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ABSTRACT

This paper examines the effect of participation in an Outward Bound course on participant levels of situational fears. Patterns of situational fears were studied with regard to: (1) fears before, immediately after, and 1 year following the Outward Bound course; (2) the intensity of these fears; and (3) relationship of fears to gender, age, and length of course. The sample included 311 students (74 percent male) and 53 instructors. Most of the 23 specific situational fears identified were sociological or psychological in nature, rather than physical. Results showed a trend toward reduced levels of fear at posttest and 1-year follow-up. Instructors typically overestimated how fearful their students were for most situations. Immediately after the course, older students and males reported lower levels of fear than did younger students and females. Results failed to show a noteworthy effect due to course length. (KS)

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THE IDENTIFICATION AND MODIFICATION OF SITUATIONAL FEARS ASSOCIATED WITH OUTDOOR RECREATION

by

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ABSTRACT:

This study identified what types of situational fears were held by participants in one type of outdoor recreational program - Outward Bound. Levels of fear for each situation were measured for three time periods, baseline, immediately after the course and one year after the course ending. Scores from both students and course instructors were compared to determine levels of agreement. In addition, a MANOVA design used the variables of gender, age and length of course to identify any significant differences in each measurement phase.

Results of the study, identified and ranked in order of "fearfulness" 23 situations which elicit a fear response. Instructors consistently overestimated the level of situational fears held by their students. For the baseline measurement, gender played an important role in generating a number of differences in levels of fears. For the post course measurement, age and gender both generated a substantial number of differences. It was concluded that gender, and to a lesser degree age, were important variables with respect to levels of situational fears. Moreover, it appeared that participation in Outward Bound was an effective method of reducing situational fears.

Keywords: Anxiety, Fear, outdoor recreation, Outward Bound

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Introduction

In a previous work it was demonstrated that the level of trait anxiety could be reduced through participation in an Outward Bound course (Ewert, 1987). The purpose of this present study is to investigate what effect participation in Outward Bound has on the levels of situational fears of participants. More specifically, this study was concerned with what participants were afraid of, what level of fear did they experience and how long-lasting were any changes in these levels of fears.

The ability of man to adapt to a variety of situations is based, in part, on his ability of foreseen events. Seyle (1950) suggests that this effective adaptation an be considered one of the hallmarks of a successful life. Unfortunately, the price paid for this constant vigilance are heightened levels of anxiety and fears, both real and imaginary. Indeed, anxiety has become the most pervasive psychological phenomenon of our time (Levitt, 1980). These anxieties can be related to one's personality (trait anxiety) or by recognition of some source of threat facing the individual, either real or illusionary (situational anxiety).

In the outdoor recreational setting, the participant is sometimes faced with situations which are perceived as potentially threatening. This can be true if the individual is part of a program which deliberately offers activities such as rockclimbing and solo camping as part of the experience. In addition to the physical threats often present in the outdoor environment, the individual is also faced with a host of social threats, especially if they are part of a group of relative strangers. This situation is common in many public and commercial recreation programs.

The purpose of this study was to identify change in pattern of these situational fears as participants were exposed to one type of outdoor recreational program-Outward Bound. The patterns of situational fears was studied from the context of: (1) what individuals were afraid of before, immediately after and one-year following their Outward Bound course, and (2) what was the intensity of these fears and (3) were these patterns of fear related to the variables of gender, age, or length of course. With the exception of Crume and Ellis (1984) and Ellis (1972) little empirical work has been done on the specific sources and levels of fear in the outdoor recreational environment.

The Concepts of Fear and Anxiety

Fear and anxiety are both learned responses (Schachter and Singer, 1962) and instinctual behaviors (Rachman, 1974). While fast moving water or the sudden movement of a snake are examples of sources of threat eliciting instinctual fear; not fitting into a group or lacking self-confidence are often situations which the individual learns to fear.

