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The FALLOUT PROTECTION Booklet: (II) A Comparison Among Four Groups of Differing Levels of Interest in Shelter Construction

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As part of our work under Contract OCD-OS-62-19 with the Office of Civil Defense, Department of Defense, we conducted a study of the impact of the Fallout Protection booklet which was published by OCD in December of 1961. While collecting data specific to that objective, we also were able to gather other useful information relevant to public information about and attitudes toward civil defense.

Report #1 presented data on the accuracy of public knowledge about nuclear attack and civil defense, the favorability of public attitudes toward civil defense measures, other estimates of the public as to the threat of nuclear war and the relative effectiveness of various shelter inducements and inducement agents, and indices of public exposure to shelter information. Report #1 also analyzed attitudinal and demographic correlates of shelter knowledge, beliefs, and plans.

This report is the second of a series of four. In this report, we will present data from an analysis of respondents, who were classified into four levels of interest with respect to constructing family shelters.

Report #3 will summarize a methodological study which compared the pre-test responses of those who responded, refused, or were non-reachable on the post-test. Finally, Report #4 will present the major findings of the impact of the Fallout Protection booklet.

The Sample

Characteristics of the sample as well as criteria for selection and interviewing of the respondents were discussed fully in Report #1. For those readers who have not received that report, we can summarize by saying that the pre-test consisted of 3,514 adults who were interviewed by telephone in December of 1961 in eight American cities: Minneapolis; Boston; Oklahoma City;

Santa Monica, California; Lansing; Manhattan, Kansas; Chapel Hill, North Carolina; and Seattle. The analysis reported here is based on the pre-test data only.

Outline of the Report

During the initial interview, we asked three questions related to the respondent's level of interest in shelter construction. The first question asked whether the respondent had plans to build a shelter. If he said he had plans, we asked him whether he had investigated methods of building a shelter. If he said he did not have plans, we asked him whether he had thought about building a shelter. Responses to these questions produced the following data:

Responses	Percentages
Has a shelter now	1.4%
Has plans and has investigated	5
Has plans but has not investigated	2
Has no plans but has thought and investigated	13
Has no plans and has thought but not investigated	27
Has no plans and has not thought	52
Total (N)	3,514

From these responses, we classified respondents into four groups: (1) has a shelter (1.4%); (2) has high interest in a shelter--has plans (7%); (3) has only a moderate interest in a shelter--no plans but has thought or investigated (40%); and (4) has low interest--has no plans and has not thought (52%).

Our analysis compares the responses of these four groups on several questions related to perceptions of nuclear attack, knowledge of and attitude toward civil defense, exposure to shelter messages, possible values of shelter inducements or inducement agents, general media behavior, and demographic

characteristics. The data produced by the analysis are reproduced in Appendix A of this report, and will be referred to in the discussion of the results.

Results of the Analysis

The four groups of respondents did not differ in their estimates as to how soon we could expect a war or as to whether we are moving more toward war or more toward peace. Those with no interest in building a shelter, however, were less likely to believe that there is a likelihood of a major war at all between the U.S. and Russia (see Table 1). On the other hand, given that they were to become convinced that Russia would start a war, those with little or no interest in building a shelter were more favorable toward a "first strike" by the U.S. (Table 2).

The four groups did not differ significantly in their estimates as to where bombs or missiles would fall in the U.S., given an attack; however, they did differ in their estimates as to whether they could do something now to protect themselves against blast, fire, or fallout if bombs were to hit their community directly. In general, the more favorable the respondent was toward shelters, the more likely he was to believe that he could do something to protect himself against all three consequences of nuclear attack. The percentage who thought they could protect themselves was two to three times as high for the "high interest" group as it was for the "no interest" group (Tables 3-4).

Those with a high interest in shelters were somewhat less likely to believe that they would be killed or injured by blast or fire if bombs or missiles exploded somewhere else; however, the four groups did not differ significantly in their estimates as to whether they would be killed or made

sick by fallout radiation. About three respondents out of four in all of the groups thought that radiation would make them sick or kill them (Table 5).

