kaiser Family Foundation Survey, 1996).

Independence and self-confidence are necessary if one is to

disregard powerful media and peer messages. Research shows that high self-esteem is significantly related to resistance to group pressures, willingness to express unpopular opinions, family adjustment, creativity, and effective communication between parents and youth (Coopersmith, 1981, p. 13). Developmental stage, comfort with one's own body, internal locus of control, and self-esteem are correlated with lower-risk sexual behavior (Tobias & Ricer, 1998, p. 53).

Research Question

Will a 5-hour course in growth and development increase the level of self-esteem in fifth grade students (age 10 to 11 years old)? The independent variable is the course, and the dependent variable is self-esteem. Self-esteem is defined as a person's collective attitude and belief about him- or herself. It is formed from self-image, the perceptions that evolve from their interactions with family, peers, teachers, and significant others. Self-esteem was measured with the Coopersmith Self-Esteem Inventory (SEI).

Conceptual Framework

The Health Belief Model was developed in the 1950s by four U.S. Public Health Service psychologists, Hochbaum, Rosenstock, Leventhal, and Kegeles. Their psychosocial model states that health behavior is a

function of personal beliefs. Perception of the vulnerability of a health problem, belief that the threat can be managed by certain actions, and a sense that the behavior can be successfully performed are factors which explain health practices. Six key concepts of the health belief model are:

1. Perceived susceptibility refers to one's assessment of personal risk for illness.

2. Perceived severity is the degree of seriousness a condition presents. Medical and social consequences are considered.

3. Perceived benefits are positive outcome expectations. Actions taken to reduce illness must be seen as practical and beneficial.

4. Perceived barriers are the most powerful predictor of health behavior (Glanz, Lewis, & Rimer, 1990; Taylor, 1991). Negative and difficult aspects are obstacles to the performance of corrective behavior. Examples are excessive financial cost, time constraints, and dealing with unpleasant physical or emotional effects.

5. Cues to action are strategies used to motivate behavior as reminder letters or mass media messages.

6. Self-efficacy describes one's confidence in the ability to successfully execute a particular action.

Methodology

This study used a pre-experimental design. A convenience sample of 20 students who attend a public elementary school in San Jose, California, comprised the subjects. Information and parental consent forms to participate in the study were mailed to the homes of all (116) fifth grade regular education students; special education students were excluded. Twenty eight parents returned signed consents (24%). Eight children were denied permission to attend the course by their classroom teacher. Opposition was due to concerns regarding academic competency. The study was done at school, during regular school hours, in the Spring of 1999.

Of the 20 subjects, 13 (65%) were girls and 7 (35%) were boys. The ethnic breakdown was 45% Asian, 35% Hispanic, 10% White, 5% African-American, and 5% American Indian. This group was representative of the ethnic distribution of the 796 children enrolled in the school: 45% Asian, 34% Hispanic, 10% White, 9% African-American, and 2% American Indian.

The Coopersmith Self-Esteem Inventory (SEI) was given twice to all participants. Surveys were anonymous and unmarked so they could not be linked to any specific child. The pretest was followed by a course in growth and development. Five 1-hour sessions were presented within a

2-1/2 week time span. The posttest was given 9 weeks after the pretest. All instruction and administration of SEIs were done by the same school nurse to establish course equivalence and consistency.

Growth and Development Education

The American School Health Association (1991) currently recommends that age appropriate sexuality education be included in all growth and development programs from kindergarten through grade 12. Topics may be covered in science or physical education classes. Curriculum is outlined within the context of three major areas: biological, psychological, and sociological. Community standards and values must be considered when designing an effective program.

The growth and development curriculum of this study attempted to incorporate the above concepts for fifth grade girls and boys. The program philosophy was to promote healthy sexuality, a normal and natural process necessary for the propagation of the human species. Four major course objectives were (a) increase knowledge about physiological changes during puberty, (b) improve parent-child communication, (c) expand decision making and peer communication skills, and (d) boost self-esteem and confidence.

Selected course topics included:

Day 1. Overview of the endocrine system and how hormones influence growth, development, behavior, and feelings. Self-esteem and its four conditions of connectiveness, uniqueness, power, and models were examined.

Day 2. The physical and emotional changes experienced during puberty were explained. A decision making process, STAR (stop, think, act, review) was presented.

Day 3. The female reproductive system and menstrual cycle were explained. Group discussion of clothing, body language, and image, along with the cultural definitions of beauty and attractiveness were begun.

Day 4. The male reproductive system was introduced. Refusal and assertiveness skills were practiced.

Day 5. Students anonymously placed their questions in a box to start the question and answer session. Short and long term goals were created by the students. The weekend assignment was to share the growth and development folder contents with their parents or guardians.

A letter was mailed to each student's home to notify parents/guardians that the course was successfully completed. Obtaining

feedback about the project was an effortless way to initiate parent-child dialog on sensitive and controversial subjects.

Instrument (SEI)

The School Form SEI, used for students aged 8 through 15 years, contains 58 items. Administration time is approximately 10 minutes. The Lie Scale consists of eight items that measure a student's test wiseness or defensiveness. The items on this scale are not used in the determination of the total score. A high Lie score invalidates the SEI results.

The other 50 self-esteem items result in a total score. They can be divided into four subscales: General-Self, Social-Self-Peers, Home-Parents, and School-Academic. The subscales identify developmental areas of need.