Moreover, while fear has generally been associated with feelings of alarm or disquiet emerging from a specific source of perceived threat, anxiety is often thought of as feelings of apprehension unrelated to a tangible source of stimulation (Hauck, 1975). This distinction, however, is behaviorally and conceptually difficult to distinguish (Leary, 1983) and for the purpose of this study, fear and anxiety are considered synonymous and will be used interchangeably.

In addition, fear has been categorized into state and trait anxieties (Cattell and Scheier, 1958). Within this framework, trait anxiety reflects a disposition toward a particular level of fear which is relatively stable and not prone to change (Spielberger, 1966). State anxiety refers to those fears held by an individual which are responsive to the immediate situation or circumstance (Zuckerman, 1976).

In an earlier work (Ewert, 1986) it was reported that physical dangers and socially-based fears were the most often reported state or situational fears in the outdoor recreational setting. Physical dangers included fear of: falling, fast or deep water and lack of food. Non-acceptance by the group they were in and not being able to keep up with the rest of the party were examples of commonly reported social-based fears. This present study extends that previous research by examining the situational (state) fear aspect of one widely-used outdoor recreational program, Outward Bound, using a larger population and course instructor observations as behavioral checks.

The Modification of Fear

Gray (1974) reports that there are four types of stimuli associated with fear: intensity, novelty, specific situations (e.g. steep cliffs or darkness) and social interaction. Past research in clinical psychology has suggested three salient techniques for reducing levels of fear: systematic desensitization, flooding and modeling (Rachman, 1974). Systematic desensitization involves a gradual exposure to the source of the fear. Flooding refers to a prolonged exposure to the

fearful stimulation in an effort to inure the individual to the fear. Modeling utilizes the observation of effective fear coping patterns in others and the rehearsal of these newly learned behaviors. While McReynolds (1976) indicates that there appears to be little difference in the overall effectiveness between the various techniques, a gradual exposure to the fearful stimuli coupled with a learning of fear-coping behaviors appears to be the most widely emulated principle in reducing levels of fear.

The Outward Bound process is designed to facilitate personal growth and development through the structured use of outdoor recreational activities such as rock-climbing, white-water rafting and solo camping. It was reasoned that the Outward Bound would be an effective process for studying fear for two reasons. First, the very nature of the activities (i.e. activities which are novel, very intense and involve both instinctual and learned types of fears) would suggest that participants experience fear at various times during the course. Because involvement in Outward Bound entails a high degree of activity in often remote wilderness settings, these feelings of fear are often compounded by an interaction between a cognitive appraisal of a real or apparent threat and a heightened level of physiological arousal (Mayes, 1979). The participant not only perceives a potential threat such as a looming mountain to be climbed, but may be a little cold and tired at the same time. Along with this lack of homeostasis is also the uncertainty present in many of these types of outdoor recreational activities. Uncertainty plays a pivotal role in the development of fear (Leary, 1983: 102-104; Warburton, 1979) with individual concern in the areas of uncertainty about: outcomes, possible responses and potential roles the individual will have to assume. All of these fear-enhancing components are present in an Outward Bound course.

The second reason for using Outward Bound as the medium for study is the contrast and similarity this process provides to clinical psychology. While far removed from the clinical setting and procedures of therapeutic drug use and office visits, the Outward Bound process emulates the clinical techniques in fear reduction of gradual desensitization and modeling with opportunities for rehearsal. Thus, the assumptions underlying this study were: (1) the Outward Bound environment would be an acceptable setting to study fear because fear and anxiety would be viable active components of the experience and (2) the Outward Bound process would be effective in reducing levels of specific fears.

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The Setting

Outward Bound is a worldwide educational program that utilizes outdoor recreational activities such as rapelling or mountain-climbing to promote personal growth of the individual. Originally developed as a training school for British seamen during World War II, there are now more than 30 Outward Bound schools throughout the world, with 7 located in North America. The process through which these schools attempt to effect changes in personal growth consists of placing the participant into a unique social and physical setting usually involving groups of 8-10 people engaged in challenging outdoor activities such as white-water rafting or rock climbing. As part of this group, the individual is given a series of progressively more difficult tasks which are designed to be physically and emotionally demanding yet possible. Throughout this experience, the course instructor provides guidance and feedback to the students concerning their actions and behaviors during activity.