As might be expected, Table 6 indicates that those with high interest in shelters were more likely to believe that shelters would provide at least some chance of escaping radiation sickness; however, it is interesting to note that seventy-one per cent of those who said they had not thought about building a shelter and had no plans to build one still believed that shelters would help.

There was a consistent relationship between interest in shelters and knowledge about nuclear radiation and shelters. We asked fourteen factual questions and found in every case that those with a high interest in shelters were more likely to give the correct answer than were those with low interest (the percentages of each group responding correctly on the fourteen items are reproduced in Table 7).

Similarly, we found a positive and consistent relationship between a respondent's interest in shelters and the favorability of his attitudes toward eighteen opinion statements relevant to radiation and shelters (Table 8). There was a significant difference in attitude among the four groups on sixteen of the eighteen opinion statements. There were no differences on two of the statements. On the first of these statements, nine out of ten respondents said that they believe that "it is a person's duty to try to live as long as he or she can." On the second statement, only three out of ten disagreed with the proposition that "if an attack comes, a person with a shelter will have to protect it from neighbors who will try to break in." For both of these statements, there was uniformity in response among the four groups.

Whether because of avoidance or suppression of an unpleasant fact or because of ignorance, only fifty-seven per cent of those with "low interest"

in shelters said that they thought the government would like them to build a family fallout shelter. By comparison, about three out of four of those with moderate or high interest acknowledged that the government did favor such a program (Table 9).

After excluding those who already had shelters, we compared the other three groups' responses to five possible shelter inducements and five possible kinds of sources which might recommend for or against shelter construction (Tables 10-11). A free shelter was viewed as the best possible inducement and the recommendation given by physicists or other scientists was viewed as the most important source of information. For purposes of this analysis, however, we primarily were interested in the differences among the three interest groups. We found a significant difference among the groups with respect to all five possible inducements and all five potential sources.

In general, the higher the respondent's interest in shelters, the more likely he was to feel that his chances of building a shelter would increase if he got the materials and provided his own labor, if he could use it for an extra room, etc. The differences between the high interest group and the low interest group were most striking on two of the items. First, seventy-four per cent of those expressing high interest said they would be more likely to build a shelter if the government provided the materials and asked them to provide the labor. The corresponding figure for the low interest group was only forty-three per cent. Second, sixty-seven per cent of the high interest group said an income tax allowance would increase the likelihood of building a shelter. Again, the corresponding figure for the low interest group was only thirty-five per cent.

The high interest group were significantly more likely to say that the recommendations given by physicists, other scientists, the President of the

United States, or other people in their neighborhoods would make a difference. The lower interest groups were significantly more likely to say that the "opinion of my church would make a difference."

As we would have expected, the data in Table 12 indicate that those with a high interest in shelters were more likely to say that they had been exposed to various communication situations involving nuclear radiation and fallout shelters. The four groups did not differ with respect to attendance at such movies as On the Beach or Hiroshima; however, there were significant differences among the groups on each of the other ten communication situations. In every case, the higher the respondent's interest, the higher the likelihood that he had been exposed to the shelter communication situation. The figures with respect to government literature are particularly striking. Slightly less than half of the high interest groups said they had received a copy of Your Family Fallout Shelter and slightly more than half said they had read other government literature. By contrast, only eleven to fifteen per cent of the low interest group had received Your Family Fallout Shelter and only about one in five had read other government literature.

As possible indicators of channel selectivity among various groups, we indexed the levels of respondent exposure to television, radio, and newspapers. There were no differences in exposure to television or radio among the four groups. There was a slight tendency for those with high interest to be more active consumers of the newspaper; however, the obtained differences were not significant enough to affect channel selection for those concerned with distributing civil defense materials (Table 13).

Detailed demographic analyses are reported in Table 14. The results of these analyses corroborated our earlier findings (see Report #1). People who

express high interest in shelters are much more likely to be under thirty-five years of age and people expressing no interest are much more likely to be over fifty years of age. Those with low interest are also significantly more likely to have no children left at home and somewhat more likely not to have children at all. Those with low shelter interest are also more likely to have an elementary school or a high school education, while those with high shelter interest are much more likely to have completed university work or to have taken post-graduate work as well.

