

A DEMONSTRATION PROJECT USING VOLUNTEERS
IN THE DAY CARE SETTING TO PROVIDE
HEALTH EDUCATION TO PRESCHOOLERS

by
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presented to the University of Manitoba
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requirements for the degree of
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Abstract

Four volunteers implemented a supervised and structured Health Education Curriculum for 15 weeks to four- five- and six-year old children attending an inner city daycare. Nineteen experimental subjects and seven control subjects were given a pretest and posttest of Health Knowledge and Language. A second control group ($n = 10$) was given a post test of Health Knowledge only. The effects of maturation and test - retest learning were controlled and eliminated as influencing factors. Results of the Health Knowledge test, using the Kruskal-Wallis one-way analysis of variance, revealed a significant (.05 level) increase in health knowledge for the experimental group, while the control group decreased. Two curriculum objectives were found to increase significantly during the implementation period. These objectives relate to nutritious food snacks and the effects of alcohol abuse. The conclusion reached based on these findings support the hypothesis that those children exposed to the health education curriculum as presented by the volunteers would reveal significant increases in health knowledge as compared to those children not exposed to the health education curriculum.

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Chapter 1

Introduction

Day Nursery Centre has served the needs of core area Winnipeg families and children since its inception in 1911. There are presently three locations, Gretta Brown, Kennedy and Broadway, with spaces for 50, 35, and 35 children, respectively. English is a second language for some of the children in attendance, and others have been designated as "special needs" by referring agencies. In order to meet the increased needs of these children the centre uses volunteers to provide additional opportunities for interaction, and to decrease the child/staff ratio.

Given the economic climate of the times, the amount of funding in all sectors of social service, including day care, is limited. Therefore, an active search for innovative ways of enhancing existing community resources must be implemented. Presently, Day Nursery Centre has the services of a volunteer coordinator. In this capacity a large number of volunteers from a variety of backgrounds, who share an

interest and dedication to children, have been recruited. In 1983 over 4000 volunteer hours were donated to provide staff with assistance during daily routines and specific skill instruction. The role of the volunteer is to augment and enhance the programs designed by the staff. Past research on volunteer activities in various settings (Garcia, Clark & Walfish, 1979; Karnes, Teska, & Hodgins, 1970; Karowe, 1967) has indicated that the services of volunteers can be extended beyond what is presently in effect at Day Nursery Centre.

Preliminary research indicates that the use of volunteers in a preschool setting is an area worthy of investigation at the local level. A study conducted at the University of Illinois (Karnes, Teska & Hodgins, 1970) illustrated that female volunteers were effective as implementors of a specific preschool instructional program. The provision of a structured program was considered to be critical to the success of the program and to the training of the volunteers. The commitment of the volunteers appeared to be strengthened for a number of reasons: a) the volunteer knew precisely what she was to do; b) the

volunteer was able to evaluate her own effectiveness as a teacher through observing the children's performance; and c) the volunteer could see the specific results of her own efforts in the day to day development of the children (Karnes et al., 1970). Findings such as those mentioned above support the use of volunteers in only one sector of social service, however, volunteers can be found in a variety of services.

Given the estimate that one out of seven adult Canadians are engaged in some type of volunteer work (McDonald, 1983), it can be assumed that volunteers are available for recruitment into programs such as that offered by Day Nursery Centre. In Canada volunteers are drawn chiefly from five major segments of the population: young people; senior citizens and people taking early retirement; professionals and business executives; unemployed professionals and business executives; and the housebound. Volunteers benefit in various ways through their volunteer work as do the agencies using their services:

By offering their particular talents, volunteers not only support staff but upgrade the calibre

and scope of the agency program.

(McDonald, 1983, p.2)

Based on this information, it would appear that Day Nursery Centre provides the opportunity to demonstrate the benefits of a coordinated volunteer program which makes use of a specific preschool instructional program.

The purpose of this project was to demonstrate the effects of a coordinated volunteer program on a specific area that would be of interest to, and benefit Day Nursery Centre children. The specific area of interest in this project is health education for four, five, and six year old children attending Day Nursery Centre.

Health education may be viewed as one of the many responsibilities of the preschool setting. Bruhn and Nader (1982) indicated a need for primary health education, promotion, and care by pointing out that health education and promotion are not common and that little material on preschool health programs has been published. Research on childrens' health knowledge, attitudes, and behavior over the past two decades has provided a base upon which preschool health programs

can be developed. Gochman (1971) conducted a study with children aged 7 to 17 years and found that few children perceive themselves as vulnerable to illness. In addition, Gochman found that preventive health behavior calls for some degree of perceived vulnerability. Work in the area of developmental theory (Natapoff, 1982) indicates that an understanding of the notion of prevention and causality is not usually reached until early adolescence. Pratt (1973) found that developmental child rearing methods were effective in the child's development of capacities and resources needed to cope effectively and take care of him/her self. Given the research cited above and the lack of information regarding children's adoption of health behaviors, the question emerges: "how can educators effectively approach health education for preschool children?".

