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## Children in fear of nuclear war

The somatic effects of atomic radiation are well documented but little is known about the psychological effects of growing up under the threat of nuclear war. A survey in Toronto, Canada, revealed that more young people had a fear of war than were worried about any other issue. With increasing age the preoccupation about nuclear war became less common, while worries about unemployment increased. Doctors, teachers and parents should take more interest in these profound concerns of youth.

A number of recent studies (1–6) have looked at the effects on children of growing up in the nuclear age. One of the objects of the present study was to place concerns about nuclear war in a broader context by asking questions not only about this subject but also about unemployment and job plans. We assessed how much young people thought or talked about the issues and with whom, how knowledgeable they felt, where they obtained their information, and how much influence or control they felt they and others could have over the areas of concern.

### Bombs and jobs

During a 10-day period in April 1984, a 103-item questionnaire was distributed by

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teachers to 1011 students in grades 6 to 13 (aged 12–18 years) in Toronto schools. The first question was “When you think of your life and future, what three things do you hope for most?”. This was followed by “What three things do you worry about most?”. Hopes and fears were classified into nine groups in accordance with the scheme of Solantaus (6), plus two additional ones. The rest of the questionnaire was of the multiple-choice type.

The fear of war was a first-mentioned worry exceeding all other fears of the respondents. In the overall sample, 29% mentioned fear of war first, while 20% placed employment concerns first. Among grade-7 students (aged 12–13 years), 37% gave fear of war as their first worry, while 10.5% ranked concern about work in first place. The first-place ranking of fear of war decreased with increasing age, and the converse was found for employment fears.

Canadian children in grade 7, like Finnish children in the study of Solantaus (6), stated that their first fear was war, and that their first hope was for employment (see figure).

Daily thoughts about the nuclear threat were reported by 10% of the students in Toronto, and almost the same proportion reported experiencing fear or anxiety daily. Considerably more students (37%) stated that they had daily thoughts about job prospects but only 14% felt daily fear or anxiety related to this matter; 28% of the students said the threat of nuclear war caused them to wonder if they should ever marry and have children, while 24% just wanted to live for the present.

A detailed examination of the responses of students reporting daily fears, thoughts or anxieties about the threat of nuclear war revealed that they were also more anxious than others about employment prospects. They talked more often about the threat of war at home, at school and with friends, and were more likely to say that thoughts about the nuclear threat had affected their plans. However, they were *less* likely to say that they and others could do nothing towards

**Responses of grade-7 children (aged 12–13 years) to the possibility of nuclear war**

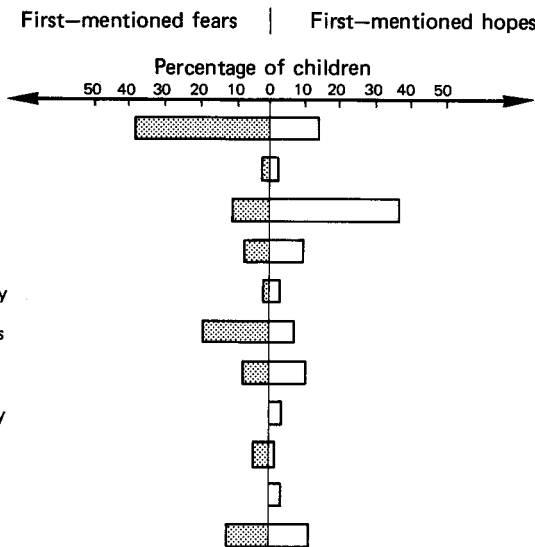
Frequency of feeling fearful and anxious during previous month	Amount of personal influence over the threat of nuclear war (%)			
	None	Some	A lot	Total control
Not at all	76.6	18.5	3.3	1.6
A few times	60.8	29.4	8.0	1.8
1–2 times/week	43.2	39.4	15.5	1.9
Almost every day	35.4	45.1	15.8	3.7

preventing war (see table). Between this “daily fear” group and others, no differences were found in sex distribution, first language, or history of themselves or their parents having taken any action to prevent war.

**Feeling of helplessness**

The group reporting an absence of fear or anxiety about the threat of war contained significantly more males than females, and this group was twice as likely as the “daily fear” group to report that they and others had no influence in preventing war. The threat of nuclear war was the least discussed of the three concerns in the home: 43% reported that there was no discussion of this subject at home. Television was the main source of learning about the nuclear threat, with newspapers and magazines second and schools third.