The tendency for home-owning to be correlated with shelter interest was substantiated more clearly in this analysis than in those analyses presented in Report #1. Forty-three per cent of those with no interest in shelters said they rented their housing or lived with others. Correspondingly, only twenty-three per cent of those with high interest in shelters were renting or living with others.

Finally, no relationship of any significance was detected between shelter interest and either religious or political preference.

Summary and Discussion

In this analysis, we compared those who expressed high interest in shelters with those who evinced little or no interest in shelters. The purpose of the analysis was to obtain a clearer picture of the characteristics of the maximally and minimally receptive audiences for civil defense messages. Such information will be useful to us in designing our experimental program on the relationship between the design of messages and attitude change and information increase on the part of the public. It is hoped the information also will be of interest to those charged with determining policy for public information in the Office of Civil Defense.

We found that those with a high interest were more willing to believe in the likelihood of war between the U. S. and the Soviet Union but that they were less willing to suggest that the U.S. should strike first. The high interest group did not differ from the low interest group with respect to estimates of the timing of a possible war, nor did they differ in general optimism-pessimism as to how world events are moving.

The high interest groups did not differ from the low interest groups in their predictions as to whether bombs would fall on their communities or in their areas; however, the high interest groups were more likely to believe that they could do something now to protect themselves from blast, fire, or fallout if bombs were to fall in their community. They also were less likely to believe that they would be killed or injured by blast or fire if bombs fell elsewhere. The two groups were equally strong in their belief that they would be killed or made sick from fallout radiation--given that bombs were to fall outside of their community.

Those expressing a high interest in shelters were more likely to believe that shelters would help in case of attack. They also knew more about nuclear radiation and civil defense and were more favorable to civil defense in their general beliefs about attack and shelters. We found, though, that high and low interest groups were equally committed to the proposition that a man has a duty to live as long as he can. The two groups also were equally committed to the proposition that a person with a shelter would have to protect it from his neighbors in the event of an attack.

High shelter interest respondents were more likely to feel that their shelter plans would be influenced by such things as a free shelter, free materials with labor provided by the individual, an income tax deduction for

shelter construction, and use of a shelter for an extra room. For each such inducement, they were more likely than were the low interest groups to respond that "it would make a difference." The difference between the two groups was particularly large on two of the inducements: free provision of materials by the government with the labor to be provided by the individual, and a provision for deducting costs of shelter construction from personal income tax.

Those with a high interest in shelters also expressed more of an interest in learning the opinions of physicists, other scientists, the President and other public officials. They also were more likely to say they would be influenced by what their neighbors did. The low interest group, on the other hand, said they would be more influenced by the opinions of their church.

Respondents with a high interest in shelters tended to be thirty-five years old or younger, to own their own home, to be relatively highly educated, and to have children still living at home. Those with minimal interest tended to be over fifty years of age, not to have any children--or, at least, not to have any still at home, to be relatively less educated, and to either rent their home or else live with others.

Those with high interest did not differ from those with low interest as far as general exposure to the public media is concerned. All groups tended to have similar patterns of viewing television, listening to radio, and reading newspapers. High interest groups, however, were significantly more likely to report exposure to shelter communication situations.

This difference was especially strong with respect to government literature on shelters, such as Your Family Fallout Shelter. High interest groups were much more likely to have read these materials. These data on shelter communication exposure lend some support to the proposition that government publications

have had an effect on public attitudes and information level; however, the characteristics of such effects need considerable further study. It is defensible to assume that civil defense messages, like messages in most substantive areas, are selected for attention by those who already have some commitment to the position taken by the messages before they are exposed to them. In other words, much shelter communication behavior can be characterized as information—seeking to support a previously determined position. Considerable work is needed if we are better to understand the nature of the information seeking process with respect to civil defense messages and, more importantly, if we are to discover ways in which those who do not seek civil defense messages can be attracted to them. Work on information-seeking will constitute a major part of our experimental communication program for the Office of Civil Defense in the next few years.