The Sample

The sample for this study consisted of two groups of people, (1) students attending an Outward Bound course during the summer of 1985 and (2) instructors supervising those courses. Participants were mailed the Situational Fear Inventory (SFI) just prior to their course beginning (base line). Immediately after their course (post-intervention) students were mailed a second SFI and again one year after that (post delayed). Course instructors were queried immediately before and after the courses.

Variables

Independent variables in this study consisted of the age, gender of the participants and length of course they were involved in. The dependent variables were the types and levels of situational fears reported by the students or observed by the instructors.

Instrument

To obtain a quantitative measurement representing the types and levels of situational fears a 23 item inventory was developed. A comprehensive search of the literature pertaining to fear, personal observations and items generated by selected outdoor instructors resulted in an initial pool of 40 items. This initial pool was

reduced and reviewed to insure that no major types of situational fears that may be encountered the outdoor recreational setting were omitted. A pilot test was conducted using Outward Bound students in 1985 with a Chronbach's alpha of .94 being generated for a revised inventory of 30 items. This scale was subsequently reduced to 23 items to avoid redundancy in some of the questions.

Participants were asked to place a slash (/) across a 10 cm line anchored by the statements "strongly disagree" and "strongly agree" which best represented their feelings about a particular fear. Instructors were asked to complete a similar instrument but with two modifications. For the baseline measurement, they were asked to respond as to how fearful their students would be to a specific item such as fast or deep water. Following the completion of the course, they were asked to report via the SFI what level of fear they observed in their students with respect to specific situational fears. To avoid any interaction effects, the instructors did not see how their students rate themselves before or after the course.

Results

Of the 550 student participants initially queried, 311 (57%) responded with usable questionnaires for all three measurement phases: baseline, post intervention phase and one-year delayed post measures. Of the total number of respondents, 230 were male (74%) and 80 were female (26%). The mean age of the respondents was 21.05. For the instructors, 90 completed the instrument prior to the beginning of their courses and 53 completed the FSI after their courses.

Of initial interest were the types of specific fears held by the participants. Most of the specific situational fears which achieved a baseline level of 30 or greater were sociological or psychological in nature, rather than physical. This is congruent with the earlier findings of Hauck (1975) and Leary (1983). A one-way analysis of variance procedure with a Scheffe multiple comparison (.05 level of significance) resulted in a number of significant differences in the subsequent levels of these different types of fear (Table 1). Many items which initially differed between the baseline level and the post course measurement also maintained a similar difference between the baseline and one-year followup, suggesting a "durability" of effect. Moreover, with few exceptions, the trend for each item was toward reduced levels of fear when the baseline data were compared to the post-intervention and one year followup measurements. In sum, of the five most

frightening situations, three were social-based and two were physical-based. "Letting myself down" and "making wrong decisions" were of particular concern to the respondents for all three measurement phases.

Of further interest is the comparison between the self-reported levels of fear for specific situations and the perceptions of the course instructors with respect to student levels of fear. Using a t test procedure, a substantial number of differences between student and instructor perceptions of specific fears were noted for the baseline measurements (Table 2). Differences were also noted between the students and instructors for the post course measurement (Table 2).

For both sets of measurements a substantial number of differences were generated between the students and their staff. While the number of differences between the students and instructors remained the same for the baseline and post course comparisons the magnitude of these differences and overall reported level of fear diminished.

A third analysis was performed using a MANOVA design with gender, age, length of course and corresponding interactions as the independent variables for the three measurement phases. In addition, a Scheffe procedure (.05) was used to identify specific sources of variation. The age variable was dichotomized into two categories: "young" (15 to 20 years old) and "adult" students (21 years old or greater). The length of course variable was dichotomized into "short courses" (5 to 9 days in length) and "long" courses (10 days long or greater). These variables were chosen because relatively little is known about the relationship between course length, gender and age of the student and fear-related outcomes of an Outward Bound course (Shore, 1977).

