NUCLEAR ISSUES AND STUDENT ANXIETY: THE EFFECTS OF A PILOT PROJECT IN PEACE EDUCATION

by

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NUCLEAR ISSUES AND STUDENT ANXIETY: THE EFFECTS OF A PILOT PROJECT IN PEACE EDUCATION

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Abstract

The impact of the threat of nuclear war on young people has been researched extensively in recent years. International studies show that students experience considerable awareness and concern about nuclear weapons and the possibility of a nuclear holocaust. Not much research has been done, however, to show what impact peace education has on the attitudes and anxiety levels of young people.

Given that research findings strongly suggest that youths are anxious and need to come to terms with nuclear issues, Project Peace along with the cooperation of the Burnaby School Board developed a peace education curriculum. This curriculum was intended to provide balanced and reliable information about nuclear issues, develop more functional ways of coping with that information, and foster the formulation of more informed attitudes about peace and nuclear issues. A similar course was developed at the university level in Psychology 106-Psychological Perspectives of Nuclear War. This study was undertaken to document the use of the curricula and to investigate any changes in anxiety and the attitudes towards nuclear and peace issues of students enrolled in classes where the curricula were being field tested.

This study assessed the general level of anxiety experienced by the student, the level of anxiety experienced by the student as relating to nuclear issues, the knowledge about nuclear issues, and the relationship between anxiety and sense of personal control. This was done through administering a battery of questionnaires to treatment and control groups prior to and after the completion of the curricula. These groups included 52 university students and 199 grade seven students.

The findings for the university students revealed no significant changes. The major findings for the elementary treatment group were as follows: (1) a marginal increase in anxiety levels, (2) a positive correlation between those who are most anxious in general and those who are most anxious about nuclear issues, (3) a significant increase in levels of personal control. This research can be used to help both educators and mental health professionals determine ways of helping children deal effectively with their nuclear-related anxieties.

DEDICATION

This thesis is dedicated to my family with love:

Shirley Anne - "I hate having a psychologist in the family"

Harry Wayne - Raised eyebrow

Martin Wayne - "You spent all that money to get a new vocabulary"

Robin Elizabeth - "Let's go shopping"

Jon Jay - "Got any money I can borrow?"

Johnny, Paulina and Carlos - "You've spent HOW MANY years in school?"

ACKNOWLEDGEMENTS

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Finally, I would like to extend some personal thanks to various friends. Dean Helm proofread, typed, ran errands and frequently told me to "hurry up and finish!". Don't forget Dean. Dale McGladdery and Grant Dimock offered encouragement and practical support in all kinds of ways (not to mention the sign at the intersection). Last (but by no means the least), a very heartfelt thanks goes to Dave Clegg who made sure that I took time out to play and who also generously gave me his time, himself and his love.

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INTRODUCTION

On July 16, 1945 the first atomic bomb was detonated at the Trinity test site in New Mexico. Since that day we have lived with the fear that the whole of humanity can be annihilated and that annihilation may take the form of a mushroom-shaped cloud. We also live with the possibility that destruction may happen to us at any time and that destruction may be accidental. As Jonathon Schell (1983) says, "the spectre of extinction hovers over our world and shapes our lives" (p.169).

What shape does this spectre give to our lives? There is evidence to suggest that living in the shadow of the nuclear threat has an effect on the attitudes and behaviours of children. There is also evidence that the completion of developmental tasks in young people is affected (Escalona, 1982; Schwebel, 1982). These effects on young people are beginning to be a concern amongst some mental health professionals and educators.

General Context

Studies conducted in recent years in Finland, Sweden, Holland, West Germany, U.S.S.R. and the U.S.A. show that youths experience considerable awareness and concern about nuclear weapons and the possibility of a nuclear holocaust (Eisenbud, Van Hoorn & Berger-Gould, 1986). These young people became aware of the nuclear threat quite early in life and they received most of their information from the media. Though they are anxious about the prospect of nuclear war they rarely share their concerns with adults. Youths express anger towards adults and despair about the world situation as relates to the nuclear threat (Eisenbud, et. al., 1986). Many also state that their planning for the future has been affected by the nuclear threat. They state that they prefer to live only for today and forget about tomorrow.

Local Context

On the local scene, studies carried out by Sommers, Goldberg, Levinson, Ross and LaCombe (1984), Harvey, Howell & Colthorpe (1985), and Hargraves (1984) have demonstrated that Canadian adolescents also are worried about the threat of nuclear war. Sommers et. al. (1984) found that 51% of the 1011 grades 6-13 students they surveyed listed nuclear war as one of their three greatest fears. On multiple choice questions 63% of the students indicated that nuclear war was a very important worry. Harvey et. al. (1985) found that 81% of the students they surveyed feared the threat of a nuclear war.

Hargraves (1984) replicated the American Psychological Association Task Force study by Beardslee and Mack (1982). Over 700 Burnaby students from grades five to twelve were involved in this study. In the younger group (grades 5, 7, and 9) 88.4% reported that they are

frightened by the thought of nuclear war "sometimes", "often", or "all the time". Students in grade seven have the greatest incidence of reported fear. There were 75% who felt they had learned very little or nothing about this issue in school. When asked how much they thought they should be learning in school 83% said "quite a bit" or "a lot". They were also asked where they would like to learn more about nuclear issues and 63% responded that school was where they would like to learn more. It seems clear that there is a need for education on this issue.

Peace Education - International and Local Scene

Markusen and Harris(1984) state that "depending upon how they respond to the nuclear threat, educators and educational institutions can either increase or decrease the momentum towards nuclear war" (p. 283). Further, Whiteley (1984) believes that "the educational establishment has been slow to address the issue of peace" (p. 82). Yet research shows that young people feel that the school should be an important source of information on this issue (Hargraves, 1984; Whiteley, 1984). The need for competent education about nuclear issues can also be found in journals such as *Teachers College Record, Forum for a Liberal Education, Social Education,* and the *Harvard Educational Review.*

In 1980 UNESCO convened the World Congress on Disarmament Education. There were over 86 countries present. The outcome was the resolution to develop programs for disarmament and peace at all levels of schooling. Since that time numerous groups have formed to promote peace education. In Canada and the United States many teachers' organizations have formed peace chapters. Curricula about nuclear issues and peace have begun to appear in various schools and universities across the continent. There are two nuclear education projects in the Greater Vancouver area that deserve mention.

Locally, the Public Education for Peace Society (PEPS) was formed in 1982. PEPS established a Peace Education Resource Center (PERC) in New Westminster as a means of advancing the main purposes of the society. PEPS received grants under the Canada Works program and was able to establish Project Peace as a pilot project in peace education implementation building on Hargraves' (1984) study. The Burnaby School Board agreed to pilot the curriculum, working in conjunction with Project Peace and Simon Fraser University. Around the same time, Dr. Neil Kyle developed a university level program dealing with psychological perspectives of nuclear war. He approached the Simon Fraser University Psychology Department about the possibility of presenting a course on nuclear issues in the fall of 1984. The Psychology Department agreed to present the course in the fall of 1985.

Statement of the Problem

There are some potential problems inherent in peace education. Parents and teachers express concern that peace education may create or increase anxiety about nuclear issues. Concern has also been expressed that peace education is too political. We need to be aware of these problems when implementing peace education and we need to evaluate what changes take place when students participate in these types of curricula.

The purpose of this study was to assess the effects of the above mentioned peace education curricula on the anxiety levels (both general and specifically related to nuclear issues) of university and grade seven students. The major questions addressed were:

1. Are those people who are most anxious in general also the ones who are most concerned about nuclear issues?
2. Does learning more about and talking more about nuclear issues help to reduce nuclear concerns?
3. Does a reduction in concern over nuclear issues have an effect on general anxiety levels?
4. What is the relationship between increased knowledge, the belief that a person can do something to affect the problems that confront him or her, and anxiety level?

Organization of the Thesis

Chapter I is a brief overview of the study including the background and statement of the problem. Chapter II is a review of the relevant literature. Chapter III is a discussion of the method used in this study including sample characteristics, treatment, data collection procedures and description of the dependent measures. The results of the study are reported and analyzed in Chapter IV. Chapter V includes a summary and discussion of the results and of the implications for further research.

CHAPTER 2
REVIEW OF THE RELEVANT LITERATURE

This thesis is concerned with evaluating the impact of two peace education curricula on the anxiety levels of students. This chapter contains a review of the major findings in research related to perceptions of the nuclear threat. Secondly, the possible effects of nuclear related worries on students' maturational processes are discussed. Given the extent of worry and the possible detrimental effects of this worry it appears that educators have a responsibility to help students deal with their nuclear concerns. Previous educational interventions are described and they show the need for evaluation of the curricula implemented here in Burnaby.

Nuclear Threat Perception

Much research has been conducted to show that youths are aware of and concerned about the nuclear threat. The research on nuclear threat perception, begun in the 1960's, has focused on how much fear young people are experiencing in the face of the possibility of nuclear war and how this fear affects their lives. Researchers the world over have looked at a number of questions. The questions relevant to the present thesis are as follows: Do young people believe that nuclear war is likely to occur within their lifetime? Do young people believe that nuclear war is survivable? How anxious are they about the possibility of war? How often do youth think about and talk about nuclear issues? Who do they talk to about their concerns? Do thoughts about nuclear war affect young people's plans for the future? Finally, how much control do young people believe they personally have over the nuclear situation. The answers to these questions are discussed in this section, beginning with the research done in the 1960's and concluding with research that has been conducted internationally (including Canadian research).

Research of the 1960's

By the early 1960's considerable research had been done to determine the reactions of adults to the threat of nuclear war but very little attention had been paid to the effects of this threat on children and teenagers (Elder, 1964). A few studies were conducted between 1961 and 1964 to measure the extent of concern about nuclear issues among young people. One of these studies also looked at the interaction between parental and child anxiety about nuclear war. This section presents the results of those preliminary studies.

Berlin Crisis 1961 and Cuban Missile Crisis 1962. In the aftermath of the Berlin crisis of 1961 and the onset of the Cuban crisis in 1962 Schwebel (1965) set out to answer the question "are children innured to crisis because they have lived their entire lives in the shadow of thermonuclear mushrooms?". He surveyed over 3,000 students from grades 3 through first year college. These students were asked three questions. "Do I think there is going to be a

war?" "Do I care? Why?" and "What do I think of fallout shelters?". Almost 50% expected that there would be war in their lifetime and feared the dangers of nuclear disaster. Those who are most knowledgeable about the consequences of thermonuclear war were more likely to express fear relating to nuclear issues. At the same time those who were "better informed... were more optimistic about peace" (p. 218). It is in Schwebel's research that one first sees what turns out to be a recurring theme in the research. The more knowledgeable young people are about nuclear issues, the more afraid they are and yet, they are also more optimistic that nuclear war can be prevented.

Escalona (1965) wanted to "obtain factual data on children's conscious awareness of the world situation and on their attitudes toward it" (p. 202). She asked 311 children between the ages of 10 to 17 to "think about the world as it may be ten years from now. What are some of the ways in which it may be different from today?". Escalona was surprised to find that 70% of the children spontaneously mentioned the issue of peace and war. Those who did visualize war saw it as being one that would completely destroy the world. Even those who did not mention war still visualized an unpleasant future. It seems from her data that children are aware of the world situation and they have a pessimistic view of what the end result will be.

Effects of parents' attitudes on children. Darr (1963) stated that "how a child experiences the nuclear threat depends on the adult environment through which this threat is filtered to him" (p. 203). Wrightsman (1964) conducted research in which he compared the level of parental worry about nuclear war, how much the issue of nuclear war was discussed at home and the children's level of anxiety about this issue. He found that "parents who reported worrying a lot about war tended to have children who reported worrying a lot" (p. 182). There was also a definite relationship between frequent discussions of nuclear war in the home and children's level of anxiety about nuclear war. More frequent discussion was associated with higher anxiety level in children. The evidence suggests that Darr was correct in his belief.

Summary. Markusen and Harris (1984) have described the late 1950's and early 1960's as a time when "adults as well as school children were systematically misinformed about the realities of the atomic age" (p. 287). Yet, despite their misinformation young people expressed concern about the possibility of nuclear war. Elder (1964), in an article summarizing the research done to date, pleaded the case for more data. He was concerned that there was little scientific evidence to support the belief that children were seriously affected by the nuclear threat. He was also concerned that the advice given to parents and teachers regarding nuclear war be based on hard data concerning the interactions of adult and child anxiety. It was 14 years before any more systematic research was done.

Recent International Research

Finland. In February, 1983 Solantaus, Rimpela and Taipale (1984) set out to determine the prevalence of the fear of war among Finnish adolescents. In all 5572 teenagers (aged 12-18) responded to their survey. Students were asked to list their 3 greatest hopes and fears. They were also asked 8 questions related to the perceived threat of war. The fear of war was the most common fear for each age group. The 12 year olds were the ones who reported the greatest fear (79% included nuclear war in their list of 3 greatest fears). Fear decreases with age (48% of the18 year olds included nuclear war in their list of 3 greatest fears). One third of these adolescents stated that they had discussed the issue of peace and war at home in the preceding month but discussing the issue with friends was more frequent (46-65%).It appears that Finnish young people are quite concerned about nuclear issues and tend to share that information only with their peer group.

Solantaus et. al. (1984) had not anticipated the extent of fear expressed. They felt that since Finland is a neutral country, has no nuclear weapons of its own, and is not threatened by any nation, their teenagers would express less fear than those in the U.S.S.R. or the U.S.A. Solantaus et. al. strongly recommend further international studies be conducted to help determine the psychological impact of the threat of nuclear war.

Sweden. Holmborg and Bergstroem (cited in Eisenbud et. al., 1986) wanted to know what Swedish adolescents were thinking and feeling in regards to nuclear war. They presented the 917 students, ages 13-15, with a list of 14 worries and asked the students to rate the worries on a scale of 1=least to 4=most. The subjects then had to choose and rank their 3 top worries in the list. The list was followed by specific questions about nuclear war. Forty-two percent said nuclear war was their greatest worry. Just over a quarter of the teenagers felt that nuclear war would "probably" or "definitely" occur in their lifetime. Only 6% thought they would be able to survive a nuclear war.

Almost one-fourth of the teenagers reported "weekly" or "daily" thoughts about nuclear war yet 62% "seldom or never talk to anyone about their nuclear fears" (p. 12). Those who do talk are most likely to talk to their friends, although half of this subgroup also talk to their parents. A large portion (82%) of the teens did not know how adults felt about nuclear war or they thought adults had very little concern about this issue. Indeed, they wanted to know why adults were not concerned. When Holmborg and Bergstroem's survey was compared to studies done on adults in Sweden it was found that 55% (1973) and 78% (1982) of the adults surveyed listed nuclear war as one of their 3 greatest worries. There is an obvious lack of communication between the generations, a lack that could be detrimental to the mental health of the young people involved.

U.S.S.R.. A group of American researchers went to the Soviet Union in 1983. Their purpose was to investigate what Soviet children were thinking and feeling about nuclear war. The researchers were able to interview 50 young people (aged 10-15) at two Pioneer camps. Chivian, Mack, Waletzky, Lazaroff, Doctor and Goldenring (1985) were also able to administer a survey to 293 Pioneers from 9 to 17 years old. The Soviet children were asked to rate their worry about nuclear war in comparison to 14 other worries (1=does not bother me to 4=very disturbing). They were then asked questions about the likelihood of nuclear war between the U.S.A. and the U.S.S.R. in their lifetime and about the survivability and preventability of nuclear war.

Nuclear war was the greatest worry (x=3.86) of the Soviet children. Close to 99% of the Soviet children surveyed reported that they found the prospect of nuclear war "disturbing" or "very disturbing". Soviet children do not think nuclear war is likely to occur. They do not think nuclear war is survivable but they believe that it is preventable (91%). It is interesting to note that the Soviets had a higher overall rating of worry (x=2.71) than did the Americans (x=2.49). This suggests that those who are more worried in general are also those who are more worried about nuclear war.

U.S.A.- Adult Studies. Kramer, Kalick and Milburn (1983) looked at the emotional impact of nuclear weapons on the American public. They examined responses to nuclear-related survey items from 1945-1982. Kramer et. al. found that in a 1958 poll only 14% were very worried about the possibility of nuclear war. A 1961 survey reported 22% were very worried about that possibility. By 1982, 28% of the sample reported that they worry "often" or "a great deal". Though the percentage of those who are worried about nuclear war doubled from 1958 to 1982 those who worry are still in a clear minority. Nuclear weapons do not seem to have had a great emotional impact on American adults.

Tyler and McGraw (1983) looked at the differences between "behavioral responses to the threat of nuclear war" (p. 31). They surveyed people who engage in prevention behaviours and people who engage in survival behaviours. Tyler and McGraw asked questions on prevention and survival behaviours, views on the threat of war, nuclear policy, sense of personal control, attributions of causality and responsibility, and political/social orientations. The data showed that survivalists did not worry about the threat of nuclear war as much as the preventionists. There was a positive correlation between estimates of the likelihood of nuclear war and reported worry about the possibility of war. People who thought nuclear war was likely to occur in their lifetime were more worried about the possibility of war. These people also tended to support disarmament policy and engage in prevention behaviour. The two groups of people acted in ways consistent with their beliefs about nuclear war. Survivalists tried to survive a

nonpreventable war and the preventionists tried to prevent a nonsurvivable war.

U.S.A.- Older Adolescents and Young Adults. Van Hoorn and French (cited in Eisenbud et. al., 1986) felt that older adolescents and young adults were underrepresented in the research on nuclear threat perception. They designed a study to survey this population's attitudes and knowledge about nuclear issues. Van Hoorn and French's sample consisted of high school students, college students, and a number of people over age 18 who were contacted through a random phone survey. A large majority of the respondents considered nuclear war to be at least "somewhat likely". When asked about the frequency of thinking about nuclear war, 11% reported that they thought about it "daily" and 25% said "weekly". As has been found in other studies the younger subjects thought about nuclear war more often than the older subjects. There was a positive correlation between the belief that one could personally make a contribution to prevent nuclear war and the frequency of thinking about and talking about nuclear war. The older adolescent and young adult population does not seem to be as concerned about nuclear issues as the younger age groups.

Another study that was conducted on the older adolescent population was part of the government funded project "Monitoring the Future" (MTF). This project collected data on high school seniors' lifestyles and values including three questions relating to nuclear issues. There are two findings relevant to the present thesis. The first is that the percentage of those who worry "often" about the chance of nuclear war has quadrupled since 1975 (7.2 to 31.2%). The second finding is that more than one-third of the students in 1982 believe that the annihilation of mankind will occur within their lifetime. As Bachman (1983) says there is an increasing tendency towards fear and pessimism on the part of today's young people.

U.S.A.-Children and Adolescents. Very little literature documenting the psychosocial impacts of nuclear developments on children had existed until the American Psychiatric Association, in 1977, organized a Task Force in an attempt to recitfy this lack. Drs. Beardslee and Mack (1982) "sampled children's attitudes towards nuclear weapons and nuclear power, trying to see whether these were concerns for children and what the nature of the concerns might be" (p. 64). Between 1978 and 1980 Beardslee and Mack surveyed 1151 students from grades 5-12. The students were asked 10 open-ended questions about nuclear issues. The data were subjected to both a qualitative and quatitative analysis. Over 50% of the students felt that a nuclear war was likely to occur in their lifetime and 70% felt that the U.S.A. would not survive it. Over half of the sample also stated that nuclear advances had affected their plans for marriage, having children and other plans for the future. A majority of the students stated that thermonuclear developments affected their daily thoughts and feelings. The results, say Beardslee and Mack (1982)

> strongly suggest that children are deeply disturbed about the threats of nuclear war...it is clear that certainly by the time students reach adolescence nuclear issues are of real concern...the strongest finding is a general unquiet or uneasiness about the future (pp. 88-89).

Goldenring and Doctor (cited in Eisenbud et. al., 1986) conducted a study to compare worry about nuclear war with other common worries. Their study design became the basis for the studies done in Finland, Sweden, Canada and the U.S.S.R. Students were asked to list their 3 greatest worries. They were then asked to rate each of a list of 20 worries on a scale from 1=not worried to 4=very worried. The next task was to choose and rank their 5 greatest worries out of the list provided. The final step was to answer 12 specific questions about nuclear war. Of the 913 students (grades 7-12) that Goldenring and Doctor surveyed only 9% of the students listed war or nuclear war as one of their 3 greatest worries. From the list of 20 worries nuclear war was third highest (x=2.69). Parents' death was first and bad grades was second highest. When students ranked their 5 greatest worries nuclear war was the second highest. This research showed that those students who were more worried about nuclear war were more hopeful than less worried students that it could be prevented. Subjects' answers to the 12 questions revealed that 33% "often" think about nuclear war and 57% "sometimes" think about it. Twenty-four percent said that it affected their planning for the future. Most of the students thought a nuclear war was likely to occur and doubted that they would survive. Over half of the sample had not talked to their parents about nuclear war. The evidence from this study suggests that youth are not concerned about nuclear issues though they often think about it, believe nuclear war is likely to occur and is nonsurvivable.

Interviews were conducted with 31 Boston high school students to learn what impact the nuclear threat has on their lives. In this preliminary study, Goodman, Mack, Beardslee and Snow (1983) found that there was " a certain consistency...in their responses" (p. 501). Almost all of the interviewees felt that it was highly likely that nuclear war would occur within their lifetime. All 31 stated that the existence of nuclear weapons affects their lives daily. At least half claim that nuclear weapons are a constant worry. Most of them "live on two levels, thinking there will be no future, and still making plans as if there will be" (p.524). They also express a sense of powerlessness and frustration with their government process and leaders. While this sample is not representative, the interviews raise some serious questions about the impact of the threat of nuclear war on young people. Should more research show that these findings are indeed representative the implications "urgently demand a response from our society" (p. 525).

Summary of International Research. Research has shown (Tyler & McGraw, 1983)

that one's belief in the inevitability of nuclear war and one's belief in how survivable it is influences the amount of fear experienced. The majority of the subjects think it is likely that nuclear war will occur within their lifetime. A large majority of the subjects also doubt that they would survive a nuclear war. Not surprisingly, then, many of the young people surveyed or interviewed are frightened or disturbed by the prospect of nuclear holocaust.

For some of the young people surveyed nuclear war is something they think about everyday yet there are a large number of young people who do not share their concerns about nuclear issues. Those who do talk about their fears may share them with friends and a subgroup of these people will also share with adults. It appears that the majority of these young people carry a heavy burden of fear that they bear alone.

It is interesting to note that the younger ones are the most afraid. Fear of nuclear war peaks at approximately age 12 in many of the studies. Kyle et. al. (1986) offer an explanation for this phenomena. They state that between the ages of10 to12 children are beginning to develop empathy.and can begin to experience the suffering of others. They are highly concerned with justice and right and wrong. Nuclear war touches on all of these issues. They also have not yet developed the psychological skills to cope with their problems and so experience more fear in the face of the nuclear threat.

An interesting finding is the correlation between higher anxiety and a sense of personal control in preventing nuclear war. At first this seems counterintuitive. Anxiety is usually associated with a sense of helplessness. In the case of nuclear anxiety it may be that those who are most anxious about nuclear war use the belief in personal control as a means of reducing or coping with their anxiety.

Finally, some of the subjects in these studies say that the possibility of nuclear war impinges on their planning for the future. They live on "two levels" as Goodman et. al. (1983) put it. They plan for the future but they are not sure they will live to see that future.

Canadian Research

Toronto Studies. Sommers, Goldberg, Levinson, Ross and LaCombe (1984) wanted to study the impact living in the nuclear age had on Canadian children. They surveyed 1011 grades 6-13 students. As in the Finnish study students were asked to state their 3 greatest hopes and fears. They were presented with a list of 9 possible hopes and 9 possible worries and asked to rate the importance of each. They were also asked parallel questions about high unemployment rates, job and career plans and nuclear war. Students were asked how much they had thought about or talked about each issue in the last month and where they had learned about the issue. Then they were asked how much control they felt they had over the situation. In the last part of the questionnaire students were asked whether or not they had

sought help for any of 8 problems (either from school counsellor or other professional help outside school).

War/peace was the first mentioned worry of 29% of the students. Overall 51.2% mentioned war in their 3 greatest worries. In the list of 9 worries 63% rated nuclear war as a very important worry. It was the second highest (parents' death was first). Close to two-thirds reported that they were afraid from a few times to almost every day within the last month. Ten percent of the sample reported that they had daily thoughts about nuclear war. A further 20% reported that they had thoughts on that subject once or twice per week. Contrary to other studies 90% of these Canadian young people believed that they had little or no control in preventing nuclear war. When asked how much they talked about the threat at home 84.5% said that they had talked about it "a few times" or "not at all". Seventy-eight percent said they had talked about nuclear war at school "a few times" or "not at all". Nor do these children talk to their friends about the issue (80% said "a few times" or "not at all"). The children in this study are fearful about nuclear war. They express helplessness in the face of the nuclear threat and these children tend to keep their worries to themselves.

Goldberg, LaCombe, Levinson, Parker, Ross and Sommers (1985) did a second study using the same questionnaire as Sommers et. al. (1984). This time they surveyed 1020 grades 7-12 students. They found that 55% mentioned nuclear war as one of their 3 greatest worries. It was mentioned first by 32% of this sample. Goldberg et. al. found that worry was highest for the youngest students (64% for the grade 7). In the last month 73% had thought about nuclear war and 59% had experienced thoughts of fear and worry at least once. Again we see a high incidence of fear about nuclear issues.

Goldberg et. al. (1985) compared those students who reported daily fear to the rest of the sample. They were not only the most anxious about nuclear war they were also the most anxious about job/career and high unemployment. Goldberg et. al. found that the "daily fear" group were more likely to have taken some action to prevent nuclear war and also talked more about their concerns at home, at school and with friends. Finally, these children were more likely to feel some sense of personal control in preventing nuclear war than the rest of the students.

Victoria Study. The purpose of Harvey, Howell and Colthorpe's (1985) study was to examine in "Canadian adolescents the fears and concerns associated with the Nuclear Age" (p. 54). One hundred and thirty three 10-16 year olds answered this survey about nuclear issues. There were 14 questions on the questionnaire including questions about the likelihood of nuclear war, fear of nuclear war, impact on future plans, perception of parental concern, and who they would talk to about their fears. A large majority expressed fear about

the threat of nuclear war (81%). When asked how likely was it that nuclear war would occur within their lifetime 67% said it was moderately likely and 12% said there was a great possibility that it would occur. One-third of the sample said that the possibility of nuclear war affects their plans for the future. Over half of these students said they would share their fears with their parents (53%). Only 38% would talk to their friends and less than 1% said they would go to their teachers. Though the students said they would talk to their parents there seems to be a lack of communication between them. Forty-five percent of the students said that they did not know whether or not their parents were concerned about nuclear issues.

Burnaby Study. Hargraves (1984) replicated Beardslee and Mack's (1982) study. She surveyed two groups of students: students in grades 5, 7, and 9 and students in grades 10, 11, and 12. She used Beardslee and Mack's (1982) questionnaire for the older students and devised a modified version for the younger group. In the younger group 68% thought that nuclear war was likely to occur in their lifetime and 72% did not think they would survive it. When asked how afaid they were 54.9% of the children reported that they were "sometimes" afraid of the prospect of nuclear war; 18.9% said "often" and 14.6% said they were afraid "all the time". The greatest incidence of reported fear is at the grade 7 level. These findings are similar to those of Beardslee and Mack.

The older students stated that nuclear advances affected their day to day thinking (47%). They were fearful, worried about the future, depressed, cynical and they expressed a desire to live for the moment. Also, 29% of the older students reported that their plans to marry and have children had been affected. Fourteen percent said that their plans as to where to live and work had been affected. Some of the other findings will be discussed later in this chapter.

Summary. It appears that Canadian children also are concerned about nuclear issues with the greatest reported incidence of fear at the grade 7 level. Canadian children and adolescents think that nuclear war is fairly likely to occur and they feel powerless to prevent it. Canadian young people, like their international counterparts, do not often share their nuclear concerns with others. Finally, for about a third of the young people surveyed thoughts about nuclear war has affected their plans for the future. Canadian youth are worried about the future.

Limitations of the studies reviewed

One of the major problems with these studies is that they are only descriptive. As Tizard (1984) points out the research is concerned only with description and not with the interrelationships between variables. There needs to be more systematic research done particularly in the area of interactions between variables. Knowing what variables influence

anxiety for example will enable educators and mental health professionals to plan effective interventions to reduce anxiety.