Appendix A Analyses of responses given to several attitudinal and information questions relevant to the threat of nuclear war and problems of civil defense.

These 14 analyses compare responses among those who (a) have home fallout shelters, (b) indicated a high interest in construction, (c) indicated a moderate interest in construction, or (d) indicated little or no interest in constructing a home shelter.

Table A-1. Estimates as to the likelihood of a major war:

Questions -- Responses	Responses (in percentages) Have Shelter	High Interest	Moderate Interest	Low Interest
1. It is likely that there will be a major war between the U.S. and Russia, etc.	43%	38%	37%	31%
2. If war does come, it will come in 2 years or less.	31	18	20	19
3. In general, we are moving more toward war (rather than more toward peace-- or neither).	31	35	35	32

Table A-2. Attitudes toward a U.S. "first strike:"

Question -- Responses	Responses (in percentages) Have Shelter	High Interest	Moderate Interest	Low Interest
"Suppose you were to become convinced that Russia would start a war. How do you feel about the U.S. striking first-- before Russia has a chance to attack us?"				
In Favor	41%	46%	52%	50%
Opposed	55	43	35	36
Undecided	4	11	13	14

Table A-3. Estimates as to where bombs or missiles would fall in the U.S., given an attack:

Responses	Responses (in percentages) Have Shelter	High Interest	Moderate Interest	Low Interest
Bombs would fall on my community.	63%	72%	69%	71%
Bombs would fall in this part of the country.	22	21	20	16
Bombs wouldn't fall in this part of the country.	14	6	10	11
No answer.	1	1	1	2

Table A-4. Estimates as to whether an individual can do something to protect against blast, fire, or fallout dangers--given that bombs or missiles will drop on or close to his community:

Responses	Responses (in percentages) Have Shelter	High Interest	Moderate Interest	Low Interest
1. I could do something now to protect against the blast of the bombs.	65%	43%	29%	20%
2. I could do something now to protect against fire caused by bombs.	53	49	35	25
3. I could do something now to protect against radioactive fallout.	69	57	40	26

Table A-5. Estimates of blast, fire, or fallout dangers to the individual--given that his community is not hit directly by bombs or missiles:

Responses	Responses (in percentages) Have Shelter	High Interest	Moderate Interest	Low Interest
1. I think I would be killed or injured by the blast from bombs or missiles exploding somewhere else.	31%	44%	50%	48%
2. I think I would be killed or injured by fire.	37	35	41	39

Table A-5 (continued)

Responses	Responses (in percentages) Have Shelter	High Interest	Moderate Interest	Low Interest
3. I think I would be killed or made sick by fallout radiation.	72%	81%	81%	74%

Table A-6. Estimates of the utility of shelters in escaping radiation sickness:

Responses	Responses (in percentages) Have Shelter	High Interest	Moderate Interest	Low Interest
Given that they had fallout shelters, people who lived far enough away to escape the bomb blast would have:				
1. A very good or some chance of escaping radiation sickness.	90%	88%	83%	71%
2. Very little or no chance of escaping radiation sickness.	10	12	17	29

Table A-7. Accuracy on 14 statements of fact relevant to nuclear radiation and fallout shelters:

Statements of Fact	Percentage Responding Favorably Have Shelter	High Interest	Moderate Interest	Low Interest
1. If you get exposed to radiation at all, you are sure to die (disagree).	84%	92%	83%	75%
2. Fallout from just one bomb may cover thousand of square miles (agree).	73	78	75	70
3. There is a new pill you can take that will protect you against radioactive fallout (disagree).	55	73	66	60
4. If someone has radiation sickness, you should avoid getting near him so you won't catch it yourself (disagree).	69	75	62	55

Table A-7 (continued)