Scoring interpretation of the SEI has no exact criteria; community norms and cultural standards are considered. A general assessment of high, medium, or low self-esteem can be made within a group of people. The highest quartile indicates high self-esteem, and the lowest quartile denotes low self-esteem.

The School Form SEI has been administered to thousands of children since its development in 1967. All socioeconomic ranges and many ethnic

groups have participated in related studies. Two research studies reported Kuder-Richardson coefficients (KR-20) of .81 and .87 for fifth grade students. Split-half reliability coefficients in different studies of similarly aged children were .87 and .90. Test-retest correlations in grade 5 were .88 (5 week interval) and .70 (3 year interval) (Coopersmith, 1981). This data supports the high reliability of the SEI.

Kimball (1973) administered the SEI to 7,600 students in grades 4 through 8. Construct validity was demonstrated when "percentile equivalents showed a consistency of score values at a given percentile regardless of the population" (p. 1132).

Results

Pretest and posttest scores were gathered for the 20 subjects. The Lie score was low (mean value of 2.5 out of a possible 8). The t-test analysis was performed on all surveys that had Lie scores of 3 and above ($n = 19$ of possible 40); these 19 represented 46% of the girls surveys and 50% of the boys surveys. No significant difference between the pretest and posttest means was found (p value = .76).

The raw score of the 50 self-esteem items answered correctly is multiplied by two to yield a maximum possible Total-Self score of 100. Each correctly answered item in the four subscales is worth two points:

General-Self, total of 52; Social-Self-Peers, 16; Home-Parents 16; and School-Academic, 16. The sum of the four subscales equals the Total-Self score.

The mean Total-Self pretest score was 71.3; the mean posttest score was 67.5. There was no significant difference between the 2 means before and after the instructional intervention (p value = .47). For girls ($n = 13$), the mean pretest and posttest scores were 67.5 and 62.6. For boys ($n = 7$), the mean pretest and posttest scores were 78.2 and 76.6.

The mean General-Self pretest score was 18.1; the mean posttest score was 16.9. There was no significant difference between the 2 means before and after the instructional intervention (p value = .35). For girls, the mean pretest and posttest scores were 17.2 and 15.9. For boys, the mean pretest and posttest scores were 19.7 and 18.7.

The mean Social-Self-Peers pretest score was 6.4; the mean posttest score was 6.0. There was no significant difference between the 2 means before and after the intervention (p value = .46). For girls, the mean pretest and posttest scores were 5.8 and 5.4. For boys, the mean pretest and posttest scores were 7.4 and 7.0.

The mean Home-Parents pretest score was 5.1; the mean posttest score was 5.4. Although there was a slight increase in scores, there was

no significant difference between the 2 means before and after the intervention (p value = .71). For girls, the mean pretest and posttest scores were both 4.8. For boys, the mean pretest and posttest scores were 5.6 and 6.4; this p value of .43 shows that the increase was insignificant.

The mean School-Academic pretest score was 6.2; the mean posttest score was 5.6. There was no significant difference between the 2 means before and after the intervention (p value = .36). For girls, the mean pretest and posttest scores were 6 and 5.3. For boys, the pretest and posttest scores were 6.4 and 6.1.

Discussion

Generally, the aggregate mean test scores after the intervention were lower than the scores before the intervention. None of these differences were statistically significant. Due to privacy issues, individual changes could not be compared. Only the group means were analyzed. The small sample size resulted in low statistical power, making it difficult to discover any true differences in the data.

In each subsection, the aggregate male score was higher than the aggregate female score. For girls, the means were highest in the Social-Self-Peers and School-Academic sections. For boys, the mean was greatest in the Social-Self-Peers category.

Study Limitations

This study had several limitations. This convenience sample consisted of a volunteer group who may not have been representative of the population at large. The sample size ($N = 20$) was small so generalizability cannot be inferred. Significant changes in the scores of personal behavior and values may take longer than 9 weeks to develop.

Lastly, there was a lack of control over events other than the teaching intervention that may have influenced the dependent variable (self-esteem). Two concurrent events noted were preparation and administration of the required California Standardized Testing and Reporting (STAR) tests and the intense media coverage of the school massacre in Littleton, Colorado. The SEI posttest was given 2-1/2 weeks after 15 students died at Columbine High School.

Conclusion

Self-esteem is a measurement of personal approval or disapproval. Competence and a sense of worthiness often lead to goal attainment and life satisfaction. A comprehensive growth and education program offered from kindergarten through high school can empower children with the knowledge, communication skills, confidence, and attitudes necessary to succeed in society.

Results from this study showed that one 5-hour course did not effect significant changes. Development and molding of self-esteem is an extremely complex task which can be influenced by experiences and interactions from all milieus. It is noteworthy that both girls and boys scored high in the Social-Self-Peers subsection. Instruction which is effective as well as influential should target that facet of development in preadolescents. Long term research of students is needed to identify curriculum designs and teaching strategies that, in collaboration with family, educational, and community resources, can guide children toward optimal sexual, psychological, and social functioning.

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A convenience sample of 20 students (13 girls and 7 boys) who attend a public elementary school in San Jose, California, comprised the subjects. The Coopersmith Self-Esteem Inventory (SEI) was given as a pretest and posttest. Five 1-hour sessions were presented after the pretest. Results from this study showed that a short course did not effect significant changes. Development and molding of self-esteem is an extremely complex task which can be influenced by experiences and interactions from all milieus. It is noteworthy that both girls and boys scored high in the Social-Self-Peers category. Instruction which is effective as well as influential should target that facet of development in preadolescents.

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