Results of this analysis revealed the existence of several patterns of effect. For the baseline measurement, gender played an important role in a number of specific situations (Table 3). Without exception, when a significant difference was noted, females reported higher levels of fearfulness for a specific situation than did the males. This may be due to sex role stereotyping, as suggested by Leary (1983), with males being less prone toward admitting their fears. With respect to the social fear of not fitting in with the group, the younger students reported significantly higher levels of fear than did older individuals. This finding supports those of previous research on the variables of age and course outcomes for these types of programs (Ewert, 1982; Thomas, 1983).

Measurements taken immediately after the course suggest a different set of patterns with age becoming the more important variable associated with discernable

differences. As in the previous measurement, sex remained an important variable in this measurement phase as well. As suggested in Table 4, the older student reported lower levels of fear than did the younger student. Likewise, the male student reported less specific fear levels than the female student immediately after the course.

For the specific item of "not having enough personal ability" this pattern continued one year after the course, with the variable gender generating a significant difference ($p = .04$, males = 31.3, females = 37.1). A significant interaction between sex and age was the only other meaningful difference, in the one year followup measurement. This interaction was interesting in that young and old males reported relatively similar levels of fear on the item of not enough training (young males = 33.4, older males = 34.3). Young females reported a level of fear on this item of 46.6, while older females reported a level of 29.4 ($p = .02$). It would appear that one year after the course, the older female is either naive about the quality and amount of training received during the course, or felt much more confident about the congruence between their abilities and the training they received than did their male counterparts.

Discussion

Given the opportunities for systematic desensitization and modeling, it is not surprising that levels of fear for a number of specific situations were reduced. In most cases, this trend of reduced levels of fear continued from the baseline measurement through the post intervention and one year followup phases suggesting that these reductions in fear levels continued well past the initial experience. The data suggest that participation in Outward Bound can be effective in reducing fear levels of specific situations.

Of a more disconcerting nature is the obvious gap between the perceptions of the instructors and their students. While anticipating how another person perceives and feels about a situation is often a difficult task, the number and magnitude of the differences noted between the reported levels of fears of the students and what the instructors thought those levels would be suggest that the instructor corp may not have an accurate picture of what their students are experiencing with respect to fear.

Rachman (1974) reports that observing fear in others is a difficult process although common expressions of fear in the outdoor recreation setting include:

talkativeness, irritability, "hurried decision-making", inability to concentrate and detachment. In addition, past research has suggested that self-report instruments generally overestimates the level of fear (Rachman, 1974) thus further complicating the situation. Overall, it can be concluded that the instructors in these programs are overestimating how fearful their students are for most situations. The information provided through this study can help provide specific information concerning what outdoor recreation participants are afraid of and to what extent they are afraid.

In addition, this study has identified a possible example of sex role stereotyping as evidenced in the findings of the latter part of the analysis. That females would consistency report higher levels of fear for the various situations would suggest that there is a systematic bias in effect. Previous work has suggested that there is no consistent evidence that females are more fearful than males (Smith, et. al. 1975; Leary, 1983). In a related work, Ewert (1987) demonstrated that there were no differences in levels of trait anxiety in Outward Bound participants due to gender differences. It would appear that the differences noted in this study are due to either a gender difference which is more pronounced when it comes to specific situations or that females are more willing to admit to their apprehension than are males. This author suggests that the latter is the case and females are no more fearful of specific situations than are males, just more prone to admit those fears. This fact has some implications for the program staff since with respect to fear perhaps the females of the group better reflect the true feelings of the participants rather than the males.

The same cannot be said as forcefully for the variable of age although with the post intervention measurement there was evidence of a systematic effect of age. Generally, it can be concluded that the older student is less fearful of a variety of situations that their younger counterpart. This is particularly true of social-based fears such as not fitting into the group. It should be noted, however, that in Outward Bound, the older students generally take shorter courses. This may account for reduced levels of fear since the time of exposure to fear is less.