A second major difficulty with many of these studies is that they only asked questions about nuclear issues. This could lead to a heightened sense of fear and a bias in the results. In order to determine the extent to which nuclear anxiety is a real concern it is necessary to compare it to other concerns.

The research gives only a hint of the extent of the amount of anxiety children experience and how it impinges on their behaviour. As Coles (cited in Butterfield, 1984) and others say, there is an important difference between children saying they are afraid of nuclear war and showing that this anxiey has an actual effect on their lives (see also Reifel, 1984; Tizard, 1984). One would need to spend days and months with kids, families and schools in order to determine the real impact of the threat of nuclear war.

Another complaint is that the data collection was not systematic (Tizard, 1984) and the samples are nonrepresentative (Beardslee & Mack, 1983; Reifel, 1984). Some data were collected over an extended period of time (e.g., Beardslee & Mack, 1982 was collected over a period of two years). Most of the U.S.A. surveys were conducted in urban settings in northeastern U.S.A. or California. These are not respresentative areas. The need for more systematic research is obvious.

Conjectured Effects on Personality

> To the extent that the present functioning of society conveys to children a picture of passive and evasive withdrawal, of fear of and belligerence toward other nations, and of not even trying to combat a host of evils both large and small - to that extent the effects of the nuclear peril upon us also affect the development of children (Escalona, 1982, p. 607)

Futurelessness

Beardslee and Mack (1982) believe that the threat of nuclear war has an impact on the personality structure, especially on impulse management and ego ideal organization. At each stage of development a child experiences disappointments. The child learns to deal with these disappointments because they look forward to a time when they can be other than they are now. The ability to deal with disappointment depends on a stable future. Beardslee and Mack(1982) found that most of the young people they surveyed believed the future to be uncertain and unstable. Young people expressed an unwillingness to plan for the future. Consequently, they are not able to advance from stage to stage properly.

Escalona (1982) believes that identity formation in young people today has been affected by the threat of nuclear war. The most important part of identity formation that is affected

according to her, is the ability to delay gratification. She says that children are encouraged to invest in the here-and-now. By doing so they are becoming 'stuck' at one developmental stage and cannot achieve the maturity necessary to cope with the problems and pressures of life. Schwebel (1982) also says that students' hopes for the future are being eroded and that that undermines their ability to achieve maturity.

Lastly, Kanet (1983) states that the youths she has dealt with express a sense of futurelessness, a get-it-now attitude, an inability to defer pleasures and even a distrust of lasting relationships. She says, "this lack of faith in the future is beginning to be seen as an important factor in many of the behavioral problems that have come to characterize so many of our youth" (p. 28).

Summary. It is clear that the uncertainty of the future has a strong impact on youth. Young people find themselves facing an uncertain future and that affects their ability to plan ahead, to delay gratification and to enter into lasting relationships. Teachers and mental health professionals see this as a serious problem.

Powerlessness

> Growing up in a social environment that tolerates and ignores the risk of total destruction by meansof voluntary human action tends to foster thosepatterns of personality functioning that can lead to a sense of powerlessness and cynical resignation. (Escalona, 1982, p.601)

Schwebel (1982) feels that the issue of feeling powerless is extremely important. The reason is that adolescence is a time when young people should be developing a sense of identity and mastery. To feel powerless would undermine the full development of identity and mastery and keep adolescents from achieving maturity.

Talking about nuclear issues helps one to cope

Many mental health professionals and educators have argued that one of the most important ways to help people to cope with their fears is to get them to talk about their fears. Fears left unexpressed can multiply and become an even heavier burden (Allerhand, 1964; Escalona, 1965; Goldberg et. al., 1985; Myers-Walls & Fry-Miller, 1984; Van Ornum & Van Ornum, 1984; and Yudkin, 1984). In Goldberg et. al.'s (1985) study they found that more frequent discussion of nuclear issues was associated with increased anxiety. However, more frequent discussion was also associated with feeling a sense of personal control in relation to being able to prevent nuclear war and actually taking action to help prevent it. In this case, anxiety seems to be serving a motivating function, resulting in attitudes and behaviours that foster the prevention of nuclear war. Therefore, in dealing with nuclear issues it makes sense to have open discussions in the home, in the school and among friends in order to help young people deal with their fears. Yet, the research shows that this kind of discussion is not

happening very often (e.g., in Verdon-Roe's (1983) interviews the children often criticized their parents for not discussing the issue of nuclear war).

There is a possible explanation for this lack of communication in Zeitlin's (1984) article. He conducted interviews with families relating to nuclear issues. He found that the kids responded positively to this experience. They felt relieved knowing what the other members of their family were thinking about nuclear war. The more that parents were able to discuss the issue the more the children were able to bring out into the open their fears and to deal with those fears. On the other hand Zeitlin (1984) found that the parents' anxiety about nuclear war initially increased as a result of these discussions. It would appear that the reason for the lack of discussion is fear on the part of adults. They frequently express concern that children's anxiety might be raised but it may be the case that they are also concerned about their own anxiety.

Children want to discuss nuclear war

> I think it's natural that adults protect children, take care of us. If a history teacher or social studies teacher will not talk about the nuclear issue, that's irresponsibility, and it's gonna hurt us in the long run (Nessa, 16, Van Ornum & Van Ornum, 1984, p. 30).

> I think it's more terrifying not to talk about it (nuclear war). Mystery is the worst thing possible. Being left alone to deal with it-that's much more frightening (Elizabeth, 14, Verdon-Roe, 1983).

Hargraves (1984) asked the younger students (grades 5, 7, and 9) how they first learned about nuclear power and weapons. She also asked how much they had learned about nuclear issues in school and how much they thought they should be learning. One last question was "where would you like to be able to talk and learn about nuclear war?". The students reported that they first learned about nuclear power and weapons from television (44% and 45% respectively). Only 10% had first found out about these from teachers. Three-quarters of the sample felt that they had learned very little or nothing about nuclear issues in school. When asked how much they thought they should be learning in school 55% said "quite a bit" and a further 28% said "a lot". These students also said that they would like to be able to talk about and learn about nuclear war at home (43%) and at school (63%). It is obvious from this research that children desire the opportunity to discuss nuclear issues.

Hargraves (1984) asked the older students how they first became aware of nuclear issues. They were allowed 3 choices and told to rank these choices. For 67% of the sample the media was the first place they had learned about nuclear issues and only 24% said school was the first place they had learned about it. A qualitative analysis was done on the comments made by all of the students. This analysis showed that the most often expressed desire of both

sets of students was a desire to be heard. As one of Hargraves' (1984) respondents put it, "I think our point of view should be seen and heard because it is our future that is in jeopardy" (p. 133). Students want to be heard and they want to learn more too, especially at school.

Educators' Responsibility

> As educators we have a responsibility to deal with the nuclear fears of our children, to offer knowledge to replace ignorance, to offer understanding to replace confusion, to offer constructive activities and role models to replace cynicism, apathy and fear (Kanet, 1983, p.28)

First of all educators and mental health professionals have a responsibility to help the young people in their care deal with their reactions to the nuclear threat (Schwebel, 1982). Beardslee and Mack (1982) believe that we need to educate our children so that they can overcome that part of their fear that arises from ignorance. The young people involved in these research projects express a sense of anxiety, helplessness and hopelessness and many professionals have argued that this is detrimental to the mental health and well-being of our youth.

Knowledge is power

Mack (1984) found that some of the adolescents he has conducted research on say that they are anxious and feel powerless because they are ignorant. To inform them is to empower them. Or, as Thomas Jefferson once said,

> I know of no safe repository of the ultimate power of society but the people. And if we think them not enlightened enough, the remedy is not to take the power from them, but to inform them by education (cited in Whiteley, 1984, p. 84).

Markusen and Harris (1984) wrote an article on the role of education in preventing nuclear war. They draw parallels between the use of education in Nazi Germany and in the U.S.A. today (in relation to nuclear issues). They believe that the "institutionalization of nuclearism and the erosion of democracy" has weakened the psychological and political ability of the people to respond to the nuclear threat. To educate the people on nuclear issues would lead to an awareness of the threat. It would give the citizenry the information they need in order to evaluate policies and proposals about nuclear weapons. They would be better able to judge political candidates. The process of nuclear education would enhance democracy and critical thinking. Perhaps most important of all it would help in generating alternative national security policies. All of these benefits of nuclear education give both psychological and political power to citizenry.

Education can play a role in peace

Markusen and Harris (1984) believe that education has an important role to play in the "struggle to avert nuclear holocaust" (p. 283). Further, Whiteley (1984) states that "there is no

institution of society that could contribute more to achieving peace" (p.83). Education has a great potential for both good and ill. It can contribute towards the goal of peace or it can be silent and by silence further the possibility of global destruction. The Project Peace and Simon Fraser University curricula have tried to promote peace on both a personal and a global level.

Previous Educational Interventions

Stress Management and Nuclear Anxiety-A structured group experience

Bisio and Crisan (1984) developed a workshop designed to help people learn how to cope with their anxiety in relation to nuclear war. This one day workshop included: discussing the effect nuclear conflict had on the values and attitudes of the participants, guided fantasy, ways to deal with surviving a nuclear war, and several logotherapy exercises on life meaning and goals. No formal data were collected but the participants reported a renewed sense of self, reduction of anxiety and hope for the future.

Physicians for Social Responsibility Workshops

French (1985) wanted to know how effective educational efforts on the consequences of nuclear war were in changing attitudes. He surveyed 1355 subjects who attended educational presentations given by a physician on the medical and physical consequences of nuclear war. Subjects were given the Nuclear War Attitude Survey before the workshop. The survey contained 25 items. There were 10 questions about attitudes and 15 relating to specific knowledge about nuclear issues (e.g., how many bombs are there in the U.S.A?). After the workshop subjects responded to only the 10 attitude questions. The attitude questions covered likelihood of certain thermonuclear events, limitability, preventability, and whether or not there are causes worth fighting a nuclear war for.

The major focus of French's (1985) research was the question of willingness to countenance nuclear war. There was a negative correlation between knowledge and willingness to countenance. The more a person knows about nuclear technology the less they believe that there are causes worth fighting a nuclear war for. The second major finding was that, at pretest, 10% were willing to countenance nuclear war. By the time of the posttest 46% of these 'countenancers' had changed their minds. Once these 'countenancers' had more information about the effects of nuclear war their willingness to countenance it went down. The results of this study suggest that educational interventions are indeed effective in altering attitudes. It would be interesting to see how many more of the "countenancers" changed their opinion after they had time to consider the information they received in the workshops.

Educational Workshop for High School Students on Nuclear War Issues

David London (1985) was invited to present a workshop on nuclear war in response to the movie "The Day After". The all day workshop was attended by 72 high school students

(aged 13-18). The workshop involved large and small groups discussions, exercises, 2 videotapes of interviews with American and Soviet children, and a workshop on hope (based on Joanna Macy's book *Despair and Personal Power in the Nuclear Age*). Students answered questionnaires prior to and after the workshop. The questionnaires included the State-Trait Anxiety Inventory (STAI) and a 33 item questionnaire on knowledge and attitudes towards nuclear war (true/false format). The subscales of this questionnaire are as follows, factual knowledge, personal emotional involvement, moral development, political orientation, perceived awareness of peers of nuclear issues, and family concern for nuclear issues.

For the sample as a whole only the scores on factual knowledge increased significantly (paired t-tests). London (1984) then divided the sample into subgroups. Those who reported becoming more anxious during the workshop had increased knowledge, were more personally emotionally affected by nuclear issues, perceived their peers to be more aware, and had families that expressed more concern regarding nuclear war and related issues, than the no change group (p.211). Because these students were more personally affected by nuclear issues London (1984) feels that the mere discussion of nuclear issues raised their anxiety. Finding that most students could reflect on nuclear war issues "in a productive manner without experiencing substantial anxiety...diminishes claims that state nuclear curricula are harmful to young people" (p. 212). Whatever increase in anxiety there is London (1984) believes may be necessary for effective learning.

Problematic Aspects of Nuclear Education

Iatrogenic

Adelson and Finn (1985) strongly suggest that education about nuclear issues may be creating or increasing that very anxiety which it is allegedly trying to reduce. Schwebel (1982) and Hargraves (1984) also make note of teachers' and parents' complaints that kids don't know or care about nuclear issues. "You're going to make them anxious or depressed" is a frequently heard comment. Tizard (1984) says that the degree of anxiety may be critical. Too much anxiety can overwhelm and paralyze but not enough may endanger "collective survival" (p. 276). Perhaps children will become more anxious when they learn more about nuclear issues but that may not be such a bad idea. Tizard notes that higher anxiety is associated with a sense of optimism and a belief in personal control in preventing nuclear war. Of course one needs to ensure that the intervention increases optimism.

Politicizing

Adelson and Finn (1985) argue that nuclear education will encourage children to engage in political action. They describe this as recruitment to the "propaganda purposes of the teacher" (p. 35). This is also a complaint of various teachers and parents (Hargraves, 1984;

Schwebel, 1982). Nuclear education could very well challenge "the prevailing assumptions embedded in the social system" (Mack, 1984, p.266) and that may be unsettling for adults. There is an obvious need for balanced information in order to avoid the accusation of propaganda or indoctrination. In implementing peace education we need to be aware of the problems associated with it and we need to evaluate it. "The complexity of the issues and the pluralistic nature of our culture demand an evaluative approach" (Harvey, et. al., 1985, p. 60).

Summary

This chapter first presented the major research findings relating to young people's perceptions of the nuclear threat. Young people are afraid of the possibility of nuclear war. They think it is likely to occur within their lifetime and that they cannot survive a nuclear war. This nuclear fear affects the daily thinking and future planning of a small proportion of these children and adolescents. Most do not share their fears with anyone.

Experts have argued that there are a number of serious detrimental effects of the fear associated with the nuclear threat. First, it is not healthy for young people to keep their fear hidden. Secondly, the sense of futurelessness and powerlessness has forced many young people to live on two levels, planning for a future that may never come to be. Given these possible effects and an expression on the part of youth that they desire to discuss nuclear issues educators have begun to see and live up to their responsibility. There have been only a few studies done on the effects of educational interventions. These findings are only preliminary and do not offer much assistance in the way of planning future interventions. Thus far not much study has been done to determine the effect of increasing knowledge on attitudes towards nuclear war. It is this question that this research has sought to address.

Hypotheses

The study described in this thesis documented the field testing of two peace education curricula units, one for grade 7 students and the other for undergraduate university students. In view of the previous research findings the following hypotheses guided this study:

Change Across Time

(1) There will be a significant increase in a sense of personal control to prevent nuclear war for students receiving peace education but not for students not receiving peace education.

(2) There will be a significant increase in knowledge about nuclear issues for students receiving peace education but not for students not receiving peace education.

(3) There will be a significant reduction in state anxiety for students receiving peace education but not for students not receiving peace education.

(4) There will be a significant reduction in trait anxiety for students receiving peace education but not for students not receiving peace education.

Relationships between variables

(5) There will be a significant positive correlation between reported fear about nuclear war and belief in the likelihood of nuclear war occuring within one's lifetime.

(6) There will be a significant positive correlation between reported fear about nuclear war and trait anxiety.

(7) There will be a significant positive correlation between reported fear about nuclear war and knowledge about nuclear issues.

(8) There will be a significant positive correlation between reported fear about nuclear war and a sense of personal control in being able to prevent nuclear war.

(9) There will be a significant negative correlation between survivability and belief in the likelihood of nuclear war occuring within one's lifetime.

(10) There will be a significant negative correlation between survivability and reported fear about nuclear war.

Exploratory Questions

This study will also deal with what kind of secondary effects are associated with peace education curricula. These secondary effects include the frequency of discussion about nuclear issues and the amount of fear about nuclear war reported by the students involved in peace education. It is expected that there will be an increase in frequency of discussions and a decrease in reported fear for the students receiving peace education but not for the students not receiving peace education.

The next chapter describes the methodology used to test these hypotheses and exploratory questions.

CHAPTER 3
METHOD

This chapter describes the methodology used in this study, the university and elementary school samples, the treatment program, the dependent measures, problems encountered in data collection, and finally the procedure used in collecting the data.

University Sample

The treatment group was an introductory psychology course which addressed nuclear issues. This class was matched with a similar-sized one in a first-year education course. The education course did not include content on nuclear issues and peace education. Eighty subjects were in the treatment group and 39 were in the control group at the time of the pretest. The posttest questionnaires were answered by 32 students in the treatment group and 20 in the control group. (See table 1)

Elementary School sample

Obtaining permission from control group elementary schools

The school board gave their approval to the evaluation aspect of the Project Peace program. Each of the treatment group classes was matched with another classroom in the Burnaby School District. This matching was done on the basis of socioeconomic status (SES), class size and grade.

Once the control group schools were targetted the school principals were approached by phone and asked if they would be involved. They were given a copy of the questionnaires to be used in the study and also a copy of the consent forms for parents. If the principals agreed to participate in the project, teachers were approached. Consent forms were then sent home to the parents and parents were given 3 to 4 days to return them to the school.

Subjects

Ten teachers in the Burnaby School District volunteered to pilot the intervention curriculum developed by Project Peace in conjunction with the Burnaby School Board. Four of the teachers dropped out of the program for various reasons. Three of the teachers' principals decided not to carry through with the program due to opposition from parents. The fourth teacher found that were too many students in his class to be able to properly implement the curriculum. The remaining 6 teachers taught the curriculum to students in grade 6 and 7 (1 grade 6 (the teacher having been transferred from a grade 7 class to a grade 6 class after becoming involved in the project); 1 grade 6/7 split and 4 grade 7 classrooms). Grade 7 was chosen as the grade at which to intervene because Hargraves (1984) showed that the incidence of reported fear about nuclear issues peaks at grade 7. It was felt that this would be an

Table 1

Demographic data for 52 university students+

	Sex		Marital Status			Children*		Religious Activity**					Fulltime		Major***		Years at University				
	M	F	Mar.	Sng.	Oth.	Yes	No	None	Some	Reg-	Reg	Reg+	Yes	No	Yes	No	0-1	1-2	3-4	Bach.	Other
Treatment	15	17	3	27	1	2	29	15	8	1	3	2	24	7	23	7	8	11	9	2	1
Control	4	16	3	14	0	4	13	8	5	0	4	2	17	2	9	7	3	12	4	0	0

+ numbers do not add up to 52 in each cell because not all of the students responded to each question

Average age: Treatment x=22.3 s.d.=4.8
Control x=23.3 s.d.=8.4

*Children's ages: Treatment range 2-14 years
Control range 3-21 years

**Reg- = less than regular attendance
Reg = regular attendance
Reg+ = regular attendance plus committes, etc.

***Major refers to the fact that the student has declared a major

important time to intervene and give students balanced and reliable information.

The treatment classrooms were matched with other classrooms in the Burnaby School District on the basis of SES, classroom size, and grade. Originally there were 6 control group classes that had agreed to participate. One of the selected classes had to drop out of the experiment because a large number of parents protested against their children being involved. That classroom was a 6/7 split. Other schools that we had approached included a grade 6 classroom. Unfortunately, we were not able to obtain permission from the principal of that school. The resulting control group consisted of 5 grade 7 classrooms.

There were 135 students in the control group and 170 in the treatment group at the time of the pretest. At the time of the posttest there were 97 in the control group and 102 in the treatment group. (See table 2).

Treatment

University Sample

The treatment was a course, Psychology 106, entitled "Psychological Perspectives of Nuclear War". The class met once a week in the evening for three hours. The course took place over a 13 week period. The content of the course included knowledge about nuclear developments, psychological effects, attitude change, conflict resolution, images of the enemy. Course grade was determined by two exams and one essay or research project. There were also tutorials related to the lecture topics. (Outline of the curriculum in Appendix A).

Elementary Sample

The curriculum consisted of 10, 40 minute lessons. These lessons covered conflict, conflict resolution, handling anger, images of the enemy, information about the USSR, Soviet children and nuclear war, information about nuclear developments, peace makers and actions that could be taken to help to bring about peace. The students saw films, participated in role playing, class discussions and were involved in group work. There were two lessons a week per week for five weeks. The scheduling of the lessons was done at the teacher's discretion though it turned out to be the same time block and the same day for the lessons. (Outline of the curriculum in Appendix A).

Dependent Measures

University Sample

Nuclear War Attitude Survey. (compiled from: French, 1985; Sommers, Goldberg, Levinson, Ross, & LaCombe, 1984; Tyler & McGraw, 1983; and one of the researchers). Nine of the items on this 49 item survey measure subjects' knowledge about nuclear issues. These items were assessed by a group of 14 members of the scientific staff of the Stanford Linear Acceleration Center (French, 1985) and were deemed valid for such a purpose. Other

Table 2

Demographic data for 199 elementary students +

	Sex		Age				Language			Father's SES**					Mother's SES**						Lives with					Grade	
	M	F	10	11	12	13	Eng.	Other	Two*	1	2	3	4	5	1	2	3	4	5	6	Hswf	Both	mother	father	guardian	grp. home	6	7
Treatment	50	48	1	16	72	9	45	20	13	21	14	8	7	10	11	15	14	4	3	0	16	51	23	2	0	2	22	76
Control	50	45	0	3	86	5	47	23	21	14	9	8	18	25	8	9	18	13	5	1	31	78	12	0	1	0	0	94

+ numbers do not add up to 199 in each cell because not all of the students responded to each question

* two languages or more spoken at home

**SES= socioeconomic status
This is from Blishen's socioeconomic index. Based on income level, educational status and prestige.
1= Below 30
2= 30.00-39.99
3= 40.00-49.99
4= 50.00-59.99
5= 60.00-69.99
6= 70+
Hswf= housewife

items assess the subjects' attitudes towards nuclear issues; i.e., likelihood of: limitability or preventability of nuclear war, personal survival in the event of a nuclear war, personal control, attributions of responsibility, and behaviours thought likely to diminish the threat of nuclear war. Demographic information was also collected, including; religious affiliation, marital status, number of children, and major area of study. (See Appendix B)

State-Trait Anxiety Inventory Form Y. The State -Trait Inventory (STAI) was used to assess the subjects' general level of anxiety. The STAI is comprised of two self-report scales for measuring state and trait anxiety. The Trait Anxiety Scale (A-Trait) consists of twenty statements that evaluate how the subject generally feels. The State Anxiety Scale (A-State) consists of twenty statements that evaluate how the subject feels at that moment.

A-Trait is defined as " relatively stable individual differences in anxiety-proneness, that is, to differences between people in the tendency to perceive stressful situations as dangerous...and to respond to such situations with elevations in the intensity of their A-State reactions" (Spielberger, 1983, p.1) A-State is defined as existing "at a given moment in time and at a particular level of intensity. Anxiety states are characterized by subjective feelings of tension, apprehension, nervousness and worry, and by activation or arousal of the autonomic nervous system" (Spielberger, 1983, p.1).

The test-retest correlations for the A-Trait range from .73 to .86 for college students. The stability coefficients for the A-State range from .16 to .54. Such low coefficients are to be expected because the A-State reflects "the influence of unique situational factors that exist at the time of testing" (Spielberger, 1983). The internal consistency measures tend to be high. For A-Trait the alpha coefficients are .90 and .91. The alpha coefficients for A-State are .91 and .93. Further evidence of the internal consistency is given by the item-remainder correlation coefficients. For A-Trait it is .57 and for A-State it is .59.

Evidence of the construct validity of the A-Trait scale can be seen when one compares the mean scores of neuropsychiatric (NP) patient groups with those of normal subjects. The scores indicate that the STAI discriminates between "normals and psychiatric patients for whom anxiety is a major symptom" (Speilberger, 1983, p. 14). Construct validity for the A-State is obtained from comparing the scores of military recruits undergoing highly stressful training programs with the scores of college and high school students tested under nonstressful conditions. The concurrent validity of the Form X A-Trait is shown by correlations with the IPAT Anxiety Scale (r= .75); the Taylor Manifest Anxiety Scale (r= .80) and the Zuckerman Affect Adjective Checklist (r= .52).

Rotter's Internal-External Locus of Control Scale (I-E Scale). This scale was developed by Julian Rotter and colleagues. Subjects are asked to choose between alternatives that reflect a

fatalistic, external-control point of view and those indicating a belief in one's own ability to affect and control the events in one's life.

The I-E scale has internal consistency estimates ranging from .65 to .79 (Rotter, 1966). Phares (1976) suspects that it is the additive nature of the test that resulted in the moderate internal consistency measures. Test-retest reliabilities range from .49 to .83 depending on the time interval and the sample involved. (See Appendix B)

Problems with Data Collection

Due to time constraints or misunderstanding as to the layout of the questionnaires there were a few problems with data collection. Some of the students did not complete one side of the State Trait Anxiety Inventory (STAI). Subsequently, at the posttest subjects' attention was called to the fact that there were two sides of the STAI questionnaire. Even so, some students still completed only 1 side of the form. Also, there were a number of students who did not complete the full complement of questionnaires. These students' data were used for normative purposes in the pretest but their posttest data were not used in the data analysis.

Elementary School Sample

Canadian Children's Concerns about the Future Scale. This questionnaire assessed childrens' hopes and worries about the future. Three concerns were compared; job/career plans, unemployment, and nuclear war. The concerns are compared on the basis of; frequency of worry about the issues, amount learned about these issues from various sources, frequency of talking about these at home, school or with friends, sense of personal and parental control, and personal behaviours related to these issues. The scale also assessed knowledge level re: government efforts to prevent nuclear war; likelihood of survival; etc. (See Appendix C)

Locus of Control. This scale was compiled from Rotter's Internal - External Locus of Control Scale by two researchers. These statements were adapted from Rotter's Internal-External Locus of Control Scale. Teachers had expressed the concern that many of their students would not understand the language of the original Rotter's scale so the questions were reworded in language that students could understand. Teachers also expressed the concern that some of the choices presented a too difficult discrimination for the students to make. Therefore a revised form was constructed consisting of 16 statements that students were to answer as true or false. (See Appendix C)

Knowledge of Curriculum. There were 12 multiple-choice questions regarding various aspects of the curriculum. It was felt necessary to obtain some measure of the children's knowledge prior to the intervention. This measure of their knowledge could then be compared witht the posttest scores to determine whether or not the children actually learned what was set out in the curriculum objectives. (See Appendix C)

State-Trait Anxiety Inventory for Children. The State-Trait Anxiety Inventory for Children(STAIC) consists of two separate self-report scales for measuring state and trait anxiety. The STAIC is similar to the STAI for adults. It was constructed to measure anxiety in nine to twelve year olds. The Trait Anxiety Scale (A-Trait) consists of twenty statements and asks children how they "feel in general". The State Anxiety Scale (A-State) consists of 20 statements that ask children how they feel at that moment.

The test-retest reliability coefficients for A-Trait are .65 for males and .71 for females. For the A-State scale the coefficients are .31 for males and .47 for females. The internal consistency measures are the alpha coefficients and the item remainder correlations. The alpha coefficients for A-Trait are .78 for males and .81 for females. The A-State alpha coefficients are .82 for males and .87 for females. The median item remainder for A-Trait are .35 for males and .40 for females. For A-State they are .38 for males and .48 for females. The STAIC is "somewhat less stable and not as internally consistent as the corresponding STAI scales" (Spielberger, 1973, p.8).

Evidence of the concurrent validity of the A-Trait scale is shown by correlations with the Children's Manifest Anxiety Scale (r = .75) and the General Anxiety Scale for Children (r= .63). The construct validity of the A-State scale in normal and exam conditions is available for more than 900 fourth, fifth and sixth grade students. The mean scores for the A-State were "considerably higher in the TEST condition than in the NORM condition" (Spielberger, 1973, p. 9).

Demographic Information. The demographic questions are the same as those in the original Canadian Children's Concerns about the Future Scale. Due to some conflict in the past with parents, teachers requested that this part of the questionnaire be sent home to the parents rather than being filled out by the children. This gave parents the option of filling the questionnaire out themselves. (See Appendix D) Their comments on the program itself or the questionnaires were also invited. The demographics requested were information about the language spoken at home, birthplace, religious affiliation, socioeconomic status, ethnic origin, and whether child was from single parent family. (See Appendix C)

Procedure

University Sample

The pretest was given approximately two weeks after the classes began. Many students drop classes during the first two weeks of classes, therefore it was decided to wait until that two week period was over.