One approach to preschool health education was developed for a population of Head Start children in the United States. "Hale and Hardy's Helpful Health Hints" was a product of careful research and expertise from individuals active in the area of health and/or preschool education (Hendricks, 1984). The health

curriculum was specifically designed for and developed within a preschool setting. The curriculum has been evaluated and found to be both appropriate and effective as a teaching tool for young children. Due to its style and content "Hale and Hardy's Helpful Health Hints" is considered to be applicable to any preschool setting (Hendricks, 1982). For all of the reasons mentioned above this particular health education curriculum was chosen as the specific preschool instructional program to be implemented by volunteers in this project.

Chapter 2

Review Of Literature

The following chapter presents a review of the literature on school health education and the role of volunteers, followed by a statement of the problem. The review of literature provides a rationale to support the research question posed in this study.

School Health Education

Current developments in school health education focus on the challenge of ways young children can learn and develop competence for their own health. Research on children's concepts of health and illness has been dominated by two theoretical approaches. The first has been concerned with the delineation of age related qualitative changes in children's concepts of health and illness, and is interpreted within the framework of Piagetian theory (Natapoff, 1978; 1982). The second approach is concerned with the perceptions of vulnerability to health problems and the relationship of these to health behavior (Gochman, 1971). Both of these approaches provide information

regarding what children know about health and illness. Although these issues are viewed as important, school health educators are concerned with discovering ways in which young children can learn and develop competence for their own health (Bruhn, 1982; Kalnins & Love, 1982; Nader, 1978).

Research on health education programs for young children has led to the development of a limited number of curricula. The programs developed for Head Start have been met with criticism (Hendricks, 1982; Livingood, 1984), and only a few acceptable comprehensive programs have been developed: Health Education Curricular Progression Chart (National Centre for Health Education, 1980); Hale and Hardy's Helpful Health Hints (Hendricks, 1982); and, Preschool Health Education Project (Bruhn & Nader, 1982).

Researchers, such as Bruhn and Cordova (1977), Parcel (1976), and Nader (1978), suggest that programs which integrate concept development with social learning would be the most effective for encouraging appropriate health behavior in children. However, instruments developed to measure various aspects and outcomes of children's learning of health knowledge

and health behavior are small in number. The research that has been done has yet to provide an answer as to how children might best learn and develop competence for their own health.

Theories of Children's Concepts of Health and Illness. Research on children's definitions of health and illness has indicated that children's concepts change qualitatively with cognitive development. This development reflects changes similar to the progression of cognitive development outlined by Piaget. Natapoff (1978; 1982) studied children's definitions of health and illness. Two-hundred and sixty-four first, fourth, and seventh grade children were asked to define health, state what it felt like to be healthy or not healthy, and to give criteria they would use to judge another person's health status. A comparison of age differences reflected characteristics of Piaget's pre-operational, concrete, and abstract stages of thought.

Natapoff (1978) noted that six year old children defined health as a concrete egocentric state. Health was seen as a positive attribute which allowed them to

play with friends, to go outside, and to be with their families. The fourth grade children believed that the health of another person could be judged only by external cues. The listing of the specifics of a visually healthy person reflects concrete thought characteristics. The older children revealed some abstract thought in their references to internal cues or feelings that were understood to indicate a healthy or non-healthy state. This characteristic was absent in the younger children who indicated that their health status was determined through the definitions of others.

Campbell (1975) reported the same developmental progression from concrete to more abstract reasoning in studies of children's definitions of illness. Children of different ages (6 - 12.11 years) shared a definitional consensus. However, those beginning to leave childhood revealed views of illness which approached those given by adults. With increasing maturity, children defined illness more precisely and placed more emphasis on role performance, as well as psychological dispositional states. Campbell (1975) contended that:

As children move toward adulthood, their fund of knowledge becomes enlarged, organized, and repeatedly transformed. General intellectual development and unique experiences contribute to changing conceptualizations. In the domain of illness concepts, children profit from experiences, but the extent to which they do so may be contingent on their level of development. (p. 100)

The development of children's understanding of health and illness was also related to their cognitive development. Natapoff (1978; 1982) found that six year old children separated the concepts of health and illness as if on opposite ends of a continuum. The idea of mental health could not be understood by the youngest children, but the twelve year old children indicated that mental health was another aspect of health that could be considered. The acceptance of health and illness as coexisting in an individual was comprehensible to the older children, but again the six year olds could not accept such an idea. Overall health was considered as a positive attribute which allowed the children to participate in desired

activities. These findings indicate the need to discuss health and/or illness concepts at a level that children can understand.