Statements of Fact		Percentage Responding Favorably: Have Shelter	High Interest	Moderate Interest	Low Interest
5.	An atomic war would contaminate the water supply and almost everyone would die before the water was fit to drink again (disagree).	65%	75%	61%	51%
6.	An atomic war would destroy all food and ways of producing food, so you would die soon--even if you were protected by a shelter (disagree).	69	73	58	46
7.	A plastic suit with filtering mask is plenty of protection against fallout (disagree).	55	63	51	43
8.	Most fallout rapidly loses its power to harm people (agree).	59	55	45	38
9.	After a nuclear attack, if you filter the dust out of the air, the air will be safe to breathe (agree).	43	51	40	35
10.	The radioactivity after an attack would make the earth, or some areas of it, impossible to live in for years or even centuries (disagree).	45	42	29	28
11.	If we are attacked, great weather storms from the explosions would sweep the nation (disagree).	31	39	29	26
12.	A fallout shelter should have an air tight door to guard against radiation (disagree).	35	32	20	17
13.	Any adequate family shelter would cost at least three hundred dollars (disagree).	28	20	11	11
14.	You can not see fallout (disagree).	12	13	9	12

Table A-8. Favorability of beliefs on 18 statements of opinion relevant to nuclear radiation and fallout shelters:

Statements of Opinion	Percentages Responding Favorably			
	Have Shelter	High Interest	Moderate Interest	Low Interest
1. Building a shelter is like hiding in a hole--only a coward would do it (disagree).	92%	96%	94%	86%
2. It is a person's duty to try to live as long as he or she can (agree).	88	90	90	88
3. An attack would destroy the morale of the U.S. so much that it would not be possible to rebuild the country (disagree).	88	95	88	83
4. Building a shelter is wrong in the eyes of God (disagree).	84	92	87	78
5. It would take a little while after an attack, but law and order would be restored (agree).	80	88	82	75
6. If we build shelters for everyone, war will be more likely to happen (disagree).	80	84	79	70
7. If a person builds a family shelter, his neighbors and friends probably will laugh at him or think he is crazy (disagree).	73	75	72	67
8. After an attack, life would be such a savage man-to-man struggle that it wouldn't be worth living through (disagree).	76	81	70	60
9. There isn't any safe way to live in this world any more, so it's just a question of what chances or risks we want to take (disagree).	74	76	68	62
10. I wouldn't want to live through an attack if I knew most of my friends and neighbors were dead (disagree).	67	81	68	56
11. Most people have the space to put in a shelter if they really want one (agree).	78	75	69	58
12. Scientists don't understand things well enough to make predictions that we can rely on (disagree).	69	71	64	53

Table A-8. (continued)

Statements of Opinion	Percentages Responding Favorably: Have Shelter	High Interest	Moderate Interest	Low Interest
13. The ending or saving of the world is up to the will of God. Man can't protect himself (disagree).	65%	69%	61%	50%
14. Parents have a duty to protect their children by building a fallout shelter (agree).	78	62	58	46
15. A person who builds a shelter now will be respected by his neighbors (agree).	35	39	35	28
16. If an attack comes, a person with a shelter will have to protect it from neighbors who will try to break in (disagree).	29	31	30	31
17. Living in a shelter for a long period of time would drive many people insane (disagree).	33	41	32	23
18. Shelters cost more than most families can afford (disagree).	47	39	27	19

Table A-9. Opinions as to whether the government wants the public to construct family fallout shelters:

Responses	Responses (in percentages): Have Shelter	High Interest	Moderate Interest	Low Interest
1. I think the government would like me to build a family fallout shelter.	80%	79%	74%	57%
2. I do not think the government would like me to build a family fallout shelter.	10	10	12	21
3. I don't know whether the government would like me to build a family fallout shelter.	10	11	14	22

Table A-10. Estimates of the extent to which 5 possible shelter inducements would influence the decisions to build a shelter:

Responses	Responses (in percentages) High Interest	Moderate Interest	Low Interest
1. If the government offered to build me a free shelter, I would be willing to have one.	81%	81%	67%
2. If the government provided the materials and asked me to provide the labor, this would make me more likely to build one.	74	68	43
3. If I could use a shelter for an extra room, this would make me more likely to build one.	62	60	44
4. If the government allowed me to take my building expenses off my income tax, this would make me more likely to build one.	67	56	35
5. If someone offered to come to my house to explain how and where to build one, this would make me more likely to build one.	39	32	21