Students were given instructions prior to completing the questionnaires. There were told that there was no obligation on their part to participate. If they did not participate there was no

penalty attached to it. Each class was then given identical instructions how to fill out the questionnaires. This included telling them to make sure that they answered all of the questions and that they filled out both sides of the STAI. They were also told that for Rotter's questionnaire they were to choose the answer that best described they way they felt. The classes had 45 minutes to complete all three of the questionnaires.

The posttest was done during the last week of classes (10 weeks after the pretest). Students who were not present at the class in which testing was done were given the option of completing the questionnaire when they wrote their final examination in that course. There were 2 students who completed the questionnaire at this later date.

Elementary School Sample

The pretest was given out the week before the curriculum was scheduled to begin. This was the second week in October. Teachers were given packages of questionnaires for their classes and were given instructions re: time limit; order of administration; and how to introduce the questionnaires to the students. At the time of administration the teachers were given instructions to provide the students with a definition of unilateral and bilateral disarmament. The definitions were given to the teachers by the research team. Teachers had expressed a concern that their students would not know what these two concepts meant.

They were also asked to assign numbers to students and to keep a master list so that at the time of the posttest we could match up the students' questionnaires with their pretest questionnaires. The master list insured the confidentiality of the respondents. The control group questionnaires were given out at the same time. They had up to a week after the treatment group had completed their questionnaires to complete theirs. The posttest was administered in the same manner during the first two weeks of December.

Demographic information questionnaires were handed out at the same time as the posttesting. The children took the demographic questionnaires home to their parents at this time. Parents were asked to return them to the teachers. The researchers then picked up the questionnaires later in the month.

Problems with Data Collection

Treatment Group. There were unforeseen problems with the teachers collecting data from the grade 7 students. One teacher handed out only 2 out of the 3 questionnaires to his class during the pretesting session. He also did not assign identifying numbers to the students' questionnaires so it was not possible to match his students' pretests and posttests with any degree of accuracy. His pretest data were used for normative purposes but the posttest data were not used.

Another teacher did not write the students' identifying numbers on their posttests. The

questionnaires were taken back to the students who then identified their own responses. Therefore, I was able to match the pretests and posttests and could use the full set of data from this class.

Control Group. During the administration of the pretest one teacher was absent. The substituting teacher did not keep a list of the identifying numbers he/she assigned to the children. The pretest data were used for normative purposes but the posttest data could not be used.

Summary

Characteristics of the samples were listed, followed by a description of the peace education curricula. The dependent measures were then described along with any problems encountered in data collection. Finally, the procedure used to collect the data was given. The next chapter presents the results of the data analysis.

CHAPTER 4
RESULTS

This chapter discusses the results of this study in terms of the hypotheses stated at the end of chapter 2. The first section reports the results of the multivariate analyses for both the university and elementary samples. The second section includes the descriptive analysis and the third reports the correlations for the sample as a whole at pretest time. The final section covers a description of other findings that are of interest and interrater reliability.

Dependent Measures

University Sample

For the university sample the dependent measures were as follows: (1) state anxiety as measured by the STAI, (2) trait anxiety as measured by the STAI, (3) internal-external locus of control as measured by Rotter's I-E Scale, (4) likelihood of certain thermonuclear events, (5) attitudes about the survivability of a nuclear war, (6) attitudes about the preventability of nuclear war, (7) extent to which subjects have engaged in survival behaviours, (8) extent to which subjects have participated in prevention behaviours, (9) knowledge about nuclear issues. The last 6 measures were assessed by the Nuclear War Attitude Survey.

Elementary Sample

For the elementary sample the dependent measures were as follows: (1) state anxiety as measured by the STAI-C, (2) trait anxiety as measured by the STAI-C, (3) internal-external locus of control as measured by the modified version of Rotter's I-E scale, (4) knowledge of the curriculum as measured by the test devised solely for this purpose, (5) attitudes about survivability of nuclear war, (6) attitudes about the preventability of nuclear war. The last two dependent measures were assessed by the Canadian Children's Concerns about the Future Scale.

Inter-rater Reliability

Inter-rater reliability values were computed for any items which required subjective judgement on the part of the researchers in coding the questionnaires. These items included: socioeconomic status, religious affiliation, language spoken at home, 3 greatest hopes and fears, and major at school. Thirty randomly selected questionnaires were photocopied and distributed to the researchers. The researchers completed the coding of these questionnaires independent of each other. The inter-rater reliability values were obtained by dividing the number of agreements by the number of agreements plus number of disagreements. Generally speaking, interrater agreement was high (see Table 3).

Table 3

Reliability Coefficients (r) for Joint Coding of Questionnaires

	r
(grade seven subjects)	
hopes	.98*
worries	.97*
(parents of grade seven subjects)	
language at home	.90**
father's s.e.s.[a]	.89**
mother's s.e.s.[a]	.89**
religious affiliation	1.00**
(university subjects)	
s.e.s[a]	.85**
major	1.00**

* 4 coders
** 2 coders
a - s.e.s. means socioeconomic status (Blishen scale)

Change Across Time

Statement of Hypotheses

There will be a significant increase in measures of sense of personal control to prevent nuclear war and knowledge about nuclear issues for students receiving peace education and not for students not receiving peace education. There will be a significant reduction in state anxiety and in trait anxiety for students receiving peace education and not for students not receiving peace education.

Data Analysis

University Sample. Due to problems with the data collection, as outlined in Chapter 3, there were only 19 treatment group subjects and 9 control group subjects considered in this analysis. The data were analyzed using a 2 x 2 (group x time) multivariate analysis of variance (MANOVA) (for summary of MANOVA see Appendix E) The means and standard deviations for each cell are found in Table 4. The MANOVA showed that the Bartlett-Box Fs for survival behaviours at both pretest and posttest were not homogeneous. It was decided that survival behaviours should be dropped from the analysis. The MANOVA was rerun without survival behaviours and there was no group effect or group x time interaction. There was a significant omnibus F for time effect ($F(8,19)= 3.85$, $p<.01$). The only significant univariate F-test involved trait anxiety ($F(1,26)= 5.23$, $p=.03$). Both the treatment and control groups decreased in trait anxiety over time. None of these hypotheses were supported.

Elementary Sample. A MANOVA was run on the elementary data (for summary of MANOVA see Appendix F) Again, due to data collection problems, outlined in Chapter 3, there was a reduced number of student reponses available for analysis. Only 138 of the elementary students were included in the MANOVAs (67 in treatment group and 71 in control group). The means and standard deviations for each cell are found in Table 5. There was a significant omnibus F for group effect ($F(6,131)=2.46$, $p=.03$). Prevention attitudes was the only subscale out of the four mentioned in the statement of the hypothesis that was found to be significant in the univariate analyses ($F(1,136)=7.09$, $p<.01$) indicating that overall, treatment students scored higher on this scale than did control students. There was also a significant omnibus F for time effect ($F(6,131)=3.84$, $p<.01$) but none of the four subscales mentioned (sense of personal control, knowledge, state anxiety, and trait anxiety) were found to be significant in the subsequent univariate analyses.

There was a significant group x time interaction effect ($F(6,131)=6.56$, $p<.01$). The prevention attitudes subscale was found to be significant in the univariate analyses ($F(1,136)=13.94$, $p<.01$) indicating a differential increase in scores on this scale favouring the

Table 4

Pretest and Posttest Scores for University Scales

Measure	Group	time	
		pre	post
LHD	treatment	12.79(2.66)	13.68(3.00)
	control	12.67(4.15)	13.44(2.70)
SURVAT	treatment	17.74(5.76)	12.00(4.51)
	control	18.67(4.69)	17.22(6.00)
PREVAT	treatment	21.58(5.36)	24.58(4.76)
	control	22.33(4.90)	21.67(4.66)
PREVBH	treatment	8.00(2.71)	9.32(2.81)
	control	8.33(2.45)	8.78(3.15)
KNOW	treatment	4.79(1.47)	4.79(1.69)
	control	3.89(1.27)	4.67(1.22)
STAIF1	treatment	42.58(10.15)	41.42(11.02)
	control	36.22(13.81)	31.22(9.86)
STAIF2	treatment	47.74(11.91)	44.95(12.38)
	control	40.78(12.14)	37.11(11.12)
ROTTER	treatment	10.79(3.63)	8.79(3.15)
	control	10.78(3.67)	10.44(3.17)

*standard deviations are given in parentheses

Table 5

Pretest and Posttest Scores for Grade 7s' Scales

Measure	Group	time	
		Pretest	Posttest
PREVAT	Treatment	9.76(3.02)	11.12(3.16)
	Control	9.76(2.82)	8.90(3.01)
SURVAT	Treatment	10.69(4.50)	10.33(4.18)
	Control	10.92(4.34)	10.35(4.48)
KNOWL	Treatment	4.02(1.61)	5.24(1.38)
	Control	4.34(1.37)	4.42(1.76)
ROT	Treatment	5.61(2.36)	5.34(2.47)
	Control	5.07(2.72)	4.96(2.64)
STAIC1	Treatment	30.88(6.06)	31.75(5.94)
	Control	31.14(5.32)	29.69(5.58)
STAIC2	Treatment	35.81(7.07)	36.78(8.49)
	Control	36.14(7.01)	35.49(8.03)
PROCUPT	Treatment	8.81(2.57)	8.44(2.63)
	Control	8.92(2.93)	8.09(2.53)
PROCJCP	Treatment	10.42(3.34)	10.12(2.89)
	Control	10.65(2.98)	10.01(2.79)
INFLUPT	Treatment	7.03(1.61)	6.97(1.75)
	Control	7.26(1.39)	7.05(1.53)
INFLJCP	Treatment	7.59(1.67)	7.31(1.97)
	Control	7.88(1.57)	7.56(1.75)
INFLNW	Treatment	5.94(1.93)	6.22(1.94)
	Control	5.89(1.68)	5.48(1.74)
NWFP	Treatment	5.44(2.22)	5.67(2.54)
	Control	4.88(2.10)	4.53(1.77)

*standard deviations are given in parentheses

treatment students (see Figure 1). The univariate analysis for the knowledge subscale showed that $F(1,136)=14.8$, $p<.01$. The treatment group increased in measures of knowledge more than the control group. (See Figure 2). This hypothesis was also supported. The interaction effect for state anxiety also was significant ($F(1,136)= 4.83$, $p =.03$) indicating that the change in state anxiety for the treatment group was different than the control group (see Figure 3). The first three hypotheses were supported. Trait anxiety was close to significance ($F(1,136)=3.69$, $p=.057$). (See Figure 4). The mean score for pretest and posttest show a slight increase in trait anxiety for the treatment group and a slight decrease in trait anxiety for the control group therefore support for this hypothesis is marginal.

It should be noted that although the changes in anxiety level reach statistical significance, the numerical change is slight and likely is not noteworthy from a clinical or practical perspective. It is important to note as well that pretest and posttest scores for both groups are well within the normal range, indicating that any change in anxiety level is not noteworthy in a clinical sense.

Relationships Between Variables

Statement of Hypothesis

There will be significant positive correlations between reported fear about nuclear war and the following variables: the belief in the likelihood of nuclear war occuring within one's lifetime, trait anxiety, knowledge about nuclear issues, and a sense of personal control in being able to prevent nuclear war. There will be significant negative correlations between survivability and the following variables: the belief in the likelihood of nuclear war occuring within one's lifetime and reported fear about nuclear war.

Data Analysis

University Sample. The analysis was done on the combined treatment and control group responses at pretest (n= 118). Pearson's correlation coefficient was used to explore the relationships between the variables. Positive correlations were found between reported fear about nuclear war and the following variables: belief in the likelihood of nuclear war occurring within one's lifetime ($r = .35$, $p<.01$) and trait anxiety ($r = .25$, $p = .02$). There was a negative correlation between survivability and reported fear ($r =-.27$, $p<.01$) and between survivability and likelihood ($r = -.25$, $p<.01$). The evidence supports all of the hypotheses above except the hypotheses regarding reported fear and knowledge and reported fear and sense of personal control as there was no significant relationship between these variables (see Table 6).

Elementary Sample. Pearson's correlation was used on the combined treatment and control groups at pretest time (n= 304) to determine the relationships between the variables.

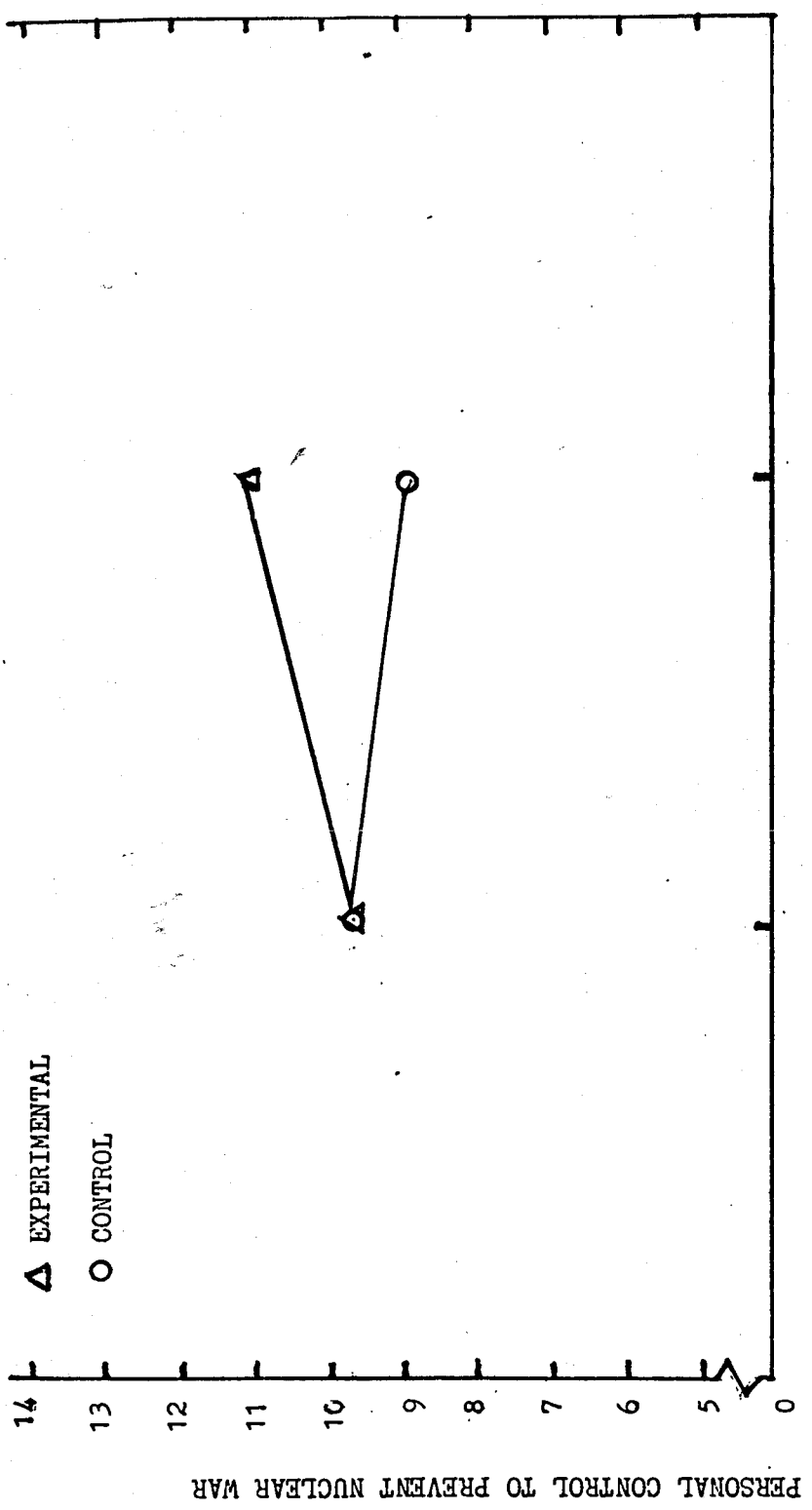

Figure 1. Personal Control to Prevent Nuclear War Scores (Grade 7 Sample)

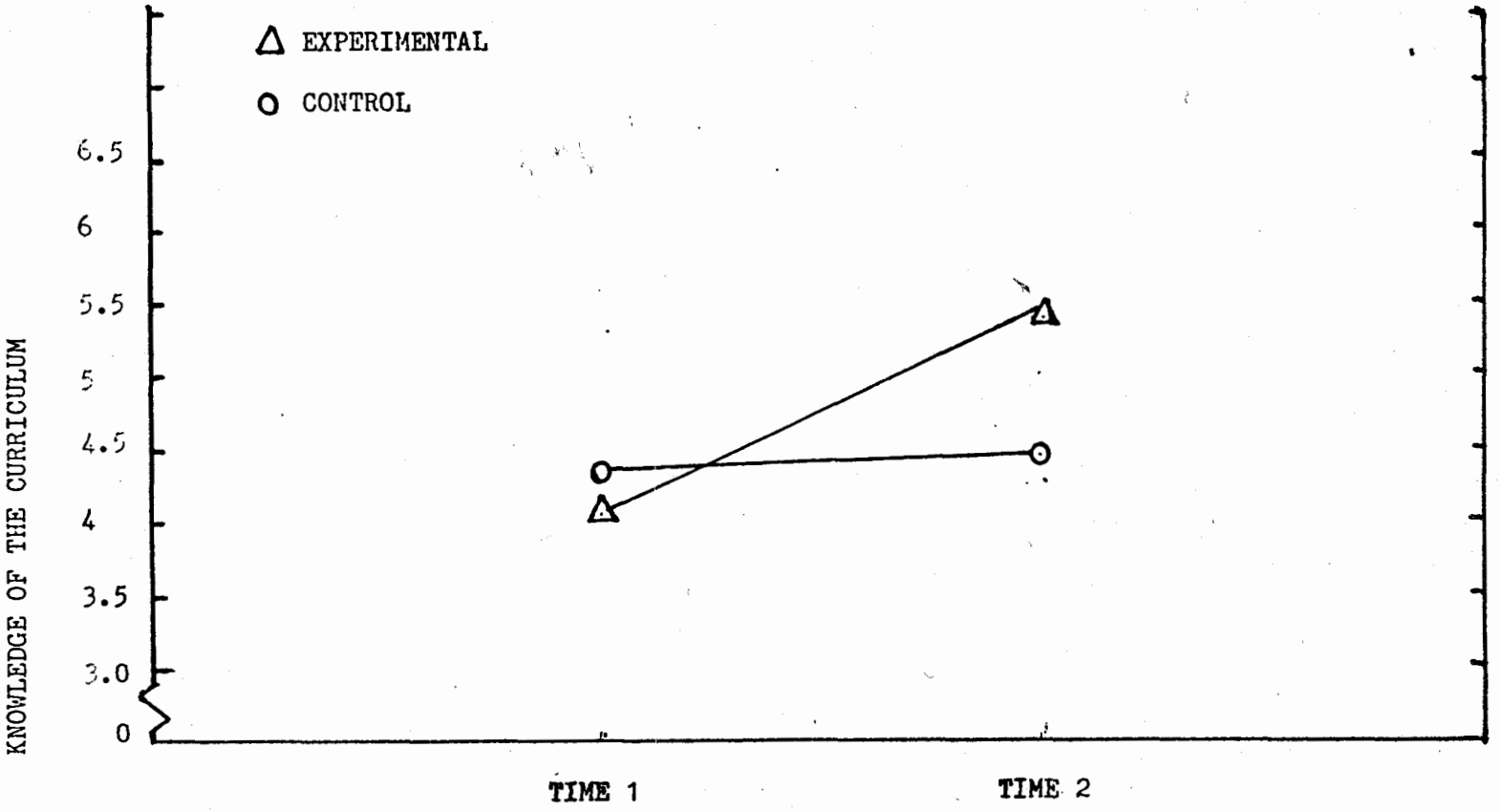

Figure 2. Knowledge Of The Curriculum Scores (Grade 7 Sample)

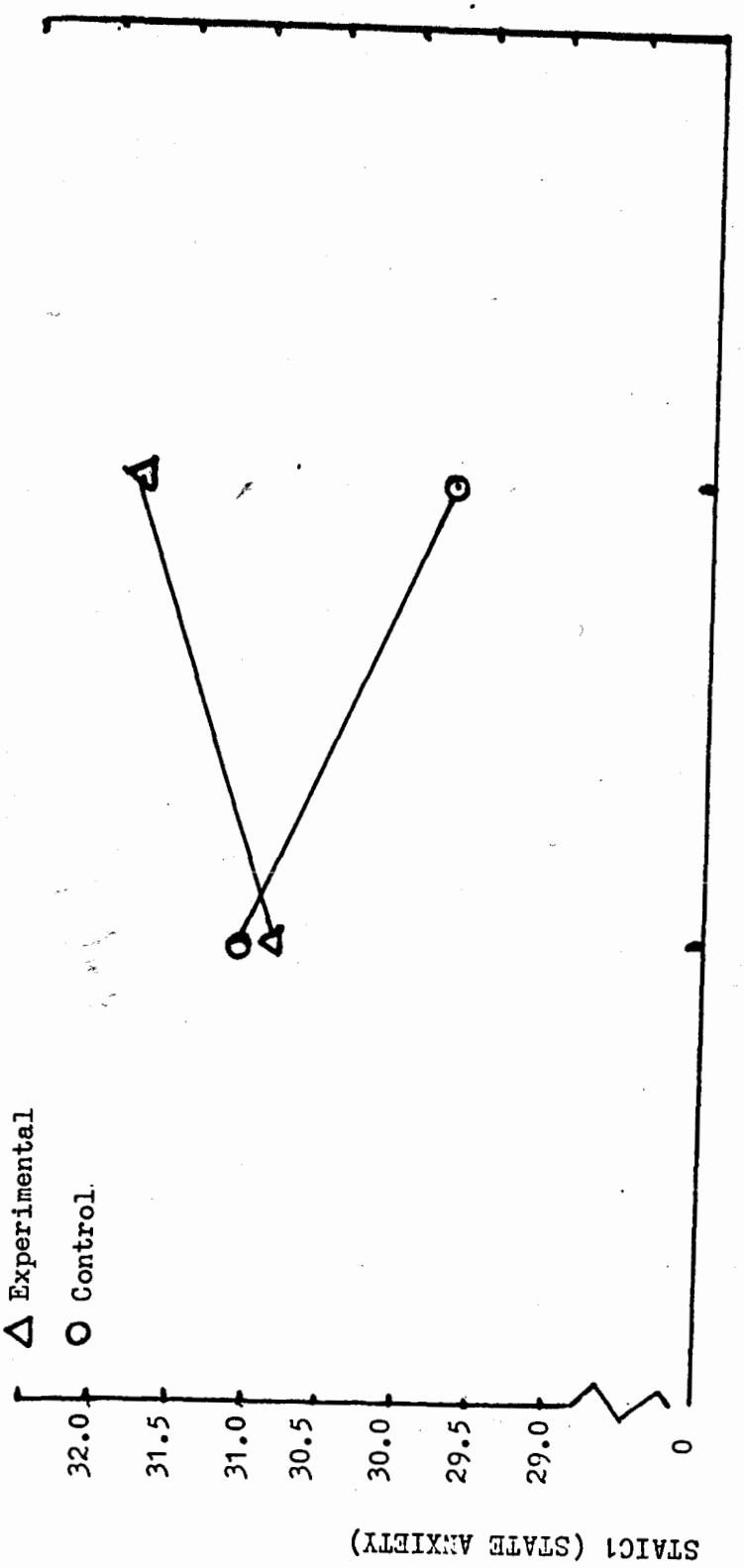

Figure 3. STAIC1 (State Anxiety) Scores (Grade 7 Sample)

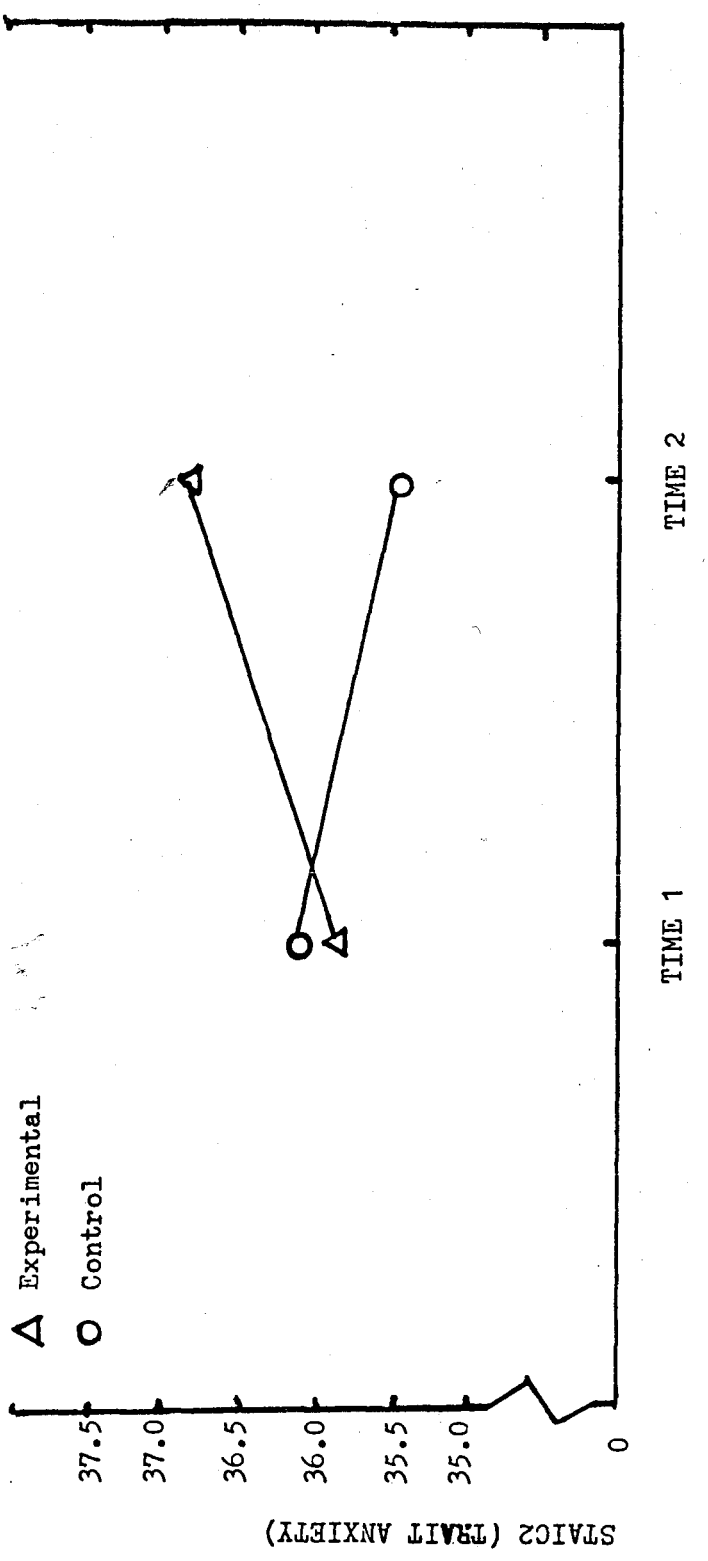

Figure 4. STAIC2 (Trait Anxiety) Scores (Grade 7 Sample)

Table 6

Correlation Matrix for University Sample

	FEAR[a]	LHD[b]	STAIC2[c]	SURV[d]	KNOWL[e]
LHD	r = .35 p < .01				
STAIC2	r = .25 p = .02	r = .15 p = .11			
SURV	r = -.27 p < .01	r = -.25 p < .01	r = -.03 p = .39		
KNOWL	r = .00 p = .48	r = .06 p = .26	r = - .05 p = .33	r = - .12 p = .10	
PREVAT[f]	r = .13 p = .08	r = -.13 p = .08	r = - .13 p = .14	r = .14 p = .06	r = .08 p = .18

Correlation Matrix for Elementary Sample

	FEAR	LHD	STAIC2	SURV	KNOWL
LHD	r = .25 p < .01				
STAIC2	r = .35 p < .01	r = .20 p < .01			
SURV	r = .18 p < .01	r = .07 p = .12	r = - .02 p = .40		
KNOWL	r = .03 p = .30	r = .01 p = .46	r = .05 p = .23	r = - .13 p = .01	
PREVAT	r = .33 p < .01	r = .15 p < .01	r = .13 p = .02	r = .46 p < .01	r = - .07 p = .11

a = reported fear about nuclear war
b = belief in the likelihood of nuclear war occuring within their lifetime
c = trait anxiety
d = belief in the survivability of nuclear war
e = knowledge about the curriculum
f = belief in personal control to prevent nuclear war

control to prevent nuclear war ($r = .33$, $p<.01$). Contrary to expectations, there was a significant positive relationship between reported fear about nuclear war and survivability ($r = .19$, $p<.01$). There was no significant relationship between likelihood and survivability. The hypotheses about a positive relationship between reported fear and likelihood, trait anxiety and sense of personal control were supported but the rest were not (see Table 6).