A majority of students (62%) felt that they could do nothing towards preventing nuclear attack. In comparison, nearly as many (59%) felt they could have some effect on employment prospects. Perceptions of parental influence in these areas followed the same pattern.



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**Distribution of first-mentioned hopes and fears among 86 Canadian grade-7 students (aged 12–13 years).**

The impact of the menace of nuclear war on the minds of millions of young people should not be ignored. Physicians, mental health professionals, teachers and parents should increase their awareness of the deep-seated concerns of youth about this matter. □

### References

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### *Paying dentists to prevent*

*A new method of paying dentists is currently being investigated in clinical trials in [the United Kingdom]. The trials, funded by the Department of Health and Social Security, entail paying dentists an annual fee for each child in their care rather than paying for each separate item of treatment. Ministers hope that this will encourage preventive rather than repair dentistry. Under the new system, dentists see young children much sooner and offer advice on preventing tooth decay. If the trial is successful, ministers will decide whether to extend the scheme to the whole country.*

—*British medical journal*, **293**: 459 (1986).

# Human case for disarmament

With a chillingly horrific account of what would happen to the city's population in the event of an atomic weapon strike, a recent conference here of International Physicians for the Prevention of Nuclear War has reminded us all of the personal stake we have in ensuring that a nuclear holocaust never happens.

The physicians, who recognize the first duty of their profession as saving human lives, say they are practising "a new-kind of medical specialty — the prevention of nuclear war." As a health hazard, nuclear war is certainly at the top of the list.

The doctors estimate that, in a war between the United States and the Soviet Union, more than 200 million people would die immediately. Another 60 million would die slower, more painful deaths from radiation sickness, injuries, and urns.

For instance, the detonation of a one-megaton weapon 3,000 feet over downtown Toronto would kill more than 600,000 people. And according to the physicians at the conference, the dead would be the lucky ones.

Another 800,000 people would be injured by the blast and firestorm of the bomb; flying glass, bricks and pieces of masonry would be hurled by 1,000 kilometre-an-hour winds, mowing down civilians as far away as Mississauga.

Blindness and eye damage from the "flash" would occur as far away as St. Catharines. Third degree burns could afflict up to 90,000 people, according to one speaker, that's more than all the intensive care beds in the world. And hospitals, medical supplies, doctors and nurses would largely be vaporized or destroyed in the blast, leaving other victims to die unattended and in pain.

The vision of Toronto — and cities like it around the world — thus levelled, with citizens screaming in agony in rubble-strewn streets,

vividly demonstrates the point of the conference. The possibility of nuclear war is not an issue only for politicians. If the possibility ever translates into reality, it will be measured in the death and misery of ordinary people everywhere.

As Dr. Frank Sommers of the Canadian Physicians for Social Responsibility put it, "The bottom line is that Soviet flesh and American flesh burn at the same temperature."

As shocking a remark as that may be to contemplate, it's a salient point as American and Soviet negotiations on mutual arms reduction get underway in Geneva. Those nations now control some 50,000 nuclear weapons — more than enough to obliterate the planet. It will be important for those teams — and the whole world — to keep the human factor in mind during their deliberations.

THE GLOBE AND MAIL, SATURDAY, DECEMBER 5, 1981

THE FIRST CANADIAN symposium on the medical consequences of nuclear weapons and nuclear war will take place today. It has been organized by psychiatrist Dr. Frank G. Summers and will be in the auditorium of the Medical Sciences Building at the University of Toronto.

It is aimed at health professionals and the public is invited to attend. The fee is \$30 for adults, \$10 for students.

It is sponsored by three groups — the faculty of medicine of the University of Toronto, Physicians for Social Responsibility, and the International Physicians for the Prevention of Nuclear War Inc.

Among the speakers will be Dr. Ian Carr, professor of pathology at the University of Saskatchewan; William Epstein, president of Pugwash Canada; George Ignatieff, president of the United Nations Association of Canada and chancellor of the University of Toronto; and two U of T professors, Dr. Frederick B. Fallis, chairman of family and community medicine at the U of T, and Eric Fawcett, professor of physics; Dr. Bernard Lowen, professor of cardiology at Harvard; and Dr. Frederick H. Lowy, dean of medicine and professor of psychiatry at the U of T.

And from Russia, Dr. Mikhail I. Kuzin, director of the Vishnevsky Institute of Surgery in Moscow.