Table A-11. Estimates of the extent to which 5 possible communication sources would influence the decision to build a shelter:

Responses	Responses (in percentages) High Interest	Moderate Interest	Low Interest
1. I would want to know the recommendations given by physicists or other scientists.	89%	87%	72%
2. I would be interested in getting opinions of other public officials.	66	65	52
3. If the President of the United States asked us to build a shelter, it would make a difference.	54	55	43
4. The opinion of my church would make a difference in my own plans.	27	35	33
5. If several other people in my neighborhood build shelters, it would make a difference.	27	30	19

Table A-12. Level of exposure to 12 possible communication situations involving nuclear radiation and fallout shelters:

Responses		Response (in percentages) Have Shelter	High Interest	Moderate Interest	Low Interest
1.	I have seen discussions of radiation and shelters in my local newspaper.	76%	83%	72%	65%
2.	I have talked with somebody on either the advantages or disadvantages of fallout shelters.	71	85	65	48
3.	I have read one or more articles about radiation and shelters in national magazines.	55	65	49	39
4.	I have received a copy of the government booklet called Your Family Fallout Shelter.	41	46	15	11
5.	I have read other government literature on fallout shelters.	53	51	24	17
6.	I saw the movie On the Beach.	24	20	17	16
7.	I read the book of the same name.	26	18	13	10
8.	I have gone out to hear speeches about nuclear radiation and fallout.	41	30	13	10
9.	I have heard sermons in church on the subject of fallout or fallout shelters.	26	16	16	12
10.	I saw the movie, Hiroshima.	20	15	12	14
11.	I read the book of the same name.	22	16	11	10
12.	A fallout shelter salesman has contacted me.	6	9	3	3

A

Table A-13. Level of exposure to radio, television, and newspapers:

Questions--Responses	Responses (in percentages) Have Shelter	High Interest	Moderate Interest	Low Interest
1. About how many hours have you watched television in the past week?				
No. of Hours				
1-5	33%	31%	28%	32%
6-15	26	35	33	30
16 or more	27	23	26	25
Not at all	14	11	13	13
2. About how many hours have you listened to radio in the past week?				
No. of Hours				
1-5	47%	40%	40%	38%
6-15	14	23	23	22
16 or more	16	22	21	18
Not at all	23	15	16	22
3. Did you look into or read a newspaper yesterday?				
Responses				
Yes	88%	90%	84%	83%
No	12	10	16	17

A

Table 14. Demographic data:

Questions--Responses	Responses (in percentages) Have Shelter	High Interest	Moderate Interest	Low Interest
1. What is your age?				
Ages				
35 or less	43%	44%	43%	28%
36-50	29	40	33	32
51 or more	26	15	23	37
No answer	2	1	1	3
2. Do you have any children? How many still live at home?				
Responses				
3 or more at home	23%	31%	28%	17%
2 at home	13	25	21	14
1 at home	27	20	18	17
None at home	16	8	12	23
No children	16	16	21	29
3. How many grades of school have you finished?				
No. of Grades				
8 or less	8%	4%	10%	14%
9-12	37	36	46	48
13-14	6	17	14	13
15-16	29	24	17	16
17 or more	20	19	13	9
4. Do you own your home or rent it?				
Responses				
Own or buying	78%	77%	69%	57%
Rent or live with others	22	23	31	43

Table A-14 (continued)

Questions--Responses	Responses (in percentages) Have Shelter	High Interest	Moderate Interest	Low Interest
5. Do you have a preference for a particular religious faith? Which one?				
Responses				
Protestant	71%	70%	67%	60%
Roman Catholic	19	18	21	20
Jewish	0	3	2	5
No preference	10	9	10	15
6. Generally speaking, do you usually think of yourself as a Republican or a Democrat?				
Responses				
Republican	45%	38%	37%	34%
Democrat	47	51	52	53
Other	8	11	11	13