Exploratory Questions

Statement of Exploratory Hypothesis

There will be an increase in frequency of discussions about nuclear issues for students receiving peace education and not for students not receiving peace education.

Descriptive Analysis

University Sample. In response to the question "to what extent have you spoken to a friend or family member about your concerns about nuclear war?" 59% of the control group and 50.6% of the treatment group stated that they had talked "some" or "a lot". At posttest time the control group showed a decrease in frequency of discussion (from 59% to 45%). The treatment group exhibited a substantial increase. They went up from 50.6% to 71.9%. (For the complete set of frequency responses see Appendices G-J).

Elementary Sample. The responses to three questions relating to the frequency of discussion of nuclear war at home, at school, and with friends were added together to obtain the following frequencies. (See Appendices K-N for a complete set of frequency responses). In the control group only 6.3% said they talked about nuclear war "once or twice/week" or "almost every day" in the past month. In the treatment group 11.4% had talked about nuclear war this often. The frequency of discussion about nuclear war decreased very slightly for the control group from pretest to posttest. Only 5.2% of the control group talked about nuclear war "once/twice per week" or "almost every day". Of the treatment group 34.5% talked about nuclear war. This is almost triple the amount of time that the treatment group devoted to discussion of nuclear war at pretesting.

Statement of Exploratory Hypothesis

There will be a reduction in reported fear about nuclear war for students receiving peace education but not for students not receiving peace education.

Descriptive Analysis

University Sample. There was one question on the Nuclear War Attitude Survey that related to fear about nuclear war. The question asks how often in the last month thoughts about nuclear war have given the subject feelings of fear and anxiety. At pretest 5.3% of the control group and 7.6% of the treatment group had experienced these feelings once or twice per

week or almost everyday. By the time of the posttest the control group did not experience fear and anxiety more than "a few times" in the last month. However, the treatment group experienced a substantial increase, going from 7.6% to 53.3%. (See Appendices E-H for a complete set of frequency responses).

Elementary Sample. There are formal and informal indicators of anxiety present in these questionnaires. The formal indicators are the questions that ask students how much fear or worry they have been experiencing as relates to the nuclear threat. The informal indicators suggest that subjects are anxious (e.g., their 3 greatest hopes and fears).

The subjects were asked how many times in the past month thoughts about nuclear war had given them feelings of fear or worry. At pretest 30.8% of the control group said that they had not experienced these feelings at all and 48.5% said "a few times". In the treatment group 36.1% said they had experienced feelings of fear and worry "not at all" and 37.9% said "a few times". At posttest 57.9% of the control group said "not at all" and 32.6% said "a few times". In the treatment group 25% said "not at all" and 49% said "a few times". The frequencies show that the control group decreased in reported fear and there was a slight shift towards greater fear on the part of the treatment group. Although these percentages appear somewhat different for the 2 groups when the "not at all" and "a few times" categories are combined, the responses are quite similar. (The full set of frequency responses can be found in Appendices I-L).

The subjects were asked to list their 3 greatest fears (see Table 7). The most common fear for both of the groups was war. At pretest time 57.2% of the control group and 62.8% of the treatment group listed war as one of their 3 greatest fears. The posttest results show that 59.4% of the control group and 80.9% of the treatment group list war. This represents a substantial increase in fear of war on the part of the treatment group.

Another informal indicator of anxiety is the section on the questionnaire that listed 9 worries and asked students to rate these worries on a scale from 1=not important at all to 4=very important. The control and the treatment groups both rated nuclear war as their second highest worry (see Table 8). The control group went down slightly from pretest to posttest (90.9 to 85.5%) placing nuclear war as their third highest worry. The first was parents' death and the second was lack of jobs. The treatment group stayed almost the same (87.1% to 87.9%) keeping nuclear war as their second highest worry. It is interesting to note that this sample of students demonstrate a high degree of worry about many things.

Other Findings

For both the university and elementary samples there was a significant positive

Table 7

Three greatest worries of elementary sample*

Worry	Group	Time	
		Pretest%	Posttest%
War	Treatment	62.8	80.9
	Control	57.2	59.4
Family	Treatment	36.8	32.9
	Control	34.1	31.5
School	Treatment	36.6	22.4
	Control	42.8	29.5
Death (self)	Treatment	31.7	40.4
	Control	37.0	39.3
Other	Treatment	29.5	32.0
	Control	21.7	30.8
Career	Treatment	21.3	19.1
	Control	28.4	29.5
Death (family)	Treatment	16.3	15.3
	Control	12.3	13.4
Money	Treatment	14.5	14.9
	Control	15.6	14.9
Friends	Treatment	13.8	9.2
	Control	10.0	16.1
Social Concerns	Treatment	13.6	17.0
	Control	16.6	20.4
My life, me	Treatment	11.2	6.8
	Control	12.8	7.9
Future	Treatment	8.0	5.6
	Control	4.0	3.8
Death (friends)	Treatment	2.1	1.1
	Control	2.5	1.2
Natural Disasters	Treatment	2.0	2.4
	Control	5.0	2.6

* the numbers indicate the percent of people listing each item as one of their 3 greatest worries

Table 8

Ratings of worries for elementary sample*

Name of worry	Group	time: Pretest %	time: Posttest %
Parents' death	Treatment	93.6	90.1
	Control	97.7	91.7
Nuclear war	Treatment	87.1	87.9
	Control	90.9	85.5
Lack of jobs	Treatment	84.7	82.2
	Control	88.5	87.5
My death	Treatment	81.5	80.2
	Control	76.9	65.7
Bad grades	Treatment	80.5	81.0
	Control	86.2	82.3
Parents' divorce	Treatment	79.3	76.3
	Control	87.6	80.5
Nuclear power plant leaks	Treatment	79.0	84.1
	Control	76.3	65.6
Poverty	Treatment	68.1	73.9
	Control	86.4	81.9
Violent crime	Treatment	67.8	74.0
	Control	79.4	73.2

* students were presented with a list of 9 worries and asked to rate them on a Likert scale from 1=not important to 4=very important. The numbers indicate the percent of people rating each item as important and very important.

correlation between reported fear about nuclear war and frequency of discussion about nuclear war ($r = .39$, $p<.01$ and $r = .45$, $p<.01$ respectively). This finding refutes previous claims (see chapter 2) that talking about one's fears helps to reduce the anxiety experienced. In the case of nuclear war higher frequency of discussion is associated with higher anxiety levels.

It is interesting how often peace is mentioned as one of the 3 greatest hopes (see Table 9). Peace is mentioned by 30.7% of the control group and 44.4% of the treatment group at pretest time. This disparity between the groups grew larger by the time of posttesting. The control group decreased slightly in their mention of peace as one of their 3 greatest hopes (24.1%) but the treatment group shows a large increase (60.3%). One can also see how important peace is to these students in their ratings of the list of 9 hopes (see Table 10). Most of the control and treatment group subjects rate peace as being important or very important to them. It is interesting to note here that although the students demonstrated a high degree of worry about many things affecting their lives (see Table 8) they also demonstrated a high degree of hope regarding their future as adults.

Anecdotal Reports for the Elementary Sample

Comments were invited from the teachers, parents, and children involved in this study. The teachers' commented that they thought their students had become less anxious about nuclear war because (and this is the crux of the matter) the students felt that there was something they could do about nuclear war. Parents were also encouraging in their comments. The parents of the children involved in peace education stated that they were pleased with what their children had learned. The parents felt that not only had their children learned more about nuclear war in terms of information, their children had also learned "more about the positive aspects of peace and hope" (a parent). The children themselves expressed a sense of relief at being given the chance to even answer the questionnaire. As one grade 7 put it, "my feelings have been bottled up inside me. When I finished writing the questions above, I felt relieved". After the peace education curriculum was completed students felt that they had learned more about nuclear war and also felt less hopeless "more possibilities for the future have been opened".

Summary

University Sample

Although there was a significant time effect (trait anxiety), no significant interaction effects were found. There were significant positive correlations between reported fear about nuclear war and the two variables, belief in the likelihood of nuclear war occuring within one's lifetime and trait anxiety. There were significant negative correlations between survivability

Table 9

Three greatest hopes of elementary sample*

Name of hope	Group	time	
		pretest %	posttest %
Career	Treatment	56.8	69.6
	Control	69.3	70.8
Peace	Treatment	44.4	60.3
	Control	30.7	24.1
Family	Treatment	41.9	39.3
	Control	56.7	65.6
Money	Treatment	30.4	15.7
	Control	22.3	20.1
Good health	Treatment	22.1	28.7
	Control	16.6	21.6
Other	Treatment	21.1	19.1
	Control	12.1	22.8
Good education	Treatment	18.2	19.2
	Control	19.8	14.7
Specific possessions	Treatment	17.1	13.8
	Control	16.8	12.3
Happiness	Treatment	16.7	15.0
	Control	15.8	17.6
Attributes of self	Treatment	9.5	3.1
	Control	8.7	4.3
Social concerns	Treatment	8.4	7.6
	Control	15.2	11.2
Friends	Treatment	7.1	5.5
	Control	8.9	11.4
Good grades	Treatment	6.2	3.2
	Control	7.0	3.5

* the numbers indicate the percent of people listing each item as one of their 3 greatest hopes

Table 10

Ratings of hopes for elementary sample*

Name of hope	Group	Time	
		Pretest %	Posttest %
Good job	Treatment	97.1	98.0
	Control	98.5	100.0
Good health	Treatment	96.5	99.0
	Control	98.5	96.9
Happiness	Treatment	94.1	96.0
	Control	97.7	97.9
Peace	Treatment	93.5	93.1
	Control	95.5	94.8
Good grades	Treatment	92.8	97.0
	Control	98.5	96.9
Good friends	Treatment	88.2	95.1
	Control	98.5	93.9
Good marriage	Treatment	86.4	90.2
	Control	96.3	97.9
Unpolluted environment	Treatment	76.6	77.4
	Control	78.4	77.3
Children	Treatment	73.0	80.4
	Control	82.9	88.7

* students were presented with a list of 9 hopes and asked to rate them on a Likert scale from 1=not important to 4=very important. The numbers indicate the percent of people rating each item as important and very important.

and the two variables likelihood and reported fear. The descriptive analysis revealed an increase for the treatment group in frequency of discussions and reported fear about nuclear war while there was none for the control group.

Elementary Sample

There was a significant group effect (sense of personal control) and a significant group x time interaction (sense of personal control, knowledge about nuclear issues and state anxiety). There were significant positive correlations between reported fear about nuclear war and the following variables: likelihood, trait anxiety, sense of personal control and survivability. Finally, the descriptive analysis revealed a large increase in frequency of discussion about nuclear issues and a marginal increase in reported fear for the treatment group but not for the control group.

The next chapter discusses these findings and makes recommendations for further research and the future use of peace education curricula.

CHAPTER 5
DISCUSSION

This chapter interprets the results obtained in this study. First, the results for both the university and elementary samples are summarized and interpreted. The limitations of this study are discussed, as are the implications of these findings. Conclusions relating to the future use of peace education curricula and suggestions for further research are made.

Summary of Results

University Sample

A multivariate analysis of variance including measures of knowledge about nuclear issues, sense of personal control to prevent nuclear war and trait anxiety yielded a significant time effect (trait anxiety). No group effects or group x time interactions were found. The correlational analysis yielded significant positive correlations between reported fear about nuclear war and these two variables, likelihood and trait anxiety. There were significant negative correlations between survivability and these two variables, likelihood and reported fear. There were no significant correlations for knowledge and sense of personal control. The descriptive analysis showed that there was an increase in reported fear and frequency of discussion about nuclear war in the treatment group but not for the control group.

Elementary Sample

The multivariate analysis of variance yielded a significant group effect (personal control) and a significant group x time interaction (sense of personal control, knowledge and state anxiety). There were no significant findings for trait anxiety. The correlational analyses revealed that there were significant positive correlations between reported fear and the following variables: likelihood, trait anxiety, sense of personal control, and survivability. There were no significant relationships between reported fear and knowledge and between likelihood and survivability. Descriptive analysis showed that there was a substantial increase in frequency of discussion about nuclear issues and a slight increase in reported fear about nuclear war for the treatment group but not for the control group.

Interpretation of Results

University Sample

Multivariate analysis of variance. There are a few possible explanations for the lack of a significant group x time interaction effect for this sample. The first is the small number of subjects' responses that were used in the analysis. A small sample size would need to show large differences in order to be considered reliable. The scales had a small range of possible responses (from1 to 5) and it would be difficult to obtain a large response difference. The

second possible explanation is related to the knowledge subscale. The items on this subscale ask specific technical questions about nuclear issues. Some of the answers to these questions were addressed in the first lecture of the Psychology 106 course. It is possible that the students forgot these minor technical details by the end of the semester. It would be better to have used a scale that reflected more of the course content. The third explanation is related to the sense of personal control subscale. The students in this course were given information about nuclear issues but they were not taught how to effect change themselves. State anxiety did not change and that may be due to the fact that the situation the students were in (i.e., answering a questionnaire) was not anxiety provoking. As to the lack of change in trait anxiety, it was hypothesized that there would be spreading effect from nuclear anxiety to trait anxiety. In other words a reduction in nuclear anxiety could lead to a reduction in general anxiety. Since nuclear anxiety did not decrease it is not surprising that there was no group x time interaction for trait anxiety. All of these factors affected the outcome but the small number of students' responses had the strongest impact on the MANOVA results.

There was a significant time effect (trait anxiety). Both of the groups decreased in trait anxiety over the course of the semester. This is another reason why there was no group x time interaction for trait anxiety. This finding is possibly due to a time-of-semseter effect. The questionnaires were distributed near the beginning of the semester and students may have been more anxious due to the difficulties associated with starting a new semester. By the time of the posttesting students would have settled into the routine and hence would be less anxious.

Correlations. It is logical to assume that those people who are more anxious in general will be the ones who are more anxious about nuclear issues. It also makes sense to assume that those people who believe that a nuclear war will occur within their lifetime and that such a war is nonsurvivable will be more afraid of the possibility of nuclear war than any other group of people. Contrary to expectations, there was no significant correlation between knowledge and reported fear. This is due to the fact that the knowledge scores were very low at the pretest (see Table 3). The scores were not high enough to detect any significance in the relationship between these two variables. Finally, there was no positive correlation between reported fear and sense of personal control. This seems to make sense as anxiety and fear are often associated with helplessness. These students may have felt anxious about nuclear war and also helpless to do anything to prevent nuclear war.

Descriptive analysis. It was hypothesized that giving students the opportunity to discuss nuclear concerns would lead to a reduction in reported fear about nuclear war. Such was not the case. There was a substantial increase in discussion about nuclear issues but this was accompanied by an increase in anxiety. It was found in the correlational analysis that more

frequent talking about nuclear issues is associated with higher anxiety. This could be because the mere mention of nuclear war increases some people's fears (e.g., London, 1985).

Elementary Sample

Multivariate analysis of variance. There was a significant group effect (sense of personal control) and a significant group x time interaction effect (sense of personal control). At the outset the groups were different overall. The analysis shows that the groups changed differently over time. More specifically, the treatment group increased in a sense of personal control and the control group decreased. This effect is due to the fact that part of the curriculum focused on actions that the students themselves could take to prevent nuclear war. It comes as no surprise then that the sense of personal control to prevent nuclear war increased in the treatment group.

There was a significant group x time interaction (knowledge and state anxiety). The knowledge subscale was derived from the curriculum and so those who received the curriculum should have increased in knowledge. This finding also lends more support to the argument above that the students who received peace education learned their sense of personal control to prevent nuclear war from the curriculum. State anxiety did not go in the direction hypothesized. It was found that state anxiety was higher for the treatment group at the time of the posttest than it was at pretest. Also, the control group decreased in state anxiety. There could be any number of classroom factors that influenced these findings. It could be that the treatment group found answering questions about nuclear war to be anxiety provoking when they had learned more about nuclear issues.

The trait anxiety did not decrease. It had been hypothesized that there would be some spreading effect from the reduction of nuclear anxiety to the trait anxiety. Nuclear anxiety was not reduced nor were any skills to reduce anxiety taught in this curriculum that students could use to reduce general anxiety. It appears from the evidence that the curriculm did indeed have an impact on the students.

Correlations. As for the university sample, it makes sense that those who are most anxious in general are those who are most anxious about nuclear war. The finding of a positive correlation between reported fear and survivability is difficult to explain. Anxiety is not a pleasant emotion and when it is experienced the organism does what it can to reduce the unpleasant situation. Perhaps it is necessary for those students who are afraid of the possibility of a nuclear war to believe that if it happened they would survive. This belief reduces their anxiety. The positive correlation between reported fear and personal control is counterintuitive at first but it is possible that a belief in personal control also reduces their anxiety levels.

The knowledge scale was not correlated to reported fear and that is due to the fact that the

knowledge scale that was used did not ask specific technical questions about nuclear weaponry or other nuclear issues. This subscale was derived from the curriculum and asks questions such as "What was Martin Luther King famous for?". A correlation between these two variables might have been found had the knowledge scale focused on subjects' knowledge about nuclear issues.

Descriptive analysis. It was expected that giving students an opportunity to air their fears and concerns about nuclear war would help to reduce their anxiety. The students did indeed discuss nuclear issues more during the course of the curriculum but they also became marginally more anxious about the possibility of nuclear war. This finding can be attributed to the fact that there is a positive correlation between frequency of discussion of nuclear issues and anxiety about nuclear war. The more they talk the more they worry, the more they worry the more they talk. One cannot say which causes the other, only that they are correlated.

Limitations of this study

University Sample

There are a number of limitations to this study. The major problem is the small number of students that answered both the pretest and posttest questionnaires. This affects the results of the analysis and the generalizability of any findings. Another limitation is that there was only one question on the questionnaire that related to fear and anxiety. Further, the knowledge subscale was not geared to the actual class content so it was not possible to see what effect increasing specific technical knowledge about nuclear issues has on attitudes. Finally, when looking at the correlations, it is important to remember that correlation is not causation. The findings in this study should be viewed as preliminary only.

Elementary Sample

The major limitation in this part of the study is the length of the curriculum. There were only 10, 40 minute lessons and this does not seem like a long enough time to effect any long term changes. There did not seem to be any way to avoid this problem.

There are a couple of problems with sampling and treatment delivery. The decrease in numbers could present a problem for the results in this sample. There might have been greater changes with a larger sample size. The small sample size can affect the generalizability of the findings. Also, the fact that the students in this sample are all from an urban area may have had some effect on the results. Another potential limitation is that the control and treatment groups were not exactly matched in terms of grade. Some of the treatment classes contained grade 6 students and the control group was made up of only grade 7 students. This may have had an effect on the results. The impact of the curriculum may have been affected by the different teaching styles. These factors should all be considered when examining the findings of this

study.

The other limitations stem from the scales used to measure the attitudes and anxiety levels of students and from the data analysis. The knowledge scale did not measure the knowledge about nuclear issues. It cannot be said that increasing knowledge about nuclear issues affects anxiety or other attitudes because we did not measure an increase in knowledge. The dropping of the preoccupation scale from the MANOVA is a problem. One cannot tell if changes in anxiety level were significant. The reliance on descriptive analysis subjects this study to the same complaints that have plagued the previous research in this area, that the resutls are descriptive only.

Implications of this study

Peace Education

How do the results of this study affect the continued use of the curricula? Will the fact that student anxiety did not decrease cause teachers and parents to reject peace education? The anxiety expressed by the young people involved in this study is anxiety about something that really exists. There is no way to get around that fact. Nuclear weapons exist and they are a threat to our survival. To deny the reality of the possibility of nuclear holocaust is unhealthy. It is also important to see the increase in student anxiety in the light of their increased sense of personal control. Anxiety may be a motivating factor in this case. It would appear, for the elementary students at least, that anxiety stirs them to believe in themselves and their ability to influence the environment around them. In light of these findings it would seem adviseable to continue with peace education, providing that there was not only information given. There needs to be some emphasis on hope, on a sense of personal control.

Future Research

This study was a preliminary one and as such it raised a lot more questions than it answered. There is a great deal of research that could be done relating to peace education curricula. One possible avenue of research is to describe the ways peace education is approached (different conceptions and content) and assess the impact of these different approaches (Tizard, 1984). This would give educators a clearer idea as to which approach would yield the results they desire. A second avenue of research is to implement peace education at different grade levels. The results of this type of research could help to allay the concerns of parents about the age at which to introduce peace education. Finally, what is the impact of increasing nuclear knowledge on anxiety levels and attitudes? An understanding of these interrealtionships could help mental health professionals and educators to help children cope with the problems associated with living in the nuclear shadow.

A related issue pertains to the need to distinguish between anxiety and concern in

research of this type. It is possible for people to be concerned about issues like nuclear war or peace education and for that concern to have a motivating effect on peoples' behaviour. However, this concern is likely qualitatively different from the fear-like responses that are an integral part of anxiety. Moreover, many people would argue that since the proliferation of nuclear weapons today represents a real (and not imagined threat) source of threat; peoples' reactions probably are most accurately labeled as fear and not anxiety. These types of distinction remain virtually unaddressed in the literature pertaining to this area and attempts should be made to assess the differential effects that anxiety and concern might have on peoples' behaviour.

Research also could be conducted to determine the long-term effects of the peace education curricula. Is peace education preventative? Does it keep fearful grade 7 students from becoming despairing grade 12 students? Does it keep undergraduates from becoming apathetic adults? Just how does peace education impact the lives of the students? Finding the answers to these questions and others like them would demonstrate the worth of these curricula to school boards and universities.

It would be interesting to conduct research on the interaction between parental child anxiety. Research has shown that the attitudes of parents and children are likely to be similar (Wrightsman, 1964) but not "whether better-informed parents have better-informed children" (Tizard, 1984, p. 281). The results of this research could be used to teach parents better ways to help their children deal with fears about nuclear issues. (The same could be applied to teacher and child anxiety). It could also help in setting up a program that encouraged better communication about these issues between the generations. Further, such public education endeavours may well have the effect of promoting more wide spread acceptance of peace education curricular pursuits.

One last question remains. This questions stems out of the previous research findings. In comparison with American children, Canadian children are much more pessimistic about nuclear war. It would be interesting to explore the reasons why the children from these two countries feel so differently about such an important issue.

Conclusions

The message that arises from this study is that it is important to do peace education because the nuclear threat is real and our young people are expressing concern about nuclear issues and a sense of powerlessness in the face of the nuclear threat. Any peace education curriculum that is implemented should include more than just information about nuclear issues, it should contain some affective component, some time for students to voice their fears and their hopes. To be effective in doing more than just raising anxiety peace education should

instill a sense of hope, a feeling that nuclear war is inevitable only if we do not make it impossible.

Appendix A
Course Outlines

"Conflict and Change" - Curriculum Outline

Lesson 1 - Conflict
- Definitions of conflict
- Examples of personal conflict situations
- Analysis of personal conflict: causes

Lesson 2 - Conflict Resolution
- Analysis of personal conflict: point of view
- Alternative resolutions to personal conflict situations
- "Win-win" resolutions

Lesson 3 - Handling Anger
- Definitions of anger
- Examples of anger-producing situations
- Usual angry responses
- Hurtful and non-hurtful responses

Lesson 4 - "What is Hate? Images of the Enemy"
- Analysis of hate: How it affects behaviour
- Video: "Neighbours"
- Transition from conflict on the personal level to conflict on the international level
- Analysis of international conflict: causes

Lesson 5 - The USSR
- Articulation and comparison of opinions on the USSR
- Articulation of opinions on the likelihood, survivability and preventability of nuclear war (using questions from video in Lesson 6)

Lesson 6 - Soviet Children and Nuclear War
- Video: "What Soviet Children are Saying About Nuclear War"
- Comparison of Soviet children's opinions with those of students
- Similarities and differences between Soviet and Canadian youth

Lesson 7 - Nuclear War, Part I
- Video: "Notes on Nuclear War" - Part I
- Opportunity for students to voice feelings about nuclear issues

Lesson 8 - Nuclear War, Part II
- Video: "Notes on Nuclear War" - Part II
- Further opportunity for students to voice feelings about nuclear issues
- Factual information on nuclear war and weapons

Lesson 9 - "I Have a Dream"
- Martin Luther King as a non-violent peacemaker
- Social justice as peace
- Articulation of students' personal dreams for peace

Lesson 10 - "I Can Do ..."
- Identification of concrete actions for peace
- Prioritizing actions
- Co-operative planning of steps towards realization of chosen action

Psychology 106 Social Issues

Psychological Perspectives on Nuclear War

Course Description: A discussion of psychological theory and research applicable to the understanding of international relations, specifically focussing upon the effects of the current potential for nuclear war.

Course Outline:

Weeks 1 - 6: Psychological Fallout before and After a Nuclear War.

Week 1: Introduction. Basic Knowledge: Armaments Levels. Medical-environmental effects of nuclear--blast, thermal, radiation, physical disorders, medical services available, nuclear winter.
Week 2: The psychology of deterrence theory. Psychological effects of nuclear war: disaster studies, psychic numbing, Hiroshima survivors.
Week 3: The effects of nuclear fear on children: research on nuclear fears -- the results from studies done in Burnaby, Toronto, the USA, Europe, and, the USSR.
Week 4: Adult reactions: psychological defenses; apathy; thinking the unthinkable - habituation; survivalist or peace activist?
Week 5: Attitude change: Talking peace "workshop". Skills for effective communication and attitude change.
Week 6: EXAM

Weeks 7 - 12: Psychological Approaches to Peace.

Week 7: The central role of trust: Can we trust the Russians? Arms verification. the mirror image concept.
Week 8: International decision-making. Crisis management. Group-think.
Week 9: Co-operative ventures: Cross-cultural exchanges -- scientific, educational, tourist. Super-ordinate goals -- the Robbers Cave experiment.
Week 10: Applying therapeutic approaches and group processes to international conflict. The Irish experience. Sadat and Begin at Camp David.
Week 11: Conflict resolution: Beyond deterrence -- conflict denial, non-violent approaches, international bargaining and negotiations, creative alternatives.
Week 12: Star wars or mutually assured protection? Tension reduction: GRIT -- the Kennedy experiment in international relations.

COURSE SYLLABUS

Education 240: Social Issues in Education

Objective:

The objective of this course is to provide students with an understanding of the role and functions of the school as a social institution and of the issues that impinge on (and often swirl turbulently about) the school. In particular the course will examine the social forces impacting on the school; issues of injustice, e.g., sex-role stereotyping, institutional racism, the effect of social class on school learning, and school based processes; education as liberation and Paulo Friere's ideas of developing critical consciousness. The method of the course is to integrate audio-visual presentations with formal lectures and guest speakers.

Course Contents:

First Class: Course Orientation and Expectations
Social Issues: Analytic Perspectives
Convergence -- School: Role, Functions & Images
"High School" - Part I
"High School" - Part II
Divergence - Alternative Education
"Summerhill"
On Assembling and Writing the Cumulative Project
Schooling, Equal Opportunity and Justice
Dimensions of Structural Injustice
Sexism in School & Society
"Mens Lives"
Racism
Racism Presentation
Social Class
"Ridley: A Secret garden"
School Based Processes
Socialization & Cultural Reproduction
Education as Liberation
"Peru: Literacy for Social Change"
Paulo Friere on Literacy
"Starting from Nina"

Appendix B
University Questionnaires (Blanks)

NUCLEAR ISSUES SURVEY PROJECT

Research Participation Consent Form for a Follow-Up Period

Investigators Neil Kyle, Ph.D., Department of Psychology
Susan Hargraves, M.A., Faculty of Education
Bryan Hiebert, Ph.D., Faculty of Education
Michael Manley-Casimir, Ph.D., Faculty of Education
Dawn Schell, Faculty of Education
Susan Morris, Faculty of Education

We have appreciated your involvement in the Nuclear Issues Survey Project during this fall semester. It is hoped that with additional funding we will be able to continue the research over a longer follow-up period. In research such as this it is possible to gain extremely valuable information by being able to follow changes or lack of changes in people over extended periods of time. We would greatly appreciate the opportunity to be able to contact you again in about six months. Your involvement would include the completion of a questionnaire similar to the present one. As before, your responses to the questionnaire will be kept strictly confidential. Your participation or your decision not to participate in the future in entirely voluntary and will not be part of your course grade assessment.