Kalnins and Love (1982) emphasized the importance of other interactional variables, including personality, family background, and the child's personal experience with health, which may also influence the development of health concepts. Kalnins and Love reviewed the few studies which have been done on psychosocial variables. Locus of control was shown to influence the accessibility of knowledge about the inside of the body (reliance on internal and external cues). Children with more internal control indicated a high usage of internal cues when judging concepts of illness, while cognitive level was found to influence the sophistication of an answer given regarding concepts of health and illness. According to Campbell (1975), there is an increasing correspondence between definitions provided by children and those of mothers as children mature. This finding supports the notion that substantial and systematic developmental variations can be identified in illness concepts. A study investigating children's personal health history

found that ill children may invoke the concept of imminent justice, and attribute their illness to personal misbehavior or fault (Brodie, 1974).

The findings discussed above from research based on cognitive development theory can be supplemented by work done by Gochman (1970; 1970b; 1971). In general, expectancy theory proposes that an individual will take a certain action based on his/her subjective evaluation of whether the action will achieve a particular outcome. Expectancy is related to the idea of preventive action toward a desirable state of health, assuming that in order to take action the individual must value health and must be able to make rational choices with regard to preventing illness (Kalnins & Love, 1982). Over a number of years, Gochman analyzed relationships between the concepts, perception of vulnerability and potential health behavior.

Gochman (1970b; 1971) found that at least some children reveal health as a meaningful and inherent feature of personality and cognitive makeup. One of Gochman's measures of health involves the use of the Health Ideation Picture (HIP) instrument which

consists of eleven ambiguous pictures which can potentially elicit health-related verbal responses from children. Another is a perceived vulnerability questionnaire. Using these instruments, Gochman (1970b; 1971) discovered consistencies in children's projection of health, illness, safety content and perceived vulnerability. Based on this, and later longitudinal research, it was concluded that children and young adults do not perceive themselves as generally vulnerable to health problems (Gochman & Saucier, 1982).

Further research on perceived vulnerability revealed affective characteristics of health and illness concepts. Earlier research was based on the premise that perceived vulnerability was a cognitive conception, and therefore did not investigate affective health beliefs, such as health motivation, preventive attitudes, self-concept and anxiety. Perceived vulnerability was found by Gochman and Saucier (1982) to be negatively related to a variety of preventive health behaviors and to self concept, and positively related to anxiety. Based on this research, Gochman and Saucier concluded that the

developmental age-related changes in perceived vulnerability are not appreciable. The authors further conclude that:

In natural environments, where no specific attempts are made to alter them, these beliefs do not change appreciably by themselves. Perceived vulnerability must be considered to be a naturally stable personality characteristic, resistant to change. (1982, p. 55)

These findings have implications for health education for young children. Preventive health behavior calls for some degree of perceived vulnerability before preventive health action will be taken. Work in the area of developmental theory indicates that an understanding of the notion of prevention and causality will not be reached until early adolescence, or in the stage of formal thought. Due to the stability revealed in children's perceptions of vulnerability to health problems, Gochman and Saucier (1982) suggest that health education programs should be planned, developed and implemented for preschool children as young as two or three. Given this information, and the lack of

information regarding children's health behaviors, the question emerges "how can educators effectively approach health education for young children?".

The Wellness Process. Bruhn and Cordova (1977) expanded a concept known as the wellness process (Bruhn, Cordova, Williams & Fuentes, 1977) by attempting to translate the concept of wellness into practical components that can be taught, learned, and applied by individuals at various stages of development. Discussed within a framework of Erikson's early developmental stages, wellness tasks are identified which correspond to the developmental tasks of each of Erikson's stages (Figure 1). These wellness tasks must be completed along with the developmental tasks in order for wellness behavior to emerge and persist throughout an individual's lifespan. Bruhn and Cordova (1977) developed their theory based on a number of premises. First, an individual must develop an awareness of wellness from role models in the environment. Second, information must be presented at a level which is directed toward the level of cognitive development of the individual.

Figure 1

EXAMPLES OF MINIMAL WELLNESS TASKS FOR THE EARLY
CHILDHOOD AND LATE CHILDHOOD STAGES OF
ERIKSON'S DEVELOPMENTAL THEORY

(adapted from Bruhn, Cordova, Williams,
and Fuentes, 1977).

ERIKSON:	MINIMAL WELLNESS TASKS
<u>Early Childhood</u> Autonomy vs shame and doubt	Learning about proper foods, sleep, exercise. Learning dental hygiene.
<u>Late Childhood</u> Initiative vs guilt	Refining psychomotor and cognitive skills. Developing self-concept. Learning attitudes of competition and cooperation with others. Learning of social, ethical, and moral differences and responsibilities.

ERIKSON:

MINIMAL WELLNESS TASKS

Learning that health is an
important value.

Learning regulation (self) of
basic physiological needs -
sleep, rest, food, drink,
and exercise.

Learning risk-taking and its
consequences.