If you would be willing to continue your participation in this research beyond the fall semester please complete the following information.

NAME: (Please Print) _____
First Name Last Name

Student Number: _____

Signature: _____

Address: _____

_____

Phone: _____

Person & Phone number that you could be contacted through if necessary:

Name: _____

Phone: _____

SURVEY QUESTIONNAIRE

— — —1
c. 1-4

Note: If you are participating in this study please read and sign the attached consent form.

Name: (please print) _____
First Name Last Name

Student Number: _____

Class: _____ —

Demographic Information: —

Sex: M F (circle one) — — —
c. 12

Birthdate: _____ Day _____ Month _____ Year Age: _____ — —

Marital Status: Married/Commonlaw _____ Single _____ —

Other (specify) _____ —

Do you have children? Yes No If yes, ages: ___ ___ ___ ___ — —

Occupation of principal earner in family: — —
(Please be specific in name of job) _____ — —
c. 24

Description of work: _____ — —

Do you have a major (i.e., biology, psychology) Yes No —

If yes, please indicate what it is: _____ — —

Are you currently a full time student? Yes No —

If no, please indicate your situation: Employed _____ Unemployed _____ —
c. 31

Homemaker _____ Other (please specify) _____

If employed, please give occupation: _____ — —

Level of education completed: 0-1 yrs. Univ. _____ 1-2 yrs Univ. _____ —

3-4 yrs. Univ. _____ Bachelor Degree _____ Other (specify) _____

Current degree of religious activity·

None at all _____ —
c. 35

On some or all religious occasions only, i.e., Christmas, Easter, Ramadan _____

Somewhat less than regular attendance _____ Regular attendance _____

Regular attendance plus committees, meetings, etc. _____

In questions 1 - 20, please circle the number in the column whose heading best reflects your opinion. (There are no right or wrong answers to these questions).

For questions 1-4, in the next fifty years, how likely do you think it is that:	very unlikely	unlikely	un-decided	likely	very likely	
(1) a nuclear blast will occur somewhere on earth killing a great number of people (thousands or millions)?	1	2	3	4	5	c. 36
(2) a nuclear war will occur between two or more nations?	1	2	3	4	5	
(3) the United States will be involved in a nuclear war with Russia?	1	2	3	4	5	
(4) terrorists will plant a nuclear device in a populated area for purposes of extortion or political belief?	1	2	3	4	5	
(5) How likely do you think it is that you, personally, will die from a nuclear blast or its fallout?	1	2	3	4	5	
(6) How likely is it that Vancouver could survive a major nuclear war?	1	2	3	4	5	c. 41
(7) How likely is it that you could survive a major nuclear war?	1	2	3	4	5	

	strongly agree	agree	undecided	disagree	strongly disagree	
(8) The United States could engage in a nuclear war with Russia and limit it to whatever size it chose.	1	2	3	4	5	
(9) If arms control efforts involving the Soviet Union and the United States had been more successful at earlier times, the security of both nations would now be greater.	1	2	3	4	5	

4.

	strongly agree	agree	undecided	disagree	strongly disagree	
(10) There are causes worth fighting a nuclear war for.	1	2	3	4	5	__ c. 45
(11) Nuclear war can be prevented.	1	2	3	4	5	__
(12) You, yourself, could do something that might aid in the prevention of nuclear war.	1	2	3	4	5	__
(13) If necessary, you would be willing to join the armed forces and help fight a nuclear war to defend your beliefs or those of your country.	1	2	3	4	5	__
(14) The average citizen can have an influence over government decisions about nuclear issues.	1	2	3	4	5	__

For questions 15 19, indicate the extent to which your engagement in the following activities would be effective in preventing nuclear war.

	not at all	very little	some	a lot	
(15) Thinking about actions that might be taken to prevent nuclear war?	1	2	3	4	__
(16) Speaking to a friend or family member about your concerns about nuclear war?	1	2	3	4	__ c. 51
(17) Writing or speaking to a politician or government official about your concerns about nuclear war?	1	2	3	4	__
(18) Participating in public demonstrations or peace marches against nuclear war?	1	2	3	4	__
(19) Attending meetings of a peace or disarmament group?	1	2	3	4	__

For questions 20-24, indicate the extent to which your engagement in the following activities would be effective in dealing with the possibility of nuclear war.

	not at all	very little	some	a lot	
(20) Making plans for self or family protection in the event of nuclear war?	1	2	3	4	__
(21) Making plans for leaving Vancouver in the event of nuclear war?	1	2	3	4	__ c. 56
(22) Stockpiling food or medicines for use after a nuclear war?	1	2	3	4	__
(23) Reading materials or books on how to survive a nuclear war?	1	2	3	4	__
(24) Attending meetings advocating survivalist activities?	1	2	3	4	__

	not at all	a few times	once or twice per week	almost every day	
(25) In the last month how often have thoughts about the threat of nuclear war given you feelings of fear or anxiety?	1	2	3	4	__

	not at all	very little	some	a lot	
(26) To what extent has thinking about threat of nuclear war affected your plans for the future.	1	2	3	4	__ c. 61

6.

To what extent have you done any of the following:

	not at all	very little	some	a lot	
(27) Thought about actions that might be taken to prevent nuclear war?	1	2	3	4	___
(28) Spoken to a friend or family member about your concerns about nuclear war?	1	2	3	4	___
(29) Written or spoken to a politician or government official about your concerns about nuclear war?	1	2	3	4	___
(30) Participated in public demonstrations or peace marches against nuclear war?	1	2	3	4	___
(31) Attended meetings of a peace or disarmament group?	1	2	3	4	___ c. 66
(32) Made plans for self or family protection in the event of nuclear war?	1	2	3	4	___
(33) Made plans for leaving Vancouver in the event of war?	1	2	3	4	___
(34) Stockpiled food or medicines for use after a nuclear war?	1	2	3	4	___
(35) Read materials or books on how to survive a nuclear war?	1	2	3	4	___
(36) Attended meetings advocating survivalist activities?	1	2	3	4	___ c. 71

To what extent is it the responsibility of the following groups or people to act to prevent nuclear war?

	very high responsi-bility	high responsi-bility	moderate responsi-bility	low responsi-bility	very little responsi-bility	
(37) Citizens (like yourself)	1	2	3	4	5	___
(38) Elected representatives	1	2	3	4	5	___
(39) The Prime Minister	1	2	3	4	5	___
(40) Canadian military leaders	1	2	3	4	5	___ c. 75

In questions 41 - 49, please circle the answer you believe to be correct. If you have no idea which answer is correct, please make a guess. It doesn't matter if you don't know some or any of the answers. We are simply interested in finding out how much information people have about these issues.

(41) The biggest modern nuclear bombs (approx. 25 megatons) are how much more powerful than the one that destroyed the city of Hiroshima?	160x	560x	1800x	5800x
(42) How many nuclear warheads are stockpiled worldwide	50	600	5000	50,000
(43) Do peaceful nuclear power plants use technology and material from which nuclear weapons can be made?		yes	no	
(44) How much of the world's stockpile of nuclear weapons do the United States and the Soviet Union own between them?	50%	80%	95%	99%
(45) ccording to former President Carter, what percentage of the United States' nuclear forces would it take to effectively destroy most of Russia's major cities? (1979 figures)	2%	32%	70%	90%
(46) Would bomb shelters offer significant protection in a populated area targeted by a nuclear bomb?		yes	no	
(47) Two large (20 megaton) nuclear bombs detonated over San Francisco would immediately kill what percentage of the city's population?	25%	50%	75%	100%
(48) How many hospital beds are there in Canada and in the United States capable of providing the burn care required by the surviving victims of a nuclear blast?	1,000	10,000	100,000	500,000
(49) How many Federally funded Canadian agencies are devoted to increasing our understanding of arms control and disarmament?	0	2	4	12

THANK YOU FOR YOUR HELP

ROTTER I-E SCALE

PLEASE PRINT CLEARLY--

Name: Last:_____ First: _____ c.1-4 ___ ___ ___ 6

Date: _____ Age: _____ Sex: M/F

This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you most strongly believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief: obviously there are no right or wrong answers.

Please answer these items carefully but do not spend too much time on any one item. Be sure to find an answer for every choice. Black-in the space provided beside a or b -- the one you choose as the statement more true.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also try to respond to each item independently when making your choice; do not be influenced by our previous choices.

1. ( ) a. Children get into trouble because their parents punish them too much. ___ 8
   ( ) b. The trouble with most children nowadays is that their parents are too easy with them.

2. ( ) a. Many of the unhappy things in people's lives are partly due to bad luck. ___
   ( ) b. People's misfortunes result from the mistakes they make.

3. ( ) a. One of the major reasons why we have wars is because people don't take enough interest in politics. ___
   ( ) b. There will always be wars, no matter how hard people try to prevent them.

4. ( ) a. In the long run people get the respect they deserve in this world. ___
   ( ) b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5. ( ) a. The idea that teachers are unfair to students is nonsense. ___
   ( ) b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. ( ) a. Without the right breaks one cannot be an effective leader. ___
   ( ) b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. ( ) a. No matter how hard you try some people just don't like you. ___ 14
   ( ) b. People who can't get others to like them don't understand how to get along with others.

8. ( ) a. Heredity plays the major role in determining one's personality.
( ) b. It is one's experiences in life which determine what they're like. 15

9. ( ) a. I have often found that what is going to happen will happen.
( ) b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action. ___

10. ( ) a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
( ) b. Many times exam questions tend to be so unrelated to course work that studying is really useless. ___

11. ( ) a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
( ) b. Getting a good job depends mainly on being in the right place at the right time. ___

12. ( ) a. The average citizen can have an influence in government decisions.
( ) b. This world is run by the few people in power, and there is not much the little guy can do about it. ___

13. ( ) a. When I make plans, I am almost certain that I can make them work.
( ) b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow. 23

14. ( ) a. There are certain people who are just no good.
( ) b. There is some good in everybody. ___

15. ( ) a. In my case getting what I want has little or nothing to do with luck.
( ) b. Many times we might just as well decide what to do by flipping a coin. ___

16. ( ) a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
( ) b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it. ___

17. ( ) a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
( ) b. By taking an active part in political and social affairs the people can control world events. ___

18. ( ) a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
( ) b. There really is no such thing as "luck." ___

19. ( ) a. One should always be willing to admit mistakes.
( ) b. It is usually best to cover up one's mistakes. ___
26

20. ( ) a. It is hard to know whether or not a person really likes you.
( ) b. How many friends you have depends upon how nice a person you are. 27

21. ( ) a. In the long run the bad things that happen to us are balanced by the good ones.
( ) b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three. ___

22. ( ) a. With enough effort we can wipe out political corruption.
( ) b. It is difficult for people to have much control over the things politicians do in office. ___

23. ( ) a. Sometimes I can't understand how teachers arrive at the grades they give.
( ) b. There is a direct connection between how hard I study and the grades I get. 30

24. ( ) a. A good leader expects people to decide for themselves what they should do.
( ) b. A good leader makes it clear to everybody what their jobs are. ___

25. ( ) a. Many times I feel that I have little influence over the things that happen to me.
( ) b. It is impossible for me to believe that chance or luck plays an important role in my life. ___

26. ( ) a. People are lonely because they don't try to be friendly.
( ) b. There's not much use in trying too hard to please people, if they like you, they like you. 33

27. ( ) a. There is too much emphasis on athletics in high school.
( ) b. Team sports are an excellent way to build character. ___

28. ( ) a. What happens to me is my own doing.
( ) b. Sometimes I feel that I don't have enough control over the direction my life is taking. ___

29. ( ) a. Most of the time I can't understand why politicians behave the way they do.
( ) b. In the long run the people are responsible for bad government on a national as well as on a local level. 36

c.40 ___

___ c.43

Appendix C

Elementary Questionnaires (Blanks)

I. When you think of your life and future what three things do you hope for most?

_____

_____

_____

II. And what three things do you worry about the most?

_____

_____

_____

III. Here are some things others list as hopes. Circle the number that best describes how important each one is to you.

	Not important at all	Somewhat important	Important	Very Important	
1. Good grades	1	2	3	4	7
2. A good marriage	1	2	3	4	8
3. Good friends	1	2	3	4	9
4. Good health	1	2	3	4	10
5. A good job	1	2	3	4	11
6. An unpolluted environment	1	2	3	4	12
7. World peace	1	2	3	4	13
8. Children	1	2	3	4	14
9. Happiness	1	2	3	4	15

IV. Here are some things others list as worries. Circle the number that best describes how important each one is to you.

1. Violent crime	1	2	3	4	16
2. My own death	1	2	3	4	17
3. Bad grades	1	2	3	4	18
4. Lack of jobs	1	2	3	4	19
5. My parents' death	1	2	3	4	20
6. Nuclear war	1	2	3	4	21
7. Parents' divorce	1	2	3	4	22
8. Poverty	1	2	3	4	23
9. Nuclear power plant leaks	1	2	3	4	24

In the next section we ask what you are doing about some worries. There are no right or wrong answers. We are interested in your experiences and thoughts

V. Concerns about high unemployment rates
Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day	
1. In the past month how often have you thought about high unemployment?	1	2	3	4	25 (37)
2. In the last month how often have you talked about high unemployment					
a. at home	1	2	3	4	26 (38)
b. at school	1	2	3	4	27 (39)
c. with your friends	1	2	3	4	28 (40)
3. In the last month how often have thoughts about high unemployment given you feelings of fear and worry?	1	2	3	4	29 (41)
4. In the last month have had any bad dreams about high unemployment?	1	2	3	4	30 (42)
5. How much have you learned about unemployment conditions from the following:					

	Nothing	A bit	A fair amount	A lot	
a. Teachers or school	1	2	3	4	31 (43)
b. Newspapers and magazines	1	2	3	4	32 (44)
c. Books	1	2	3	4	33 (45)
d. Television	1	2	3	4	34 (46)
e. Family	1	2	3	4	35 (47)
f. Friends	1	2	3	4	36 (48)

	None	A little	A lot	Total control	
6. How much influence do you feel that you personally can have in changing employment conditions	1	2	3	4	37 (49)

	None	A little	A lot	Total control	
7. How much influence do you think your parents can have in changing employment conditions?	1	2	3	4	38 (50)
8. How much influence do you feel the Canadian government can have in changing employment conditions?	1	2	3	4	39 (51)

VI. Concerns about job and career plans

Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day	
1. In the last month, how often have you thought about job and career plans?	1	2	3	4	40 (52)
2. In the last month, how often have you talked about job and career plans?					
a. at home	1	2	3	4	41 (53)
b. at school	1	2	3	4	42 (54)
c. with friends	1	2	3	4	43 (55)
3. In the last month how often have job and career plans given you feelings of fear or worry?	1	2	3	4	44 (56)
4. In the last month have you had any dreams related to job and career plans?	1	2	3	4	45 (57)

5. How much have you learned about job and career possibilities from each of the following?

	Nothing	A bit	A fair amount	A lot	
a. teachers or school	1	2	3	4	46 (58)
b. Newspapers and magazines	1	2	3	4	47 (59)
c. Books	1	2	3	4	48 (60)
d. Television	1	2	3	4	49 (61)
e. Family	1	2	3	4	50 (62)
f. Friends	1	2	3	4	51 (63)

	None	A little	A lot	Total control	
6. How much influence do you feel you personally have in making your job or career plans work out?	1	2	3	4	☐ 64 S
7. How much influence do you think your parents can have in making your job and career plans work out?	1	2	3	4	☐ 65 S
8. How much influence do teachers and schools have in making your career plans work out?	1	2	3	4	☐ 66 S

VII. Concerns about the threat of nuclear war

Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day	
1. In the last month how often have you thought about the threat of nuclear war?	1	2	3	4	☐ 67 S
2. In the last month how often have you talked about the threat of nuclear war					
a. at home	1	2	3	4	☐ 68 S
b. at school	1	2	3	4	☐ 69 S
c. with friends	1	2	3	4	☐ 70 S
3. In the last month how often have thoughts about the threat of nuclear war given you feelings of fear or worry?	1	2	3	4	☐ 71 S
4. In the last month have you had any had dreams about nuclear war?	1	2	3	4	☐ 72 6

	Not at all	Very little	Some	A lot	
5. Thinking about the threat of nuclear war has affected my plans for the future ____	1	2	3	4	☐ 73 6
6. Thinking about the threat of nuclear war makes me wonder if I really want to get married and have children some day	1	2	3	4	☐ 74 6
7. Thinking about the threat of nuclear war makes me want to live only for today and forget about the future ___	1	2	3	4	☐ 75 6

(End of Card 1)

	Nothing	A bit	A fair amount	A lot	
8. How much have you learned about the threat of nuclear war from each of the following:					1 SEQ # 2 6
a. teachers	1	2	3	4	7 64
b. newspapers and magazines	1	2	3	4	8 65
c. books	1	2	3	4	9 66
d. television	1	2	3	4	10 67
e. family	1	2	3	4	11 68
f. friends	1	2	3	4	12 69

	None	A little	A lot	Total control	
9. How much influence do you feel that you personally can have in preventing nuclear war?	1	2	3	4	13 70
10. How much influence do you feel your parents can have in preventing nuclear war?	1	2	3	4	14 71
11. How much influence do you feel Canada as a nation can have in preventing nuclear war?	1	2	3	4	15 72

	Yes	No	
12. Have you taken any actions to prevent nuclear war?	1	2	16 73
13. Have your parents taken any actions to prevent nuclear war?	1	2	17 74

14. Below are some of the suggestions that have been made about what Canada can do to prevent nuclear war. Do you think the following will help prevent nuclear war?

	Yes	No	Undecided	
a. supporting a nuclear freeze	1	2	9	18 75
b. the West having more nuclear weapons than the Soviets	1	2	9	19 76
c. testing the cruise missile	1	2	9	20 77
d. refusing to test the cruise missile	1	2	9	21 78
e. refusing to manufacture nuclear weapons	1	2	9	22 79
f. do our share of manufacturing nuclear weapons	1	2	9	23 80
g make Canada a nuclear weapon free zone	1	2	9	24 81
h. withdraw from NATO	1	2	9	25 82
i. support NATO	1	2	9	26 83

j. other suggestions you have _____

_____

VIII. General

1. Are you aware of what the Government is doing to prevent war of any kind?

Yes	No	Undecided
1	2	3

27

In your view, what else should the Government be doing in this regard?

_____

2. Are you aware that Canada is at the disarmament negotiating table in Stockholm, Vienna, Geneva and New York?

Yes	No
1	2

28

3. In your view, what is the most important reason why Canada has been at peace for forty years? (circle one)

29

(a) Geography

(b) Membership in NATO

(c) Peaceful Nature of Canadians

(d) No External Threat

(e) Other (please specify) _____

4. What do you think is the most important way we can reduce the threat of nuclear war? (circle one)

30

(a) Arms Control Negotiations

(b) Unilateral Disarmament

(c) People-to-People Exchanges

(d) Bilateral Disarmament

(e) Other

8.

5. Are you concerned about other forms of warfare?

Yes	No
1	2

31

If so, which? (circle one only)

(a) Conventional Warfare

32

(b) Chemical Warfare

(c) Other (please specify) _____

6. What do you feel is the likelihood of nuclear war occurring in your lifetime?

Very Low	Low	Moderate	High	Very High
1	2	3	4	5

33

7. Who do you think is responsible for whatever risk of nuclear war exists today?

USA	USSR	Both USA & USSR	Canada	Other (specify)
1	2	3	4	5

34

8. Would you expect children in the United States to hold the same views of these issues as you do?

Yes	No
1	2

35

9. Would you expect children in the Soviet Union to hold the same views on these issues as you do?

Yes	No
1	2

36

10. Do you think you would survive a nuclear war?

Yes	No
1	2

37

11. Would you want to survive a nuclear war?

Yes	No
1	2

38

12. In your view, is there a greater risk of you being affected by a nuclear war or a non-nuclear war?

Nuclear	Non-Nuclear	
1	2	39

IX. General

1. In the last year have you seen anyone at school for advice or counselling about any of the following:

	Yes	No	
a. choosing courses	1	2	40
b. problems with a class	1	2	41
c. problems with a teacher	1	2	42
d. problems at home	1	2	43
e. personal problems	1	2	44
f. job or career plans	1	2	45
g. worries about unemployment	1	2	46
h. worries about nuclear war	1	2	47

2. In the past year have you seen a counsellor or therapist outside of school about any of the following:

a. choosing courses	1	2	48
b. problems with a class	1	2	49
c. problems with a teacher	1	2	50
d. problems at home	1	2	51
e. personal problems	1	2	52
f. job or career plans	1	2	53
g. worries about unemployment	1	2	54
h. worries about nuclear war	1	2	55

3. Is there anything you'd like to add? Please use the space below to tell us about your thoughts and feelings.

PLEASE READ EACH QUESTION AND CIRCLE ONE ANSWER.

4. How much difference would your involvement in the following activities make in preventing nuclear war?

	not at all	very little	some	a lot	
a) Thinking about actions that might be taken to prevent nuclear war?	1	2	3	4	56
b) Speaking to a friend or family member about your concerns about nuclear war?	1	2	3	4	57
c) Writing or speaking to a politician or government official about your concerns about nuclear war?	1	2	3	4	58
d) Attending meetings of a peace group?	1	2	3	4	59

5. How much difference would your involvement in the following activities make in dealing with the possibility of nuclear war?

	not at all	very little	some	a lot	
e) Making plans for self or family protection in the event of nuclear war?	1	2	3	4	60
f) Making plans for leaving Vancouver in the event of nuclear war?	1	2	3	4	61
g) Storing food or medicines for use after a nuclear war?	1	2	3	4	62
h) Reading materials or books on how to survive a nuclear war?	1	2	3	4	63
i) Attending meetings/activities about survival?	1	2	3	4	64

X. BACKGROUND INFORMATION

These questions are asked so that we describe the group of students who answered the questionnaire.

A. Your age: _____ years 11 12

B. Grade _____ 13

Circle the number that best describes you and fill in the blanks that apply:

C. Sex: 1 male 2 female 14

Circle the best answer. Choose one.

1. When two children are fighting over the same toy it is a fight over 15

   (a) needs
   (b) resources
   (c) values
   (d) other
   (e) don't know

2. In a fight between two people there can be 16

   (a) a winner and a loser
   (b) two winners
   (c) all of these
   (d) don't know

3. Things we do when we're mad 17

   (a) are always hurtful
   (b) always make other people mad
   (c) are sometimes helpful
   (d) don't know

4. The difference between two countries fighting with each other and two people fighting with each other is 18

   (a) the kind of things they fight about
   (b) the number of people
   (c) there is no difference
   (d) don't know

5. If a nuclear war were to start, how likely is it that it would stay small and not affect the whole world? 19

   (a) impossible
   (b) very unlikely
   (c) possible
   (d) very likely
   (e) absolutely certain

6. If a country believes that it is possible to fight and win a Limited Nuclear war it would

(a) be less willing to start a nuclear attack
(b) be more willing to start a nuclear attack
(c) be less concerned about its people
(d) make no difference
(e) don't know

20

7. A country that believes it could fight and win a nuclear war would probably

(a) develop weapons of attack instead of defence
(b) make a strong army of soldiers
(c) develop weapons of defence instead of attack
(d) none of these
(e) don't know

21

8. Cars run on gas. Capitalism runs on

(a) shared ownership
(b) unions
(c) money
(d) Marxism
(e) revolution

22

9. Communism runs on

(a) supply and demand
(b) free trade
(c) competition
(d) private ownership
(e) workers

23

10. Soviet youth my age

(a) want peace as much as we do
(b) never talk or think about nuclear war
(c) want Russia to destroy the rest of the world
(d) don't care about nuclear war
(e) believe they could win a nuclear war

24

11. Two countries in conflict are

(a) Canada and Holland
(b) Germany and England
(c) U.S. and U.S.S.R.
(d) New Zealand and Australia
(e) Rumania and Yugoslavia

25

12. Martin Luther King Jr. was famous for

(a) creating a nuclear bomb
(b) ending the Second World War
(c) the bus boycott
(d) his jazz music

☐ 26

Read each question. If you believe that the statement is true, circle T; if you believe that the statement is false, circle F.

1. I usually get blamed for things even when it's not my fault.

T F ☐ 27

2. When people are good to me, it is usually because of something I did.

T F ☐ 28

3. Even when I work hard for something, I usually don't get it.

T F ☐ 29

4. To matter how hard I try, no one seems to notice the good things I do.

T F ☐ 30

5. When I get a good mark, it's because I worked hard.

T F ☐ 31

6. People have no control over what happens to them.

T F ☐ 32

7. When someone is nice to me, it's because I did the right thing.

T F ☐ 33

8. I believe I can be whatever I want to be when I grow up.

T F ☐ 34

9. No matter how hard I try, some people just don't like me.

T F ☐ 35

10. When I make plans, I can count on them working out.

T F ☐ 36

4

11. When something bad is about to happen, there's usually no way to stop it.

T F ☐ 37

12. Many of the unhappy things in my life are just due to bad luck.

T F ☐ 38

13. What happens to me is my own doing.

T F ☐ 39

14. When I work hard for something, I usually get it.

T F ☐ 40

15. I can usually find a way to make someone a friend.

T F ☐ 41

16. When I fail a test, it's because the teacher asks the wrong questions.

T F ☐ 42

Background Information

These questions are asked so that we can describe the group of students who answered the questionnaires.

A. Was your child born in Canada? __ yes __no, what country? _____

B. Before your child started school what language was spoken at home? (Circle more than one if necessary.)
1. English
2. French
3. Another language _____
Please tell which language

C. People sometimes identify themselves by race and colour. Which category below do you use to describe your immediate family?
1. Black
2. White
3. Native Canadian Indian, Inuit or Metis
4. Asian descent _____
Specify, e.g. Chinese, Japanese, etc.

5. South Asian descent _____
Specify, e.g. East Indian, Pakistan

6. Other _____
Specify, if not included above

D. Does your child live with (choose one):

1. Both parents
2. mother
3. father
4. guardian
5. group home
6. alone

E. What is the child's father's job? _____

Description of work: _____
Is he working now? 1 yes ___ 2 no ___

F. What is the child's mother's job? _____

Description of work: _____
Is she working now? 1 yes ___ 2 no _____

G. If the child lives with a guardian, what is the guardian's job?
_____

Description of work: _____
Is he or she working now? 1 yes _____ 2 no _____

H. Are you and your child are affiliated with a particular religious group?
2 no _____

1 yes _____ name of group _____

Feel free to make any comments about your reactions to our study or your child's participation in our study. Please use reverse side.

Appendix D

Letters to Parents

SIMON FRASER UNIVERSITY

FACULTY OF EDUCATION

BURNABY, BRITISH COLUMBIA V5A 1S6
Telephone: (604) 291-3395

October 1985.

Dear Parent:

The Burnaby School Board and Simon Fraser University are collaborating in a curriculum project on "Conflict and Change" for grade 6 and 7 students. Your child's class has been selected to participate in this pilot project.

In a series of 10 lessons students will explore causes and results of conflict at personal and national levels. At each of these levels students will be asked to suggest ways in which conflict can be resolved without violence or hurting others, and in so doing, to change the widely held notion often reinforced by T.V. and other media, that conflict usually results in violence. Students will draw parallels between - conflict between individuals and conflict between nations - and learn that differences need not necessarily result in hatred or war.

We invite you to attend an Information Meeting at Schou Resource Centre on Thursday, October 17th at 7:30 p.m. to find our more about this project. There will be an opportunity to view audio-visual materials to be used in the lessons and to discuss the lesson content. Bring your questions.

This project grows out of earlier research conducted in Burnaby schools which identified a significant level of concerns students voiced about their futures and the prospect of nuclear war. Our project also has a research base. It seeks to determine whether information which demonstrates that violence is not the only response to conflict will alleviate children's concerns about nuclear war in their future. Before and after the lessons your children will be asked to fill out an anonymous questionnaire that surveys their concerns for their future, if any; their knowledge about conflict-resolution; and their general level of anxiety. The results of this questionnaire will be strictly confidential; your child's name will not appear on the questionnaire forms. No individual questionnaire results will be released. The purpose is not to check any one child's attitudes or knowledge but to obtain information on the attitudes and knowledge of all children.

. . . continued

Part of the project will involve the use of video tape. Some lessons will be taped in order to document the project for others who might want to adopt the same curriculum. We need your consent for your child to be video-taped for this purpose. Participation in this project is entirely voluntary and may be withdrawn at any time.

Participation in the project will have no bearing on your child's regular classroom work or grades. The project has been given unconditional approval by the research committee of the Burnaby School Board and has been examined by the Simon Fraser University Committee on Ethics in Research.

If you do not wish your child to participate in the project or the video-taping fill in the form below and return it to the school by tomorrow. If we do not receive this form, we will assume that your child has your permission to participate.

I hope that you will agree to your child taking part in this project. Your child's participation may have impact on future studies of children in B.C.

Sincerely,

Susan Hargraves,
Research Associate,
Faculty of Education,
Simon Fraser University.

SH/ac

My Child _____ may not participate in the "Conflict and Change" project.

Name: _____ Signature: _____

My child _____ may participate in the project, but not in the video-taping.

Name: _____ Signature: _____

SIMON FRASER UNIVERSITY

FACULTY OF EDUCATION

BURNABY, BRITISH COLUMBIA V5A 1S6
Telephone: (604) 291-3395

October 1985.

Dear Parent:

We will be asking your son or daughter to be a part of a study about student worries and hopes for the future. Each student in the study will spend about one hour filling in a questionnaire sometime in October and again in December. It asks students what they hope for and worry about and what they do about their hopes and worries.

Students will not put their names on the questionnaires so that all information will be private. The results will be used to describe the entire group of students rather than any one person. A report will be made to the Burnaby School Board and you can request a report from them or from us at Simon Fraser University, Faculty of Education.

We think that students will be interested in answering our questions. Your son or daughter will have the choice as to whether or not they would like to participate in the study. Whether or not a student participates will not affect grades or standing in school activities.

If you have reservations and are not prepared to give him/her permission to particicpte, please sign the form below and return it to the school in the next day or two.

If we do not receive this form, we will assume that your child has your permission to participate.

Yours sincerely,

Susan Hargraves,
Research Associate.

SH/ac

Child's name: _____ may not participate in study, Children's Concerns for the Future.
Name: _____ Signature: _____

December 1985.

Dear Parent:

As you know your child has been participating in a research project conducted by the Burnaby School District and Simon Fraser University. This research project asked students what they hope for and worry about and what they do about their hopes and worries. Students completed questionnaires in October and December.

In order to make comparisons between the students involved in this project and students involved in a similar national study we would like to collect some background information. The information that you give us will be kept strictly confidential. The results will be used to describe the entire group of students rather than any one person.

If you would be willing to assist us in making these kinds of comparisons, please return the questionnaire in the envelope provided. Please do this in the next day or two.

Thank-you for allowing your child to participate in this study and also for your own involvement. A report will be made to the Burnaby School Board and you can request a report from them or from us at Simon Fraser University, Faculty of Education.

Yours sincerely,

Susan Morris
Research Assistant

Dawn Schell
Research Assistant

Appendix E

Multivariate Tests of Significance for University Scales

Effect	F	p =
	df= 8,19	
Group	1.99	.105
Time	3.85	.008
Group x Time	1.54	.210

Appendix F

Multivariate Tests of Significance for Grade 7's Scales

Effect	F	p<
	df=6,131	
Group	2.46	.027
Time	3.84	.001
Group x Time	6.56	.001

Univariate Tests of Significance for Grade 7's Scales

Effect, Variable	MS	F	p=
		df = 6,131	
Group			
PREVAT	84.84	7.09	.009
SURVAT	1.10	.04	.839
KNOWL	4.19	1.29	.257
ROT	14.81	1.44	.232
STAIC1	55.59	1.20	.276
STAIC2	15.50	.15	.702
Time			
PREVAT	4.29	.71	.402
SURVAT	14.64	1.26	.263
KNOWL	29.51	19.52	.000
ROT	2.51	.91	.343
STAIC1	5.90	.31	.580
STAIC2	1.79	.15	.703
Group x Time			
PREVAT	84.74	13.94	.000
SURVAT	.73	.06	.803
KNOWL	22.37	14.80	.000
ROT	.42	.15	.698
STAIC1	92.48	4.83	.030
STAIC2	45.12	3.69	.057

Appendix C

University Control Group Pretest Frequencies

In questions 1 - 20, please circle the number in the column whose heading best reflects your opinion. (There are no right or wrong answers to these questions).

For questions 1-4, in the next fifty years, how likely do you think it is that:	very unlikely	unlikely	un-decided	likely	very likely
(1) a nuclear blast will occur somewhere on earth killing a great number of people (thousands or millions)?	3(7.7)	10(25.6)	6(15.4)	12(30.8)	8(20.5)
(2) a nuclear war will occur between two or more nations?	4(10.5)	11(28.9)	5(13.2)	3(7.9)	3(7.9)
(3) the United States will be involved in a nuclear war with Russia?	4(10.3)	12(30.8)	10(25.6)	12(30.8)	1(2.6)
(4) terrorists will plant a nuclear device in a populated area for purposes of extortion or political belief?	1(2.6)	5(12.8)	10(25.6)	18(46.2)	5(12.8)
(5) How likely do you think it is that you, personally, will die from a nuclear blast or its fallout?	0	9(23.1)	9(23.1)	9(23.1)	12(30.8)
(6) How likely is it that Vancouver could survive a major nuclear war?	15(38.5)	11(28.2)	9(23.1)	1(2.6)	3(7.7)
(7) How likely is it that you could survive a major nuclear war?	16(41.0)	16(41.0)	3(7.7)	1(2.6)	3(7.7)

	strongly agree	agree	undecided	disagree	strongly disagree
(8) The United States could engage in a nuclear war with Russia and limit it to whatever size it chose.	0	4(10.5)	3(7.9)	15(39.5)	16(42.1)
(9) If arms control efforts involving the Soviet Union and the United States had been more successful at earlier times, the security of both nations would now be greater.	6(15.4)	17(43.6)	6(15.4)	7(17.9)	3(7.7)

	strongly agree	agree	undecided	disagree	strongly disagree
(10) There are causes worth fighting a nuclear war for.	0	1(2.6)	0	9(23.1)	29(74.4)
(11) Nuclear war can be prevented.	13(33.3)	19(48.7)	3(7.7)	4(10.3)	0
(12) You, yourself, could do something that might aid in the prevention of nuclear war.	1(2.6)	14(35.9)	12(30.8)	9(23.1)	3(7.7)
(13) If necessary, you would be willing to join the armed forces and help fight a nuclear war to defend your beliefs or those of your country.	2(5.1)	1(2.6)	10(25.6)	11(28.2)	15(38.5)
(14) The average citizen can have an influence over government decisions about nuclear issues.	2(5.1)	14(35.9)	5(12.8)	13(33.3)	5(12.8)

For questions 15-19, indicate the extent to which your engagement in the following activities would be effective in preventing nuclear war.

	not at all	very little	some	a lot
(15) Thinking about actions that might be taken to prevent nuclear war?	18(46.2)	13(33.3)	8(20.5)	0
(16) Speaking to a friend or family member about your concerns about nuclear war?	11(28.2)	14(35.9)	11(28.2)	3(7.7)
(17) Writing or speaking to a politician or government official about your concerns about nuclear war?	9(23.1)	13(33.3)	17(43.6)	0
(18) Participating in public demonstrations or peace marches against nuclear war?	8(20.5)	7(17.9)	22(56.4)	2(5.1)
(19) Attending meetings of a peace or disarmament group?	9(23.1)	11(28.2)	18(46.2)	1(2.6)

For questions 20-24, indicate the extent to which your engagement in the following activities would be effective in dealing with the possibility of nuclear war.

	not at all	very little	some	a lot
(20) Making plans for self or family protection in the event of nuclear war?	12(31.6)	16(42.1)	8(21.1)	2(5.3)
(21) Making plans for leaving Vancouver in the event of nuclear war?	13(34.2)	16(42.1)	8(21.1)	1(2.6)
(22) Stockpiling food or medicines for use after a nuclear war?	9(23.7)	15(39.5)	13(34.2)	1(2.6)
(23) Reading materials or books on how to survive a nuclear war	8(21.1)	14(36.8)	14(36.8)	2(5.3)
(24) Attending meetings advocating survivalist activities?	9(23.7)	14(36.8)	14(36.8)	1(2.6)

	not at all	a few times	once or twice per week	almost every day
(25) In the last month how often have thoughts about the threat of nuclear war given you feelings of fear or anxiety?	22(57.9)	14(36.8)	2(5.3)	0

	not at all	very little	some	a lot
(26) To what extent has thinking about threat of nuclear war affected your plans for the future?	24(63.2)	11(28.9)	3(7.9)	0

To what extent have you done any of the following:

	not at all	very little	some	a lot
(27) Thought about actions that might be taken to prevent nuclear war?	9(23.1)	16(41.0)	4(35.9)	0
(28) Spoken to a friend or family member about your concerns about nuclear war?	7(17.9)	9(23.1)	19(48.7)	4(10.3)
(29) Written or spoken to a politician or government official about your concerns about nuclear war?	37(94.9)	2(5.1)	0	0
(30) Participated in public demonstrations or peace marches against nuclear war?	31(79.5)	3(7.7)	5(12.8)	0
(31) Attended meetings of a peace or disarmament group?	35(89.7)	2(5.1)	2(5.1)	0
(32) Made plans for self or family protection in the event of nuclear war?	34(87.2)	4(10.3)	1(2.6)	0
(33) Made plans for leaving Vancouver in the event of war?	34(87.2)	4(10.3)	1(2.6)	0
(34) Stockpiled food or medicines for use after a nuclear war?	36(92.3)	3(7.7)	0	0
(35) Read materials or books on how to survive a nuclear war?	30(76.9)	7(17.9)	2(5.1)	0
(36) Attended meetings advocating survivalist activities?	38(97.4)	1(2.6)	0	0

To what extent is it the responsibility of the following groups or people to act to prevent nuclear war?

	very high responsibility	high responsibility	moderate responsibility	low responsibility	very little responsibility
(37) Citizens (like yourself)	7(17.9)	14(35.9)	16(41.0)	1(2.6)	1(2.6)
(38) Elected representatives	22(56.4)	16(41.0)	0	1(2.6)	0
(39) The Prime Minister	35(89.7)	4(10.3)	0	0	0
(40) Canadian military leaders	28(71.8)	10(25.6)	0	0	1(2.6)

Appendix H

University Control Group Posttest Frequencies

In questions 1 - 20, please circle the number in the column whose heading best reflects your opinion. (There are no right or wrong answers to these questions).

For questions 1-4, in the next fifty years, how likely do you think it is that:	very unlikely	unlikely	un-decided	likely	very likely
(1) a nuclear blast will occur somewhere on earth killing a great number of people (thousands or millions)?	0	7(35.0)	3(15.0)	8(40.0)	2(10.0)
(2) a nuclear war will occur between two or more nations?	0	6(30.0)	5(25.0)	7(35.0)	2(10.0)
(3) the United States will be involved in a nuclear war with Russia?	2(10.0)	9(45.0)	6(30.0)	3(15.0)	0
(4) terrorists will plant a nuclear device in a populated area for purposes of extortion or political belief?	1(5.0)	0	3(15.0)	13(65.0)	3(15.0)
(5) How likely do you think it is that you, personally, will die from a nuclear blast or its fallout?	0	4(20.0)	5(25.0)	6(30.0)	5(25.0)
(6) How likely is it that Vancouver could survive a major nuclear war?	10(50.0)	7(35.0)	3(15.0)	0	0
(7) How likely is it that you could survive a major nuclear war?	11(55.0)	7(35.0)	1(5.0)	1(5.0)	0

	strongly agree	agree	undecided	disagree	strongly disagree
(8) The United States could engage in a nuclear war with Russia and limit it to whatever size it chose.	0	2(10.0)	0	7(35.0)	11(55.0)
(9) If arms control efforts involving the Soviet Union and the United States had been more successful at earlier times, the security of both nations would now be greater.	0	8(40.0)	8(40.0)	2(10.0)	2(10.0)

	strongly agree	agree	undecided	disagree	strongly disagree
(10) There are causes worth fighting a nuclear war for.	1(5.0)	1(5.0)	0	2(10.0)	16(80.0)
(11) Nuclear war can be prevented.	3(15.0)	13(65.0)	1(5.0)	3(15.0)	0
(12) You, yourself, could do something that might aid in the prevention of nuclear war.	0	7(35.0)	7(35.0)	5(25.0)	1(5.0)
(13) If necessary, you would be willing to join the armed forces and help fight a nuclear war to defend your beliefs or those of your country.	1(5.0)	1(5.0)	3(15.0)	6(30.0)	9(45.0)
(14) The average citizen can have an influence over government decisions about nuclear issues.	0	10(50.0)	4(20.0)	3(15.0)	3(15.0)

For questions 15-19, indicate the extent to which your engagement in the following activities would be effective in preventing nuclear war.

	not at all	very little	some	a lot
(15) Thinking about actions that might be taken to prevent nuclear war?	8(40.0)	9(45.0)	3(15.0)	0
(16) Speaking to a friend or family member about your concerns about nuclear war?	6(30.0)	10(50.0)	4(20.0)	0
(17) Writing or speaking to a politician or government official about your concerns about nuclear war?	6(30.0)	5(25.0)	9(45.0)	0
(18) Participating in public demonstrations or peace marches against nuclear war?	4(20.0)	8(40.0)	6(30.0)	2(10.0)
(19) Attending meetings of a peace or disarmament group?	3(15.0)	8(40.0)	8(40.0)	1(5.0)

For questions 20-24, indicate the extent to which your engagement in the following activities would be effective in dealing with the possibility of nuclear war.

	not at all	very little	some	a lot
(20) Making plans for self or family protection in the event of nuclear war?	8(40.0)	6(30.0)	6(30.0)	0
(21) Making plans for leaving Vancouver in the event of nuclear war?	7(35.0)	6(30.0)	7(35.0)	0
(22) Stockpiling food or medicines for use after a nuclear war?	7(35.0)	7(35.0)	4(20.0)	2(10.0)
(23) Reading materials or books on how to survive a nuclear war	7(35.0)	7(35.0)	3(15.0)	3(15.0)
(24) Attending meetings advocating survivalist activities?	7(35.)	7(35.0)	4(20.0)	2(10.0)

	not at all	a few times	once or twice per week	almost every day
(25) In the last month how often have thoughts about the threat of nuclear war given you feelings of fear or anxiety?	10(50.0)	10(50.0)	0	0

	not at all	very little	some	a lot
(26) To what extent has thinking about threat of nuclear war affected your plans for the future?	14(70.0)	4(20.0)	2(10.0)	0

To what extent have you done any of the following:

	not at all	very little	some	a lot
(27) Thought about actions that might be taken to prevent nuclear war?	7(35.0)	6(30.0)	6(30.0)	1(5.0)
(28) Spoken to a friend or family member about your concerns about nuclear war?	4(20.0)	7(35.0)	7(35.0)	2(10.0)
(29) Written or spoken to a politician or government official about your concerns about nuclear war?	18(90.0)	1(5.0)	1(5.0)	0
(30) Participated in public demonstrations or peace marches against nuclear war?	15(75.0)	2(10.0)	3(15.0)	0
(31) Attended meetings of a peace or disarmament group?	14(70.0)	5(25.0)	1(5.0)	0
(32) Made plans for self or family protection in the event of nuclear war?	16(80.0)	2(10.0)	2(10.0)	0
(33) Made plans for leaving Vancouver in the event of war?	17(85.0)	3(15.0)	0	0
(34) Stockpiled food or medicines for use after a nuclear war?	20(100.0)	0	0	0
(35) Read materials or books on how to survive a nuclear war?	17(85.0)	1(5.0)	2(10.0)	0
(36) Attended meetings advocating survivalist activities?	20(100.0)	0	0	0

To what extent is it the responsibility of the following groups or people to act to prevent nuclear war?

	very high responsibility	high responsibility	moderate responsibility	low responsibility	very little responsibility
(37) Citizens (like yourself)	4(20.0)	5(25.0)	7(35.0)	4(20.0)	0
(38) Elected representatives	10(50.0)	8(40.0)	2(10.0)	0	0
(39) The Prime Minister	17(85.0)	3(15.0)	0	0	0
(40) Canadian military leaders	19(95.0)	0	0		

Appendix I

University Treatment Group Pretest Frequencies

In questions 1 - 20, please circle the number in the column whose heading best reflects your opinion. (There are no right or wrong answers to these questions).

For questions 1-4, in the next fifty years, how likely do you think it is that:	very unlikely	unlikely	un-decided	likely	very likely
(1) a nuclear blast will occur somewhere on earth killing a great number of people (thousands or millions)?	3(3.8)	18(22.8)	11(13.9)	33(41.8)	14(17.7)
(2) a nuclear war will occur between two or more nations?	3(3.8)	24(30.4)	12(15.2)	29(36.7)	11(13.9)
(3) the United States will be involved in a nuclear war with Russia?	10(12.7)	25(31.6)	14(17.7)	22(27.8)	8(10.1)
(4) terrorists will plant a nuclear device in a populated area for purposes of extortion or political belief?	3(3.8)	6(7.6)	18(22.8)	37(46.8)	15(19.0)
(5) How likely do you think it is that you, personally, will die from a nuclear blast or its fallout?	7(8.9)	14(17.7)	22(27.8)	21(26.6)	15(19.0)
(6) How likely is it that Vancouver could survive a major nuclear war?	40(50.6)	24(30.4)	11(13.9)	3(3.8)	1(1.3)
(7) How likely is it that you could survive a major nuclear war?	43(54.4)	12(15.2)	16(20.3)	3(3.8)	5(6.3)

	strongly agree	agree	undecided	disagree	strongly disagree
(8) The United States could engage in a nuclear war with Russia and limit it to whatever size it chose.	2(2.5)	5(6.3)	4(5.1)	37(46.8)	31(39.2)
(9) If arms control efforts involving the Soviet Union and the United States had been more successful at earlier times, the security of both nations would now be greater.	10(12.7)	38(48.1)	13(16.5)	17(21.5)	1(1.3)

	strongly agree	agree	undecided	disagree	strongly disagree
(10) There are causes worth fighting a nuclear war for.	3(3.8)	8(10.1)	3(3.8)	16(20.3)	49(62.0)
(11) Nuclear war can be prevented.	27(34.2)	37(46.8)	12(15.2)	2(2.5)	1(1.3)
(12) You, yourself, could do something that might aid in the prevention of nuclear war.	7(8.9)	28(35.4)	26(32.9)	13(16.5)	5(6.3)
(13) If necessary, you would be willing to join the armed forces and help fight a nuclear war to defend your beliefs or those of your country.	5(6.3)	10(12.7)	20(25.3)	16(20.3)	28(35.4)
(14) The average citizen can have an influence over government decisions about nuclear issues.	5(6.3)	30(38.0)	14(17.7)	24(30.4)	6(7.6)

For questions 15-19, indicate the extent to which your engagement in the following activities would be effective in preventing nuclear war.

	not at all	very little	some	a lot
(15) Thinking about actions that might be taken to prevent nuclear war?	32(40.5)	28(35.4)	17(21.5)	2(2.5)
(16) Speaking to a friend or family member about your concerns about nuclear war?	24(30.4)	35(44.3)	20(25.3)	0
(17) Writing or speaking to a politician or government official about your concerns about nuclear war?	16(20.3)	23(29.1)	35(44.3)	5(6.3)
(18) Participating in public demonstrations or peace marches against nuclear war?	9(11.4)	16(20.3)	44(55.7)	10(12.7)
(19) Attending meetings of a peace or disarmament group?	12(15.2)	20(25.3)	40(50.6)	7(8.9)

For questions 20-24, indicate the extent to which your engagement in the following activities would be effective in dealing with the possibility of nuclear war.

	not at all	very little	some	a lot
(20) Making plans for self or family protection in the event of nuclear war?	24(30.4)	29(36.7)	18(22.8)	8(10.1)
(21) Making plans for leaving Vancouver in the event of nuclear war?	27(34.2)	32(40.5)	12(15.2)	8(10.1)
(22) Stockpiling food or medicines for use after a nuclear war?	24(30.4)	24(30.4)	24(30.4)	7(8.9)
(23) Reading materials or books on how to survive a nuclear war	22(27.8)	22(27.8)	23(29.1)	12(15.2)
(24) Attending meetings advocating survivalist activities?	25(31.6)	23(29.1)	24(30.4)	7(8.9)

	not at all	a few times	once or twice per week	almost every day
(25) In the last month how often have thoughts about the threat of nuclear war given you feelings of fear or anxiety?	37(46.8)	36(45.6)	6(7.6)	0

	not at all	very little	some	a lot
(26) To what extent has thinking about threat of nuclear war affected your plans for the future?	55(69.6)	14(17.7)	9(11.4)	1(1.3)

To what extent have you done any of the following:

	not at all	very little	some	a lot
(27) Thought about actions that might be taken to prevent nuclear war?	16(20.3)	28(35.4)	32(40.5)	3(3.8)
(28) Spoken to a friend or family member about your concerns about nuclear war?	14(17.7)	25(31.6)	32(40.5)	8(10.1)
(29) Written or spoken to a politician or government official about your concerns about nuclear war?	72(91.1)	4(5.1)	2(2.5)	1(1.3)
(30) Participated in public demonstrations or peace marches against nuclear war?	54(68.4)	13(16.5)	9(11.4)	3(3.8)
(31) Attended meetings of a peace or disarmament group?	63(80.8)	13(16.7)	1(1.3)	1(1.3)
(32) Made plans for self or family protection in the event of nuclear war?	72(91.1)	7(8.9)	0	0
(33) Made plans for leaving Vancouver in the event of war?	74(93.7)	4(5.1)	1(1.3)	0
(34) Stockpiled food or medicines for use after a nuclear war?	79(100.0)	0	0	0
(35) Read materials or books on how to survive a nuclear war?	61(77.2)	14(17.7)	4(5.1)	0
(36) Attended meetings advocating survivalist activities?	78(100.0)	0	0	0

To what extent is it the responsibility of the following groups or people to act to prevent nuclear war?

	very high responsibility	high responsibility	moderate responsibility	low responsibility	very little responsibility
(37) Citizens (like yourself)	27(34.2)	22(27.8)	24(30.4)	5(6.3)	1(1.3)
(38) Elected representatives	52(65.8)	19(24.1)	7(8.9)	0	1(1.3)
(39) The Prime Minister	68(86.1)	9(11.4)	1(1.3)	0	1(1.3)
(40) Canadian military leaders	57(72.2)	15(19.0)	5(6.3)	0	2(2.5)

Appendix J

University Treatment Group Posttest Frequencies

In questions 1 - 20, please circle the number in the column whose heading best reflects your opinion. (There are no right or wrong answers to these questions).

For questions 1-4, in the next fifty years, how likely do you think it is that:	very unlikely	unlikely	un-decided	likely	very likely
(1) a nuclear blast will occur somewhere on earth killing a great number of people (thousands or millions)?	2(6.3)	6(18.8)	4(12.5)	18(56.3)	2(6.3)
(2) a nuclear war will occur between two or more nations?	1(3.1)	5(15.6)	6(18.8)	17(53.1)	3(9.4)
(3) the United States will be involved in a nuclear war with Russia?	2(6.3)	6(18.8)	4(12.5)	17(53.1)	3(9.4)
(4) terrorists will plant a nuclear device in a populated area for purposes of extortion or political belief?	1(3.1)	4(12.5)	8(25.0)	14(43.8)	5(15.6)
(5) How likely do you think it is that you, personally, will die from a nuclear blast or its fallout?	9(28.1)	7(21.9)	5(15.6)	8(25.0)	3(9.4)
(6) How likely is it that Vancouver could survive a major nuclear war?	23(71.9)	5(15.6)	0	1(3.1)	3(9.4)
(7) How likely is it that you could survive a major nuclear war?	23(71.9)	5(15.6)	1(3.1)	0	3(9.4)

	strongly agree	agree	undecided	disagree	strongly disagree
(8) The United States could engage in a nuclear war with Russia and limit it to whatever size it chose.	2(6.3)	2(6.3)	1(3.1)	6(18.8)	21(65.6)
(9) If arms control efforts involving the Soviet Union and the United States had been more successful at earlier times, the security of both nations would now be greater.	10(31.3)	14(43.8)	4(12.5)	2(6.3)	2(6.3)

	strongly agree	agree	undecided	disagree	strongly disagree
(10) There are causes worth fighting a nuclear war for.	3(9.4)	2(6.3)	1(3.1)	1(3.1)	25(78.1)
(11) Nuclear war can be prevented.	16(50.0)	14(43.8)	2(6.3)	0	0
(12) You, yourself, could do something that might aid in the prevention of nuclear war.	8(25.0)	13(40.6)	7(21.9)	3(9.4)	1(3.1)
(13) If necessary, you would be willing to join the armed forces and help fight a nuclear war to defend your beliefs or those of your country.	0	2(6.3)	5(15.6)	6(18.8)	19(59.4)
(14) The average citizen can have an influence over government decisions about nuclear issues.	9(28.1)	14(43.8)	5(15.6)	4(12.5)	0

For questions 15-19, indicate the extent to which your engagement in the following activities would be effective in preventing nuclear war.

	not at all	very little	some	a lot
(15) Thinking about actions that might be taken to prevent nuclear war?	8(25.0)	11(34.4)	11(34.4)	2(6.3)
(16) Speaking to a friend or family member about your concerns about nuclear war?	4(12.5)	10(31.3)	14(43.8)	4(12.5)
(17) Writing or speaking to a politician or government official about your concerns about nuclear war?	4(12.5)	8(25.0)	13(40.6)	7(21.9)
(18) Participating in public demonstrations or peace marches against nuclear war?	3(9.4)	5(15.6)	16(50.0)	8(25.0)
(19) Attending meetings of a peace or disarmament group?	2(6.3)	6(18.8)	18(56.3)	6(18.8)

For questions 20-24, indicate the extent to which your engagement in the following activities would be effective in dealing with the possibility of nuclear war.

	not at all	very little	some	a lot
(20) Making plans for self or family protection in the event of nuclear war?	23(74.2)	7(22.6)	1(3.2)	0
(21) Making plans for leaving Vancouver in the event of nuclear war?	23(74.2)	6(19.4)	2(6.5)	0
(22) Stockpiling food or medicines for use after a nuclear war?	22(71.0)	6(19.4)	3(9.7)	0
(23) Reading materials or books on how to survive a nuclear war	21(70.0)	4(13.3)	5(16.7)	0
(24) Attending meetings advocating survivalist activities?	21(67.7)	5(16.1)	5(16.1)	0

	not at all	a few times	once or twice per week	almost every day
(25) In the last month how often have thoughts about the threat of nuclear war given you feelings of fear or anxiety?	6(20.0)	8(26.7)	15(50.0)	1(3.3)

	not at all	very little	some	a lot
(26) To what extent has thinking about threat of nuclear war affected your plans for the future?	16(53.1)	8(25.8)	5(16.1)	0

To what extent have you done any of the following:

	not at all	very little	some	a lot
(27) Thought about actions that might be taken to prevent nuclear war?	3(9.4)	4(12.5)	16(50.0)	9(28.1)
(28) Spoken to a friend or family member about your concerns about nuclear war?	2(6.3)	7(21.9)	14(43.8)	9(28.1)
(29) Written or spoken to a politician or government official about your concerns about nuclear war?	27(84.4)	4(12.5)	1(3.1)	0
(30) Participated in public demonstrations or peace marches against nuclear war?	20(62.5)	6(18.8)	6(18.8)	0
(31) Attended meetings of a peace or disarmament group?	25(78.1)	4(12.5)	3(9.4)	0
(32) Made plans for self or family protection in the event of nuclear war?	30(93.8)	2(6.3)	0	0
(33) Made plans for leaving Vancouver in the event of war?	30(93.8)	2(6.3)	0	0
(34) Stockpiled food or medicines for use after a nuclear war?	32(100.0)	0	0	0
(35) Read materials or books on how to survive a nuclear war?	26(81.3)	5(15.6)	1(3.1)	0
(36) Attended meetings advocating survivalist activities?	32(100.0)	0	0	0

To what extent is it the responsibility of the following groups or people to act to prevent nuclear war?

	very high responsibility	high responsibility	moderate responsibility	low responsibility	very little responsibility
(37) Citizens (like yourself)	16(50.0)	9(28.1)	6(18.8)	0	1(3.1)
(38) Elected representatives	26(81.3)	4(12.5)	1(3.1)	1(3.1)	0
(39) The Prime Minister	31(96.9)	1(3.1)	0	0	0
(40) Canadian military leaders	26(81.3)	2(6.3)	4(12.5)	0	0

Appendix K

Elementary Control Group Pretest Frequencies

III. Here are some things others list as hopes. Circle the number that best describes how important each one is to you.

		Not important at all	Somewhat important	Important	Very Important
1.	Good grades	1 (.7)	1 (.7)	30 (22.4)	102(76.1)
2.	A good marriage	3 (2.2)	2(1.5)	34(25.4)	95(70.9)
3.	Good friends	1(0.8)	1(0.8)	45(33.8)	86(64.7)
4.	Good health	0	2(1.5)	17(12.7)	115(85.8)
5.	A good job	1(0.7)	1(0.7)	29(21.6)	103(76.9)
6.	An unpolluted environment	4(3.0)	25(18.7)	45(33.6)	60(44.8)
7.	World peace	1(.7)	5(3.7)	22(16.4)	106(79.1)
8.	Children	7(5.2)	16(11.9)	40(29.9)	71(53.0)
9.	Happiness	2(1.5)	1(0.7)	27(20.1)	104(77.6)

IV. Here are some things others list as worries. Circle the number that best describes how important each one is to you.

1.	Violent crime	10(7.6)	17(13.0)	41(31.3)	63(48.1)
2.	My own death	8(6.2)	22(16.9)	36(27.7)	64(49.2)
3.	Bad grades	12(9.2)	6(4.6)	27(20.8)	85(65.4)
4.	Lack of jobs	4(3.1)	11(8.5)	36(27.7)	79(60.8)
5.	My parents' death	3(2.3)	0	13(9.9)	115(87.8)
6.	Nuclear war	6(4.6)	6(4.6)	20(15.3)	99(75.6)
7.	Parents' divorce	11(8.5)	5(3.9)	29(22.5)	84(65.1)
8.	Poverty	7(5.6)	10(8.0)	62(49.6)	46(36.8)
9.	Nuclear power plant leaks	10(7.6)	21(16.0)	38(29.0)	62(47.3)

In the next section we ask what you are doing about some worries. There are no right or wrong answers. We are interested in <u>your</u> experiences and thoughts

V. <u>Concerns about high unemployment rates</u>
Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day
1. In the past month how often have you thought about high unemployment?	42(31.6)	62(46.6)	24(18.0)	5(3.8)
2. In the last month how often have you talked about high unemployment				
a. at home	66(51.2)	42(32.6)	18(14.0)	3(2.3)
b. at school	86(71.1)	25(20.7)	8(6.6)	2(1.7)
c. with your friends	89(71.8)	26(21.0)	6(4.8)	3(2.4)
3. In the last month how often have thoughts about high unemployment given you feelings of fear and worry?	56(42.4)	56(42.4)	14(10.6)	6(4.5)
4. In the last month have had any bad dreams about high unemployment?	122(92.4)	7(5.3)	2(1.5)	1(0.8)
5. How much have you learned about unemployment conditions from the following:				

	Nothing	A bit	A fair amount	A lot
a. Teachers or school	39(30.5)	59(46.1)	22(17.2)	8(6.3)
b. Newspapers and magazines	27(20.8)	39(30.0)	43(33.1)	21(16.2)
c. Books	59(45.7)	43(33.3)	24(18.6)	3(2.3)
d. Television	13(9.9)	33(25.2)	34(26.0)	51(38.9)
e. Family	27(20.9)	36(27.9)	30(23.3)	36(27.9)
f. Friends	81(63.3)	32(25.0)	8(6.3)	7(5.5)

	None	A little	A lot	Total control
6. How much influence do you feel that you personally can have in changing employment conditions	40(30.3)	67(50.8)	20(15.2)	5(3.8)

	None	A little	A lot	Total control
7. How much influence do you think your parents can have in changing employment conditions?	20(15.2)	85(64.4)	25(18.9)	2(1.5)
8. How much influence do you feel the Canadian government can have in changing employment conditions?	7(5.3)	15(11.3)	55(41.4)	56(42.1)

VI. Concerns about job and career plans
Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day
1. In the last month, how often have you thought about job and career plans?	12(9.0)	55(41.0)	36(26.9)	31(23.1)
2. In the last month, how often have you talked about job and career plans?				
a. at home	32(24.4)	67(51.5)	23(17.6)	9(6.9)
b. at school	81(64.3)	39(31.0)	4(3.2)	2(1.6)
c. with friends	55(42.3)	64(49.2)	8(6.2)	3(2.3)
3. In the last month how often have job and career plans given you feelings of fear or worry?	60(45.5)	51(38.6)	15(11.4)	6(4.5)
4. In the last month have you had any dreams related to job and career plans?	98(77.2)	22(17.3)	2(1.6)	5(3.9)

5. How much have you learned about job and career possibilities from each of the following?	Nothing	A bit	A fair amount	A lot
a. teachers or school	50(38.2)	55(42.0)	25(19.1)	1(0.8)
b. Newspapers and magazines	30(22.7)	53(40.2)	39(29.5)	10(7.6)
c. Books	54(41.2)	44(33.6)	24(18.3)	9(6.9)
d. Television	22(16.9)	39(30.0)	40(30.8)	29(22.3)
e. Family	16(12.2)	39(29.8)	44(33.6)	32(24.4)
f. Friends	74(56.1)	41(31.1)	11(8.3)	6(4.5)

	None	A little	A lot	Total control
6. How much influence do you feel you personally have in making your job or career plans work out?	4(3.1)	26(19.8)	77(58.8)	24(18.3)
7. How much influence do you think your parents can have in making your job and career plans work out?	8(6.1)	49(37.4)	68(51.9)	6(4.6)
8. How much influence do teachers and schools have in making your career plans work out?	18(13.8)	45(34.6)	59(45.4)	8(6.2)

VII. Concerns about the threat of nuclear war

Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day
1. In the last month how often have you thought about the threat of nuclear war?	34(25.8)	63(47.7)	23(17.4)	12(9.1)
2. In the last month how often have you talked about the threat of nuclear war				
a. at home	69(54.3)	47(37.0)	9(7.1)	2(1.6)
b. at school	83(65.4)	36(28.3)	7(5.5)	1(0.8)
c. with friends	84(65.6	39(30.5)	3(2.3)	2(1.6)
3. In the last month how often have thoughts about the threat of nuclear war given you feelings of fear or worry?	40(30.3)	63(48.5)	19(14.6)	8(6.2)
4. In the last month have you had any had dreams about nuclear war?	100(78.1)	20(15.6)	5(3.9)	3(2.3)

	Not at all	Very little	Some	A lot
5. Thinking about the threat of nuclear war has affected my plans for the future _____	62(47.3)	36(27.5)	26(19.8)	7(5.3)
6. Thinking about the threat of nuclear war makes me wonder if I really want to get married and have children some day	80(61.1)	29(22.1)	13(9.9)	9(6.9)
7. Thinking about the threat of nuclear war makes me want to live only for today and forget about the future ___	92(69.7)	23(17.4)	10(7.6)	7(5.3)

	Nothing	A bit	A fair amount	A lot
8. How much have you learned about the threat of nuclear war from each of the following:				
a. teachers	46(35.1)	61(46.6)	22(16.8)	2(1.5)
b. newspapers and magazines	24(18.5)	39(30.0)	47(36.2)	20(15.4)
c. books	58(44.3)	46(35.1)	20(15.3)	7(5.3)
d. television	16(12.1)	27(20.5)	52(39.4)	37(28.0)
e. family	23(17.7)	51(39.2)	44(33.8)	12(9.2)
f. friends	82(62.6)	40(30.5)	7(5.3)	2 (1.5)

	None	A little	A lot	Total control
9. How much influence do you feel that you personally can have in preventing nuclear war?	75(56.0)	48(35.8)	10(7.5)	1(0.7)
10. How much influence do you feel your parents can have in preventing nuclear war?	59(44.0)	58(43.3)	16(11.9)	1(0.7)
11. How much influence do you feel Canada as a nation can have in preventing nuclear war?	9(6.8)	37(28.0)	79(59.8)	7(5.3)

	Yes	No
12. Have you taken any actions to prevent nuclear war?	8(6.0)	125(94.0)
13. Have your parents taken any actions to prevent nuclear war?	11(8.5)	119(91.5)

14. Below are some of the suggestions that have been made about what Canada can do to prevent nuclear war. Do you think the following will help prevent nuclear war?

	Yes	No	Undecided
a. supporting a nuclear freeze	61(46.9)	36(27.7)	33(25.4)
b. the West having more nuclear weapons than the Soviets	16(12.2)	89(67.9)	26(19.8)
c. testing the cruise missile	22(17.1)	92(71.3)	15(11.6)
d. refusing to test the cruise missile	81(62.8)	30(23.3)	18(14.0)
e. refusing to manufacture nuclear weapons	85(65.9)	33(25.6)	11(8.5)
f. do our share of manufacturing nuclear weapons	18(14.0)	92(71.3)	19(14.7)
g make Canada a nuclear weapon free zone	68(53.1)	37(28.9)	23(18.0)
h. withdraw from NATO	28(21.5)	83(63.8)	19(14.6)
i. support NATO	81(60.9)	26(19.5)	26(19.5)
j. other suggestions you have			

VIII. General

1. Are you aware of what the Government is doing to prevent war of any kind?

Yes	No	Undecided
44(32.8)	67(50.0)	23(17.2)

In your view, what else should the Government be doing in this regard?

_____

2. Are you aware that Canada is at the disarmament negotiating table in Stockholm, Vienna, Geneva and New York?

Yes	No
17(13.4)	110(86.6)

3. In your view, what is the most important reason why Canada has been at peace for forty years? (circle one)

(a)	Geography	2(1.5)
(b)	Membership in NATO	25(19.2)
(c)	Peaceful Nature of Canadians	64(49.2)
(d)	No External Threat	33(25.4)
(e)	Other (please specify)	6(4.6)

4. What do you think is the most important way we can reduce the threat of nuclear war? (circle one)

(a)	Arms Control Negotiations	21(16.2)
(b)	Unilateral Disarmament	10(7.7)
(c)	People-to-People Exchanges	15(11.5)
(d)	Bilateral Disarmament	77(59.2)
(e)	Other	7(5.4)

5. Are you concerned about other forms of warfare?

Yes	No
77(58.3)	55(41.7)

If so, which? (circle one only)

(a) Conventional Warfare 19(23.5)

(b) Chemical Warfare 50(61.7)

(c) Other (please specify) 12(14.8) _____.

6. What do you feel is the likelihood of nuclear war occurring in your lifetime?

Very Low	Low	Moderate	High	Very High
22(16.7)	27(20.5)	61(46.2)	17(12.9)	5(3.8)

7. Who do you think is responsible for whatever risk of nuclear war exists today?

USA	USSR	Both USA & USSR	Canada	Other (specify)
3(2.3)	22(16.9)	97(74.6)	0	8(6.2)

8. Would you expect children in the United States to hold the same views of these issues as you do?

Yes	No
79(60.3)	52(39.7)

9. Would you expect children in the Soviet Union to hold the same views on these issues as you do?

Yes	No
64(49.2)	66(50.8)

10. Do you think you would survive a nuclear war?

Yes	No
23(17.7)	107(82.3)

11. Would you want to survive a nuclear war?

Yes	No
60(46.2)	70(53.8)

12. In your view, is there a greater risk of you being affected by a nuclear war or a non-nuclear war?

Nuclear	Non-Nuclear
86(68.8)	39(31.2)

IX. General

1. In the last year have you seen anyone at school for advice or counselling about any of the following:

	Yes	No
a. choosing courses	11(8.6)	117(91.4)
b. problems with a class	39(30.5)	89(69.5)
c. problems with a teacher	30(23.1)	100(76.9)
d. problems at home	27(20.9)	102(79.1)
e. personal problems	25(19.4)	104(80.6)
f. job or career plans	15(11.7)	113(88.3)
g. worries about unemployment	10(7.8)	118(92.2)
h. worries about nuclear war	24(18.6)	105(81.4)

2. In the past year have you seen a counsellor or therapist outside of school about any of the following:

a. choosing courses	11(8.5)	118(91.5)
b. problems with a class	15(11.6)	114(88.4)
c. problems with a teacher	9(6.9)	121(93.1)
d. problems at home	13(10.1)	116(89.9)
e. personal problems	16(12.4)	113(87.6)
f. job or career plans	9(6.9)	121(93.1)
g. worries about unemployment	9(7.0)	120(93.0)
h. worries about nuclear war	11(8.6)	117(91.4)

3. Is there anything you'd like to add? Please use the space below to tell us about your thoughts and feelings.

PLEASE READ EACH QUESTION AND CIRCLE ONE ANSWER.

4. How much difference would your involvement in the following activities make in preventing nuclear war?

	not at all	very little	some	a lot
a) Thinking about actions that might be taken to prevent nuclear war?	40(31.5)	38(29.9)	43(29.9)	6(4.7)
b) Speaking to a friend or family member about your concerns about nuclear war?	47(37.0)	57(44.9)	20(15.7)	3(2.4)
c) Writing or speaking to a politician or government official about your concerns about nuclear war?	43(33.9)	34(26.8)	35(27.6)	15(11.8)
d) Attending meetings of a peace group?	45(35.4)	33(26.0)	36(28.3)	13(10.2)

5. How much difference would your involvement in the following activities make in dealing with the possibility of nuclear war?

	not at all	very little	some	a lot
e) Making plans for self or family protection in the event of nuclear war?	39(31.0)	39(31.0)	29(23.0)	19(15.1)
f) Making plans for leaving Vancouver in the event of nuclear war?	55(44.0)	34(27.2)	24(19.2)	12(9.6)
g) Storing food or medicines for use after a nuclear war?	40(32.0)	29(23.2)	32(25.6)	24(19.2)
h) Reading materials or books on how to survive a nuclear war?	38(30.4)	37(29.6)	36(28.8)	14(11.2)
i) Attending meetings/activities about survival?	37(29.4)	31(24.6)	3(26.2)	25(19.5)

Appendix L

Elementary Control Group Posttest Frequencies

III. Here are some things others list as hopes. Circle the number that best describes how important each one is to you.

	Not important at all	Somewhat important	Important	Very Important
1. Good grades	0	3(3.1)	28(29.2)	65(67.7)
2. A good marriage	1(1.0)	1(1.0)	26(26.8)	69(71.1)
3. Good friends	0	6(6.2)	31(32.0)	60(61.9)
4. Good health	0	3(3.1)	21(21.6)	73(75.3)
5. A good job	0	0	25(25.8)	72(74.2)
6. An unpolluted environment	2(2.1)	20(20.6)	40(41.2)	35(36.1)
7. World peace	0	5(5.2)	23(23.7)	69(71.1)
8. Children	2(2.1)	9(9.3)	35(36.1)	51(52.6)
9. Happiness	0	2(2.1)	13(13.4)	82(84.5)

IV. Here are some things others list as worries. Circle the number that best describes how important each one is to you.

1. Violent crime	6(6.2)	20(20.6)	37(38.1)	34(35.1)
2. My own death	13(13.5)	20(20.8)	18(18.8)	45(46.9)
3. Bad grades	8(8.3)	9(9.4)	24(25.0)	55(57.3)
4. Lack of jobs	4(4.2)	8(8.3)	37(38.5)	47(49.0)
5. My parents' death	4(4.1)	4(4.1)	17(17.5)	72(74.2)
6. Nuclear war	4(4.2)	10(10.4)	16(16.7)	66(68.8)
7. Parents' divorce	12(13.0)	6(6.5)	17(18.5)	57(62.0)
8. Poverty	5(5.3)	12(12.8)	49(52.1)	28(29.8)
9. Nuclear power plant leaks	10(10.4)	23(24.0)	29(30.2)	34(35.4)

In the next section we ask what you are doing about some worries. There are no right or wrong answers. We are interested in your experiences and thoughts

V. Concerns about high unemployment rates
Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day
1. In the past month how often have you thought about high unemployment?	46(47.4)	37(38.1)	12(12.4)	2(2.1)
2. In the last month how often have you talked about high unemployment				
a. at home	58(61.1)	28(29.5)	7(7.4)	2(2.1)
b. at school	75(80.6)	17(18.3)	1(1.1)	0
c. with your friends	75(79.8)	15(16.0)	4(4.2)	0
3. In the last month how often have thoughts about high unemployment given you feelings of fear and worry?	58(59.8)	28(28.9)	9(9.3)	2(2.1)
4. In the last month have had any bad dreams about high unemployment?	95(97.9)	2(2.1)	0	0

5. How much have you learned about unemployment conditions from the following:

	Nothing	A bit	A fair amount	A lot
a. Teachers or school	34(35.8)	49(51.6)	12(12.6)	0
b. Newspapers and magazines	16(16.8)	38(40.0)	32(33.7)	9(9.5)
c. Books	47(49.5)	37(38.9)	10(10.5)	1(1.1)
d. Television	8(8.3)	29(30.2)	32(33.3)	27(28.1)
e. Family	28(30.1)	25(26.9)	27(29.0)	13(14.0)
f. Friends	63(65.6)	26(27.1)	6(6.3)	1(1.0)

	None	A little	A lot	Total control
6. How much influence do you feel that you personally can have in changing employment conditions	34(35.1)	49(50.5)	9(9.3)	5(5.2)

	None	A little	A lot	Total control
7. How much influence do you think your parents can have in changing employment conditions?	23(24.0)	55(57.3)	17(17.7)	1(1.0)
8. How much influence do you feel the Canadian government can have in changing employment conditions?	3(3.1)	10(10.3)	43(44.3)	41(42.3)

VI. Concerns about job and career plans

Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day
1. In the last month, how often have you thought about job and career plans?	10(10.3)	48(49.5)	27(27.8)	12(12.4)
2. In the last month, how often have you talked about job and career plans?				
a. at home	27(28.1)	49(51.0)	14(14.6)	6(6.3)
b. at school	63(66.3)	30(31.6)	2(2.1)	0
c. with friends	43(44.8)	46(47.9)	6(6.3)	1(1.0)
3. In the last month how often have job and career plans given you feelings of fear or worry?	57(58.3)	31(32.0)	8(8.2)	1(1.0)
4. In the last month have you had any dreams related to job and career plans?	83(85.6)	9(9.3)	2(2.1)	3(3.1)

5. How much have you learned about job and career possibilities from each of the following?	Nothing	A bit	A fair amount	A lot
a. teachers or school	33(34.4)	51(53.1)	12(12.5)	0
b. Newspapers and magazines	28(29.5)	31(32.6)	31(32.6)	5(5.3)
c. Books	47(49.0)	36(37.5)	12(12.5)	1(1.0)
d. Television	18(18.8)	28(29.2)	30(31.3)	20(20.8)
e. Family	18(18.9)	36(37.9)	25(26.3)	16(16.8)
f. Friends	48(50.0)	34(35.4)	13(13.5)	1(1.0)

	None	A little	A lot	Total control
6. How much influence do you feel you personally have in making your job or career plans work out?	7(7.3)	17(17.7)	54(56.3)	18(18.8)
7. How much influence do you think your parents can have in making your job and career plans work out?	11(11.5)	42(43.8)	40(41.7)	3(3.1)
8. How much influence do teachers and schools have in making your career plans work out?	17(17.9)	30(3 .6)	41(43.2)	7(7.4)

VII. Concerns about the threat of nuclear war

Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day
1. In the last month how often have you thought about the threat of nuclear war?	36(37.5)	49(51.0)	9(9.4)	2(2.1)
2. In the last month how often have you talked about the threat of nuclear war				
a. at home	59((62.1)	29(30.5)	7(7.4)	0
b. at school	76(80.0)	17(17.9)	2(2.1)	0
c. with friends	70(72.9)	20(20.8)	6(6.3)	0
3. In the last month how often have thoughts about the threat of nuclear war given you feelings of fear or worry?	55(57.9)	31(32.6)	8(8.4)	1(1.1)
4. In the last month have you had any had dreams about nuclear war?	86(91.5)	5(5.3)	3(3.2)	0

	Not at all	Very little	Some	A lot
5. Thinking about the threat of nuclear war has affected my plans for the future ____	50(52.1)	31(32.3)	11(11.5)	4(4.2)
6. Thinking about the threat of nuclear war makes me wonder if I really want to get married and have children some day	65(67.7)	21(21.9)	7(7.3)	3(3.1)
7. Thinking about the threat of nuclear war makes me want to live only for today and forget about the future ___	72(75.8)	14(14.7)	6(6.3)	3(3.2)

	Nothing	A bit	A fair amount	A lot
8. How much have you learned about the threat of nuclear war from each of the following:				
a. teachers	41(42.3)	46(47.4)	19(10.3)	0
b. newspapers and magazines	24(24.7)	37(38.1)	26(26.8)	10(10.3)
c. books	53(54.6)	31(32.0)	12(12.4)	1(1.0)
d. television	17(17.5)	24(24.7)	31(32.0)	25(25.8)
e. family	29(29.9)	34(35.1)	24(24.7)	10(10.3)
f. friends	62(63.9)	28(28.9)	5(5.2)	2(2.1)

	None	A little	A lot	Total control
9. How much influence do you feel that you personally can have in preventing nuclear war?	60(61.9)	33(34.0)	3(3.1)	1(1.0)
10. How much influence do you feel your parents can have in preventing nuclear war?	50(52.1)	41(42.7)	5(5.2)	0
11. How much influence do you feel Canada as a nation can have in preventing nuclear war?	10(10.4)	30(31.3)	48(50.0)	8(8.3)

	Yes	No
12. Have you taken any actions to prevent nuclear war?	6(6.3)	90(93.8)
13. Have your parents taken any actions to prevent nuclear war?	8(8.9)	82(91.1)

14. Below are some of the suggestions that have been made about what Canada can do to prevent nuclear war. Do you think the following will help prevent nuclear war?

	Yes	No	Undecided
a. supporting a nuclear freeze	49(50.5)	23(23.7)	25(25.8)
b. the West having more nuclear weapons than the Soviets	15(15.5)	71(73.2)	11(11.3)
c. testing the cruise missile	14(14.4)	71(73.2)	12(12.4)
d. refusing to test the cruise missile	51(53.1)	32(33.3)	13(13.5)
e. refusing to manufacture nuclear weapons	54(55.7)	31(32.0)	12(12.4)
f. do our share of manufacturing nuclear weapons	15(15.6)	63(65.6)	18(18.8)
g make Canada a nuclear weapon free zone	62(63.9)	20(20.6)	15(15.5)
h. withdraw from NATO	12(12.5)	67(69.8)	17(17.7)
i. support NATO	63(65.6)	14(14.6)	19(19.8)

j. other suggestions you have _____

_____

VIII. General

1. Are you aware of what the Government is doing to prevent war of any kind?

Yes	No	Undecided
35(36.5)	48(50.0)	13(13.5)

In your view, what else should the Government be doing in this regard?

_____

2. Are you aware that Canada is at the disarmament negotiating table in Stockholm, Vienna, Geneva and New York?

Yes	No
23(24.5)	71(75.5)

3. In your view, what is the most important reason why Canada has been at peace for forty years? (circle one)

(a) Geography 0

(b) Membership in NATO 16(17.2)

(c) Peaceful Nature of Canadians 44(47.3)

(d) No External Threat 24(25.8)

(e) Other (please specify) 9(9.7)

4. What do you think is the most important way we can reduce the threat of nuclear war? (circle one)

(a) Arms Control Negotiations 17(18.3)

(b) Unilateral Disarmament 4(4.3)

(c) People-to-People Exchanges 16(17.2)

(d) Bilateral Disarmament 50(53.8)

(e) Other 6(6.5)

5. Are you concerned about other forms of warfare?

Yes	No
46(48.9)	48(51.1)

If so, which? (circle one only)

(a) Conventional Warfare 16(35.6)

(b) Chemical Warfare 22(48.9)

(c) Other (please specify) 7(15.6) _____.

6. What do you feel is the likelihood of nuclear war occurring in your lifetime?

Very Low	Low	Moderate	High	Very High
12(12.8)	23(24.5)	49(52.1)	7(7.4)	3(3.2)

7. Who do you think is responsible for whatever risk of nuclear war exists today?

USA	USSR	Both USA & USSR	Canada	Other (specify)
6(6.6)	17(18.7)	64(70.3)	0	4(4.4)

8. Would you expect children in the United States to hold the same views of these issues as you do?

Yes	No
60(63.8)	34(36.2)

9. Would you expect children in the Soviet Union to hold the same views on these issues as you do?

Yes	No
55(58.5)	39(41.5)

10. Do you think you would survive a nuclear war?

Yes	No
19(20.4)	74(79.6)

11. Would you want to survive a nuclear war?

Yes	No
42(45.7)	50(54.3)

12. In your view, is there a greater risk of you being affected by a nuclear war or a non-nuclear war?

Nuclear	Non-Nuclear
55(61.3)	34(38.2)

IX. General

1. In the last year have you seen anyone at school for advice or counselling about any of the following:

	Yes	No
a. choosing courses	11(11.6)	84(88.4)
b. problems with a class	20(21.1)	75(78.9)
c. problems with a teacher	15(15.8)	80(84.2)
d. problems at home	15(15.8)	80(84.2)
e. personal problems	23(24.2)	72(75.8)
f. job or career plans	11(11.6)	84(88.4)
g. worries about unemployment	6(6.3)	89(93.7)
h. worries about nuclear war	9(9.5)	86(90.5)

2. In the past year have you seen a counsellor or therapist outside of school about any of the following:

a. choosing courses	6(6.3)	89(93.7)
b. problems with a class	7(7.4)	88(92.6)
c. problems with a teacher	10(10.5)	85(89.5)
d. problems at home	11(11.6)	84(88.4)
e. personal problems	12(12.6)	83(87.4)
f. job or career plans	6(6.3)	89(93.7)
g. worries about unemployment	10(10.5)	85(89.5)
h. worries about nuclear war	8(8.4)	87(91.6)

3. Is there anything you'd like to add? Please use the space below to tell us about your thoughts and feelings.

PLEASE READ EACH QUESTION AND CIRCLE ONE ANSWER.

4. How much difference would your involvement in the following activities make in preventing nuclear war?

	not at all	very little	some	a lot
a) Thinking about actions that might be taken to prevent nuclear war?	41(43.2)	33(34.7)	18(18.9)	3(3.2)
b) Speaking to a friend or family member about your concerns about nuclear war?	49(52.1)	35(37.2)	9(9.6)	1(1.1)
c) Writing or speaking to a politician or government official about your concerns about nuclear war?	26(27.4)	39(41.1)	25(26.3)	5(5.3)
d) Attending meetings of a peace group?	35(36.8)	33(34.7)	24(25.3)	3(3.2)

5. How much difference would your involvement in the following activities make in dealing with the possibility of nuclear war?

	not at all	very little	some	a lot
e) Making plans for self or family protection in the event of nuclear war?	34(35.8)	26(27.4)	23(24.2)	12(12.6)
f) Making plans for leaving Vancouver in the event of nuclear war?	45(47.4)	28(29.5)	19(20.0)	3(3.2)
g) Storing food or medicines for use after a nuclear war?	32(34.0)	22(23.4)	27(28.7)	13(13.8)
h) Reading materials or books on how to survive a nuclear war?	34(35.4)	29(30.2)	18(18.8)	15(15.6)
i) Attending meetings/activities about survival?	37(38.9)	24(25.3)	18(18.9)	16(16.8)

Appendix M

Elementary Treatment Group Pretest Frequencies

III. Here are some things others list as hopes. Circle the number that best describes how important each one is to you.

	Not important at all	Somewhat important	Important	Very Important
1. Good grades	1 (.6)	11 (6.5)	39 (23.2)	117 (69.6)
2. A good marriage	9 (5.3)	14 (8.2)	56 (32.9)	91 (53.5)
3. Good friends	1 (.6)	19 (11.2)	67 (39.4)	83 (48.8)
4. Good health	0	6 (3.6)	27 (16.0)	136 (80.5)
5. A good job	1 (.6)	4 (2.4)	51 (30.4)	112 (66.7)
6. An unpolluted environment	10 (6.0)	29 (17.4)	70 (41.9)	58 (34.7)
7. World peace	2 (1.2)	9 (5.3)	28 (16.6)	130 (76.9)
8. Children	14 (8.4)	31 (18.6)	58 (34.7)	64 (38.3)
9. Happiness	3 (1.8)	7(4.1)	48 (28.2)	112 (65.9)

IV. Here are some things others list as worries. Circle the number that best describes how important each one is to you.

1. Violent crime	25 (14.9)	29 (17.3)	59 (35.1)	55 (32.7)
2. My own death	9 (5.4)	22 (13.1)	40 (23.8)	97 (57.7)
3. Bad grades	20 (11.8)	13 (7.7)	40 (23.7)	96 (56.8)
4. Lack of jobs	13 (7.7)	13 (7.7)	66 (39.1)	77 (45.6)
5. My parents' death	4 (2.4)	7 (4.1)	19 (11.2)	140 (82.4)
6. Nuclear war	13 (7.6)	9 (5.3)	37 (21.8)	111 (65.3)
7. Parents' divorce	17 (10.4)	17 (10.4)	48 (29.3)	82 (50.0)
8. Poverty	11 (6.9)	40 (25.0)	61 (38.1)	48 (30.0)
9. Nuclear power plant leaks	15 (9.0)	20 (12.0)	49 (29.3)	83 (49.7)

In the next section we ask what you are doing about some worries. There are no right or wrong answers. We are interested in your experiences and thoughts

V. Concerns about high unemployment rates
Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day
1. In the past month how often have you thought about high unemployment?	52 (30.8)	76 (45.0)	32 (18.9)	9 (5.3)
2. In the last month how often have you talked about high unemployment				
a. at home	66 (40.0)	72 (43.6)	21 (12.7)	6 (3.6)
b. at school	111 (72.5)	34 (22.2)	8 (5.2)	0
c. with your friends	122 (78.2)	21 (13.5)	9 (5.8)	4 (2.6)
3. In the last month how often have thoughts about high unemployment given you feelings of fear and worry?	53 (32.1)	84 (50.9)	20 (12.1)	8 (4.8)
4. In the last month have had any bad dreams about high unemployment?	150(88.8)	13 (7.7)	5 (3.0)	1 (.6)
5. How much have you learned about unemployment conditions from the following:				
	Nothing	A bit	A fair amount	A lot
a. Teachers or school	48 (29.6)	72 (44.4)	32 (19.8)	10 (6.2)
b. Newspapers and magazines	35 (21.5)	62 (38.0)	45 (27.6)	21 (12.9)
c. Books	75 (47.2)	56 (35.7)	14 (8.9)	12 (7.6)
d. Television	15 (9.3)	36 (22.2)	56 (34.6)	55 (34.0)
e. Family	32 (19.5)	58 (35.4)	36 (22.0)	38 (23.2)
f. Friends	91 (56.5)	39 (24.2)	20 (12.4)	11 (6.8)
	None	A little	A lot	Total control
6. How much influence do you feel that you personally can have in changing employment conditions	48 (29.1)	86 (52.1)	23 (13.9)	8 (4.8)

	None	A little	A lot	Total control
7. How much influence do you think your parents can have in changing employment conditions?	26 (15.5)	92 (54.8)	45 (26.8)	5 (3.0)
8. How much influence do you feel the Canadian government can have in changing employment conditions?	7 (4.2)	23 (13.9)	70 (42.4)	65 (39.4)

VI. Concerns about job and career plans

Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day
1. In the last month, how often have you thought about job and career plans?	21 (12.4)	77 (45.6)	46 (27.2)	25 (14.8)
2. In the last month, how often have you talked about job and career plans?				
a. at home	52 (31.7)	68 (41.5)	33 (20.1)	11 (6.7)
b. at school	90 (58.1)	50 (32.3)	14 (9.0)	1 (.6)
c. with friends	72 (45.6)	62 (39.2)	15 (9.5)	9 (5.7)
3. In the last month how often have job and career plans given you feelings of fear or worry?	85 (50.9)	56 (33.5)	21 (12.6)	5 (3.0)
4. In the last month have you had any dreams related to job and career plans?	110 (65.5)	40 (23.8)	12 (7.1)	6 (3.6)

5. How much have you learned about job and career possibilities from each of the following?

	Nothing	A bit	A fair amount	A lot
a. teachers or school	50 (30.7)	75 (46.0)	28 (17.2)	10 (6.1)
b. Newspapers and magazines	46 (28.2)	70 (42.9)	35 (21.5)	12 (7.4)
c. Books	68 (42.8)	68 (42.8)	13 (8.2)	10 (6.3)
d. Television	23 (14.2)	50 (30.9)	53 (32.7)	36 (22.2)
e. Family	22 (13.6)	57 (35.2)	49 (30.2)	34 (21.0)
f. Friends	85 (52.1)	51 (31.3)	17 (10.4)	10 (6.1)

	None	A little	A lot	Total control
6. How much influence do you feel you personally have in making your job or career plans work out?	11 (6.5)	55 (32.4)	84 (49.4)	20 (11.8)
7. How much influence do you think your parents can have in making your job and career plans work out?	13 (7.7.)	67 (39.9)	79 (47.0)	9 (5.4)
8. How much influence do teachers and schools have in making your career plans work out?	27 (16.0)	61 (36.1)	63 (37.3)	18 (10.7)

VII. Concerns about the threat of nuclear war

Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day
1. In the last month how often have you thought about the threat of nuclear war?	47 (27.8)	71 (42.0)	27 (16.0)	24 (14.2)
2. In the last month how often have you talked about the threat of nuclear war				
a. at home	78 (47.3)	66 (40.0)	16 (9.7)	5 (3.0)
b. at school	63 (39.1)	73 (45.3)	23 (14.3)	2 (1.2)
c. with friends	101 (64.7)	46 (29.5)	7 (4.5)	2 (1.3)
3. In the last month how often have thoughts about the threat of nuclear war given you feelings of fear or worry?	61 (36.1)	64 (37.9)	25 (14.8)	19 (11.2)
4. In the last month have you had any had dreams about nuclear war?	126 (75.0)	21 (12.5)	15 (8.9)	6 (3.6)

	Not at all	Very little	Some	A lot
5. Thinking about the threat of nuclear war has affected my plans for the future	50 (29.6)	56 (33.1)	41 (24.3)	22 (13.0)
6. Thinking about the threat of nuclear war makes me wonder if I really want to get married and have children some day	85 (50.6)	33 (19.6)	33 (19.6)	17 (10.1)
7. Thinking about the threat of nuclear war makes me want to live only for today and forget about the future	111 (65.7)	30 (17.8)	17 (10.1)	11 (6.5)

	Nothing	A bit	A fair amount	A lot
8. How much have you learned about the threat of nuclear war from each of the following:				
a. teachers	38 (23.3)	69 (42.3)	44 (27.0)	12 (7.4)
b. newspapers and magazines	35 (21.7)	61 (37.9)	44 (27.3)	21 (13.0)
c. books	66 (41.5)	61 (38.4)	22 (13.8)	10 (6.3)
d. television	10 (6.2)	39 (24.2)	59 (36.6)	53 (32.9)
e. family	38 (23.6)	68 (42.2)	34 (21.1)	21 (13.0)
f. friends	94 (58.4)	46 (28.6)	13 (8.1)	8 (5.0)

	None	A little	A lot	Total control
9. How much influence do you feel that you personally can have in preventing nuclear war?	72 (43.6)	59 (35.8)	31 (18.8)	3 (1.8)
10. How much influence do you feel your parents can have in preventing nuclear war?	58 (35.4)	74 (45.1)	30 (18.3)	2 (1.2)
11. How much influence do you feel Canada as a nation can have in preventing nuclear war?	12 (7.3)	44 (26.7)	84 (50.9)	25 (15.2)

	Yes	No
12. Have you taken any actions to prevent nuclear war?	30 (18.1)	136 (81.9)
13. Have your parents taken any actions to prevent nuclear war?	25 (15.6)	135 (84.4)

14. Below are some of the suggestions that have been made about what Canada can do to prevent nuclear war. Do you think the following will help prevent nuclear war?

	Yes	No	Undecided
a. supporting a nuclear freeze	77 (48.7)	35 (22.2)	46 (29.1)
b. the West having more nuclear weapons than the Soviets	21 (12.8)	114 (69.5)	29 (17.7)
c. testing the cruise missile	20 (12.2)	122 (74.4)	22 (13.4)
d. refusing to test the cruise missile	98 (61.2)	33 (20.6)	29 (18.1)
e. refusing to manufacture nuclear weapons	107 (66.5)	30 (18.6)	24 (14.9)
f. do our share of manufacturing nuclear weapons	28 (17.3)	107 (66.0)	27 (16.7)
g make Canada a nuclear weapon free zone	87 (53.7)	47 (29.0)	28 (17.3)
h. withdraw from NATO	31 (19.1)	87 (53.7)	44 (27.2)
i. support NATO	72 (44.4)	38 (23.5)	52 (32.1)
j. other suggestions you have			

VIII. General

1. Are you aware of what the Government is doing to prevent war of any kind?

Yes	No	Undecided
55 (32.7)	90 (53.6)	23 (13.7)

In your view, what else should the Government be doing in this regard?

_____

2. Are you aware that Canada is at the disarmament negotiating table in Stockholm, Vienna, Geneva and New York?

Yes	No
22 (13.5)	141 (86.5)

3. In your view, what is the most important reason why Canada has been at peace for forty years? (circle one)

(a)	Geography	6 (3.7)
(b)	Membership in NATO	23 (14.3)
(c)	Peaceful Nature of Canadians	80 (49.7)
(d)	No External Threat	40 (24.8)
(e)	Other (please specify)	12 (7.5)

4. What do you think is the most important way we can reduce the threat of nuclear war? (circle one)

(a)	Arms Control Negotiations	20 (12.4)
(b)	Unilateral Disarmament	11 (6.8)
(c)	People-to-People Exchanges	23 (14.3)
(d)	Bilateral Disarmament	81 (50.3)
(e)	Other	26 (16.1)

5. Are you concerned about other forms of warfare?

Yes	No
104 (64.6)	57 (35.4)

If so, which? (circle one only)

(a) Conventional Warfare 24 (21.1)

(b) Chemical Warfare 81 (71.1)

(c) Other (please specify) 9 (7.9) _____.

6. What do you feel is the likelihood of nuclear war occurring in your lifetime?

Very Low	Low	Moderate	High	Very High
23 (13.3)	27 (16.3)	83 (50.0)	23 (13.9)	11 (6.6)

7. Who do you think is responsible for whatever risk of nuclear war exists today?

USA	USSR	Both USA & USSR	Canada	Other (specify)
9 (5.5)	19 (11.6)	113 (68.9)	3 (1.8)	20 (12.2)

8. Would you expect children in the United States to hold the same views of these issues as you do?

Yes	No
109 (67.3)	53 (32.7)

9. Would you expect children in the Soviet Union to hold the same views on these issues as you do?

Yes	No
95 (59.4)	65 (40.6)

10. Do you think you would survive a nuclear war?

Yes	No
21 (13.0)	140 (87.0)

11. Would you want to survive a nuclear war?

Yes	No
71 (44.1)	90 (55.9)

12. In your view, is there a greater risk of you being affected by a nuclear war or a non-nuclear war?

Nuclear	Non-Nuclear
102 (68.0)	48 (32.0)

IX. General

1. In the last year have you seen anyone at school for advice or counselling about any of the following:

	Yes	No
a. choosing courses	21 (13.3)	137 (86.7)
b. problems with a class	47 (29.4)	113 (70.6)
c. problems with a teacher	42 (26.4)	117 (73.6)
d. problems at home	32 (2 .1)	127 (79.9)
e. personal problems	52 (32.5)	108 (67.5)
f. job or career plans	20 (12.7)	138 (87.3)
g. worries about unemployment	22 (13.7)	138 (86.2)
h. worries about nuclear war	44 (27.5)	116 (72.5)

2. In the past year have you seen a counsellor or therapist outside of school about any of the following:

a. choosing courses	11 (7.0)	147 (93.0)
b. problems with a class	19 (11.9)	140 (88.1)
c. problems with a teacher	18 (11.4)	140 (88.6)
d. problems at home	26 (16.5)	132 (83.5)
e. personal problems	31 (19.4)	129 (80.6)
f. job or career plans	17 (10.7)	142 (89.3)
g. worries about unemployment	18 (11.3)	141 (88.7)
h. worries about nuclear war	29 (18.2)	130 (81.8)

3. Is there anything you'd like to add? Please use the space below to tell us about your thoughts and feelings.

PLEASE READ EACH QUESTION AND CIRCLE ONE ANSWER.

4. How much difference would your involvement in the following activities make in preventing nuclear war?

	not at all	very little	some	a lot
a) Thinking about actions that might be taken to prevent nuclear war?	42(26.2)	56(35.0)	43(26.9)	19 (11.9)
b) Speaking to a friend or family member about your concerns about nuclear war?	67(41.9)	50(31.3)	37(23.1)	6(3.7)
c) Writing or speaking to a politician or government official about your concerns about nuclear war?	54(34.0)	43(27.0)	50 (31.4)	12(7.5)
d) Attending meetings of a peace group?	66(41.0)	32(19.9)	43(26.7)	20(12.4)

5. How much difference would your involvement in the following activities make in dealing with the possibility of nuclear war?

	not at all	very little	some	a lot
e) Making plans for self or family protection in the event of nuclear war?	58(37.2)	43(27.6)	38(24.4)	17(10.9)
f) Making plans for leaving Vancouver in the event of nuclear war?	83(52.9)	36(22.9)	34(21.7)	4(2.5)
g) Storing food or medicines for use after a nuclear war?	61(38.4)	39(24.5)	34(21.4)	25(15.7)
h) Reading materials or books on how to survive a nuclear war?	70(44.3)	38(24.1)	30(19.0)	20(12.7)
i) Attending meetings/activities about survival?	69(43.4)	37(23.3)	35(22.0)	18(11.3)

Appendix N
Elementary Treatment Group Posttest Frequencies

III. Here are some things others list as hopes. Circle the number that best describes how important each one is to you.

	Not important at all	Somewhat important	Important	Very Important
1. Good grades	0	3(2.9)	25 (24.5)	74 (72.5)
2. A good marriage	3 (2.9)	7 (6.9)	27 (26.5)	65 (63.7)
3. Good friends	0	5 (4.9)	34 (33.3)	63 (61.8)
4. Good health	0	1 (1.0)	13 (12.9)	87 (86.1)
5. A good job	1 (1.0)	1 (1.0)	24 (23.5)	76 (74.5)
6. An unpolluted environment	5 (4.9)	18 (17.6)	39 (38.2)	40 (39.2)
7. World peace	1 (1.0)	6 (5.9)	9 (8.8)	86 (84.3)
8. Children	4 (3.9)	16 (15.8	38 (37.3)	44 (43.1)
9. Happiness	0	4 (3.9)	18 (17.6)	80 (78.4)

IV. Here are some things others list as worries. Circle the number that best describes how important each one is to you.

1. Violent crime	11 (11.0)	15 (15.0)	38 (38.0)	36 (36.0)
2. My own death	9 (8.9)	11 (10.9)	28 (27.7)	53 (52.5)
3. Bad grades	12 (12.0)	7 (7.0)	21 (21.0)	60 (60.0)
4. Lack of jobs	10 (9.9)	8 (7.9)	31 (30.7)	52 (51.5)
5. My parents' death	4 (4.0)	6 (5.9)	9 (8.9)	82)81.2)
6. Nuclear war	6 (6.1)	6 (6.1)	12 (12.1)	75 (75.8)
7. Parents' divorce	16 (15.8)	8 (7.9)	22 (21.8)	55 (54.5)
8. Poverty	9 (9.4)	16 (16.7)	34 (35.4)	37 (38.5)
9. Nuclear power plant leaks	11 (10.9)	5 (5.0)	27 (26.7)	58 (57.4)

In the next section we ask what you are doing about some worries. There are no right or wrong answers. We are interested in your experiences and thoughts

V. Concerns about high unemployment rates
Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day
1. In the past month how often have you thought about high unemployment?	53 (52.5)	27 (26.7)	17 (16.8)	4 (4.0)
2. In the last month how often have you talked about high unemployment				
a. at home	56 (57.1)	32 (32.7)	7 (7.1)	3 (3.1)
b. at school	52 (55.3)	36 (38.3)	3 (3.2)	3 (3.2)
c. with your friends	82 (86.3)	10 (10.5)	2 (2.1)	1 (1.1)
3. In the last month how often have thoughts about high unemployment given you feelings of fear and worry?	52 (51.5)	32 (31.7)	13 (12.9)	4 (4.0)
4. In the last month have had any bad dreams about high unemployment?	95 (94.1)	5 (5.0)	0	1 (1.0)
5. How much have you learned about unemployment conditions from the following:				
	Nothing	A bit	A fair amount	A lot
a. Teachers or school	31 (31.0)	49 (49.0)	17 (17.0)	3 (3.0)
b. Newspapers and magazines	25 (25.0)	35 (35.0)	34 (34.0)	6 (6.0)
c. Books	52 (52.0)	28 (28.0)	14 (14.0)	6 (6.0)
d. Television	10 (10.1)	31 (31.3)	33 (33.3)	25 (25.3)
e. Family	29 (28.7)	35 (34.7)	19 (18.8)	18 (17.8)
f. Friends	72 (71.3)	21 (20.8)	4 (4.0)	4 (4.0)
	None	A little	A lot	Total control
6. How much influence do you feel that you personally can have in changing employment conditions	33 (33.0)	46 (46.5)	20 (20,2)	0

	None	A little	A lot	Total control
7. How much influence do you think your parents can have in changing employment conditions?	22 (21.8)	50 (49.5)	28 (27.7)	1 (1.0)
8. How much influence do you feel the Canadian government can have in changing employment conditions?	8 (7.9)	13 (12.9)	46 (45.5)	34 (33.7)

VI. Concerns about job and career plans

Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day
1. In the last month, how often have you thought about job and career plans?	14 (13.9)	55 (54.5)	22 (21.8)	10 (9.9)
2. In the last month, how often have you talked about job and career plans?				
a. at home	27 (26.7)	46 (45.5)	22 (21.8)	6 (5.9)
b. at school	61 (62.9)	31 (32.0)	4 (4.1)	1 (1.0)
c. with friends	51 (52.6)	36 (37.1)	9 (9.3)	1 (1.0)
3. In the last month how often have job and career plans given you feelings of fear or worry?	56 (55.4)	39 (38.6)	3 (3.0)	3 (3.0)
4. In the last month have you had any dreams related to job and career plans?	73 (73.7)	23 (23.2)	1 (1.0)	2 (2.0)

5. How much have you learned about job and career possibilities from each of the following?

	Nothing	A bit	A fair amount	A lot
a. teachers or school	33 (33.3)	54 (54.5)	12 (12.1)	0
b. Newspapers and magazines	31 (31.3)	35 (35.3)	24 (24.2)	9 (9.1)
c. Books	47 (48.0)	30 (30.6)	17 (17.3)	4 (4.1)
d. Television	16 (16.3)	34 (34.7)	25 (25.5)	23 (23.5)
e. Family	17 (17.3)	40 (40.8)	23 (23.5)	18 (18.4)
f. Friends	61 (61.6)	30 (30.3)	5 (5.1)	3 (3.0)

	None	A little	A lot	Total control
6. How much influence do you feel you personally have in making your job or career plans work out?	13 (13.1)	26 (26.3)	46 (46.5)	14 (14.1)
7. How much influence do you think your parents can have in making your job and career plans work out?	10 (10.1)	45 (45.5)	39 (39.4)	5 (5.1)
8. How much influence do teachers and schools have in making your career plans work out?	21 (21.2)	35 (35.4)	35 (35.4)	8 (8.1)

VII. Concerns about the threat of nuclear war

Circle the number that best describes your experience

	Not at all	A few times	Once or twice/week	Almost every day
1. In the last month how often have you thought about the threat of nuclear war?	12 (11.9)	47 (46.5)	24 (23.8)	18 (17.8)
2. In the last month how often have you talked about the threat of nuclear war				
a. at home	39 (39.0)	48 (48.0)	8 (8.0)	5 (5.0)
b. at school	5 (5.1)	17 (17.2)	54 (54.5)	23 (23.2)
c. with friends	49 (49.5)	37 (37.4)	11 (11.1)	2 (2.0)
3. In the last month how often have thoughts about the threat of nuclear war given you feelings of fear or worry?	25 (25.0)	49 (49.0)	22 (22.0)	4 (4.0)
4. In the last month have you had any had dreams about nuclear war?	79 (79.8)	13 (13.1)	2 (2.0)	5 (5.1)

	Not at all	Very little	Some	A lot
5. Thinking about the threat of nuclear war has affected my plans for the future _____	34(34.7)	30 (30.6)	22 (22.4)	12 (12.2)
6. Thinking about the threat of nuclear war makes me wonder if I really want to get married and have children some day	42(42.4)	26 (26.3)	20 (20.2)	11 (11.1)
7. Thinking about the threat of nuclear war makes me want to live only for today and forget about the future ___	60(60.0)	18 (18.0)	14 (14.0)	8 (8.0)

	Nothing	A bit	A fair amount	A lot
8. How much have you learned about the threat of nuclear war from each of the following:				
a. teachers	4 (4.0)	17 (17.0)	37 (37.0)	42 (42.0)
b. newspapers and magazines	21 (21.0)	37 (37.0)	32 (32.0)	10 (10.0)
c. books	45 (45.5)	31 (31.3)	13 (13.1)	10 (10.1)
d. television	9 (9.0)	32 (32.0)	34 (34.0)	25 (25.0)
e. family	27 (27.8)	40 (41.2)	15 (15.5)	15 (15.5)
f. friends	61 (61.0)	27 (27.0)	7 (7.0)	5 (5.0)

	None	A little	A lot	Total control
9. How much influence do you feel that you personally can have in preventing nuclear war?	35 (35.7)	46 (46.9)	15 (15.3)	2 (2.0)
10. How much influence do you feel your parents can have in preventing nuclear war?	35 (36.1)	50 (51.5)	11 (11.3)	1 (1.0)
11. How much influence do you feel Canada as a nation can have in preventing nuclear war?	11 (11.2)	19 (19.4)	58 (59.2)	10 (10.2)

	Yes	No
12. Have you taken any actions to prevent nuclear war?	21 (22.1)	74 (77.9)
13. Have your parents taken any actions to prevent nuclear war?	11 (11.6)	84 (88.4)

14. Below are some of the suggestions that have been made about what Canada can do to prevent nuclear war. Do you think the following will help prevent nuclear war?

	Yes	No	Undecided
a. supporting a nuclear freeze	46 (46.9)	21 (21.4)	31 (31.6)
b. the West having more nuclear weapons than the Soviets	8 (8.1)	81 (81.8)	10 (10.1)
c. testing the cruise missile	9 (9.1)	75 (75.8)	15 (15.2)
d. refusing to test the cruise missile	58 (58.6)	20 (20.2)	21 (21.2)
e. refusing to manufacture nuclear weapons	66 (67.3)	16 (16.3)	16 (16.3)
f. do our share of manufacturing nuclear weapons	12 (12.4)	67 (69.1)	18 (18.6)
g make Canada a nuclear weapon free zone	66 (68.0)	17 (17.5)	14 (14.4)
h. withdraw from NATO	13 (12.7)	69 (67.6)	20 (19.6)
i. support NATO	61 (60.4)	18 (17.8)	22 (21.8)
j. other suggestions you have			

VIII. General

1. Are you aware of what the Government is doing to prevent war of any kind?

Yes	No	Undecided
29 (28.7)	52 (51.5)	20 (19.8)

In your view, what else should the Government be doing in this regard?

_____

2. Are you aware that Canada is at the disarmament negotiating table in Stockholm, Vienna, Geneva and New York?

Yes	No
21 (21.2)	78 (78.8)

3. In your view, what is the most important reason why Canada has been at peace for forty years? (circle one)

(a)	Geography	1 (1.0)
(b)	Membership in NATO	29 (29.9)
(c)	Peaceful Nature of Canadians	36 (37.1)
(d)	No External Threat	23 (23.7)
(e)	Other (please specify)	8 (8.2)

4. What do you think is the most important way we can reduce the threat of nuclear war? (circle one)

(a)	Arms Control Negotiations	3 (3.0)
(b)	Unilateral Disarmament	3 (3.0)
(c)	People-to-People Exchanges	14 (14.1)
(d)	Bilateral Disarmament	69 (69.7)
(e)	Other	10 (10.1)

5. Are you concerned about other forms of warfare?

Yes	No
65 (65.0)	35 (35.0)

If so, which? (circle one only)

(a) Conventional Warfare 16 (24.2)

(b) Chemical Warfare 40 (60.6)

(c) Other (please specify) 10 (15.2) _____.

6. What do you feel is the likelihood of nuclear war occurring in your lifetime?

Very Low	Low	Moderate	High	Very High
18 (18.0)	17 (17.0)	48 (48.0)	11 (11.0)	6 (6.0)

7. Who do you think is responsible for whatever risk of nuclear war exists today?

USA	USSR	Both USA & USSR	Canada	Other (specify)
6 (6.0)	6 (6.0)	76 (76.0)	2 (2.0)	10 (10.0)

8. Would you expect children in the United States to hold the same views of these issues as you do?

Yes	No
75 (77.3)	22 (22.7)

9. Would you expect children in the Soviet Union to hold the same views on these issues as you do?

Yes	No
83 (84.7)	15 (15.3)

10. Do you think you would survive a nuclear war?

Yes	No
16 (16.7)	80 (83.3)

11. Would you want to survive a nuclear war?

Yes	No
33 (34.0)	64 (66.0)

12. In your view, is there a greater risk of you being affected by a nuclear war or a non-nuclear war?

Nuclear	Non-Nuclear
57 (61.7)	36 (38.3)

IX. General

1. In the last year have you seen anyone at school for advice or counselling about any of the following:

	Yes	No
a. choosing courses	11 (11.1)	88 (88.9)
b. problems with a class	24 (24.0)	76 (76.0)
c. problems with a teacher	20 (20.0)	80 (80.0)
d. problems at home	11 (11.0)	89 (89.0)
e. personal problems	19 (19.0)	81 (81.0)
f. job or career plans	11 (11.0)	89 (89.0)
g. worries about unemployment	10 (10.0)	90 (90.0)
h. worries about nuclear war	26 (26.0)	74 (74.0)

2. In the past year have you seen a counsellor or therapist outside of school about any of the following:

a. choosing courses	7 (7.3)	89 (92.7)
b. problems with a class	8 (8.2)	89 (91.8)
c. problems with a teacher	10 (10.2)	88 (89.8)
d. problems at home	11 (11.2)	87 (88.8)
e. personal problems	14 (14.3)	84 (85.7)
f. job or career plans	8 (8.2)	90 (91.8)
g. worries about unemployment	6 (6.1)	92 (93.9)
h. worries about nuclear war	12 (12.4)	85 (87.6)

3. Is there anything you'd like to add? Please use the space below to tell us about your thoughts and feelings.

PLEASE READ EACH QUESTION AND CIRCLE ONE ANSWER.

4. How much difference would your involvement in the following activities make in preventing nuclear war?

	not at all	very little	some	a lot
a) Thinking about actions that might be taken to prevent nuclear war?	19(19.6)	37(38.1)	30(30.9)	11(11.3)
b) Speaking to a friend or family member about your concerns about nuclear war?	43(44.8)	30(31.3)	18(18.8)	5(5.2)
c) Writing or speaking to a politician or government official about your concerns about nuclear war?	21(21.6)	26(26.8)	29(29.9)	21(21.6)
d) Attending meetings of a peace group?	24(25.0)	28(29.2)	23(24.0)	21(21.9)

5. How much difference would your involvement in the following activities make in dealing with the possibility of nuclear war?

	not at all	very little	some	a lot
e) Making plans for self or family protection in the event of nuclear war?	32(33.3)	32(33.3)	22(22.9)	10(10.4)
f) Making plans for leaving Vancouver in the event of nuclear war?	42(43.8)	33 (34.4)	16(16.7)	5(5.2)
g) Storing food or medicines for use after a nuclear war?	33(34.0)	22(22.7)	24(24.7)	18(18.6)
h) Reading materials or books on how to survive a nuclear war?	40(41.2)	26(26.8)	21(21.6)	10(10.3)
i) Attending meetings/activities about survival?	39(40.2)	27(27.8)	21(21.6)	10(10.3)

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