Related to this difference in course length is the lack of many significant differences specifically due to course length. Two patterns can explain the outcome of this finding. First, the lack of any noteworthy effect due to the length of the course may be a result of the younger student usually having longer to become less fearful and ultimately reaching the level that their older counterparts were at, only in less time.

Secondly, with respect to levels of fear, what may be of greater importance is not how long a course is taken but rather that a course is taken. From observations on Outward Bound participants during their courses, Katz and Kolb (1968) report that there is an ideology and mystic that is both compelling and instructive. According to Katz and Kolb (op cit) once the decision is made to attend a course, not finishing or not attending the course involves feelings of dissonance and inability. Conversely, attending and completing the course enabled an individual to join the "league" of successful alumni. Students in a program such as Outward Bound may report reduced levels of fear not only because of the opportunities for desensitization and modeling, but also because they expect themselves to be less fearful and more confident.

In conclusion, this study has provided information on what situations related to the outdoor environment participants are specifically afraid of before, immediately after, and one year after an Outward Bound course. In addition, it was demonstrated that outdoor recreational programs such as Outward Bound can be effective in reducing specific situational-based fears and that this reduction is consistent over one year's time. It would appear that the effectiveness of this reduction is influenced by the participant's gender and age. Course length does not appear to play a differential role in the reduction of levels of situation fears. In light of previous work done in trait anxiety levels (Ewert, 1987), it cannot only be said that Outward Bound is a useful technique in reducing overall levels of fear but also the outdoor recreation programmer now has a better idea as to what people are afraid of in these types of programs with an eye toward reducing those feelings of fear and anxiety.

TABLE 1

Effects of Different Phases of Participation in Outward Bound Upon Mean Levels of Situational Fears

Situation	Baseline		Post		1 Year		Baseline
Letting Myself Down	48.7		46.9		46.9		48.7
Making Wrong Decisions	47.9		43.6		44.1		47.9
Becoming Trapped	42.8		37.8		39.4		42.8
Not Enough Training	40.1	*	30.2	*	35.3	*	40.1
Becoming Hurt	39.6		38.3		35.3		39.6
Venomous Animals	39.3	*	30.1		27.0	*	39.3
Not Fitting In	39.2	*	34.8		34.1	*	39.2
Not Enough Ability	37.4	*	30.5		33.6	*	37.4
Insufficient Food	37.1		34.6		32.8		37.1
Unexpected Situations	36.8	*	32.1		31.5	*	36.8
Insects	36.2	*	28.5		34.4	*	36.2
Task Too Demanding	35.6	*	26.8		29.8		35.6
Unrecognized in Group	34.4		33.1		31.3		34.4
Inadequate Clothing	33.6		33.2		36.6		33.6
Confrontation	33.2		32.3		30.6		33.2
Lack of Control	32.5		32.5		31.2		32.5
Hostile Environment	32.0		30.1		29.3		32.0
Fast/Deep Water	28.7		24.0		24.4	*	28.7
Poisonous Plants	26.6		22.0		20.1	*	26.6
Money's Worth	25.3		28.0		25.2		25.3
Sexually Harassed	21.7	*	17.2		19.6		21.7
High Winds	21.1		19.0		18.4		21.1
Darkness	19.8	*	13.4		14.0	*	19.8

Means on a scale of 0.0 to 100.0 with higher numbers indicating a higher level of fear.

*Significant difference between adjacent measurements at .05 levels.

TABLE 2

Differences Between Student Reported Levels of Fears and Instructor Perceptions of Student Fears[1]

	Baseline			Post		
	Students		Instructors	Students		Instructors
Situations	M		M	M		M
Lack of Control	32.5	*	48.6	32.5	*	40.5
Unexpected Situations	36.9	*	61.8	32.1	*	39.4
Physically Trap	42.8		42.0	37.8	*	27.3
Becoming Hurt	39.6	*	53.8	38.3		35.4
Wrong Decisions	47.9	*	60.3	43.6	*	52.5
Letting Self Down	48.7		48.9	46.9		49.0
Task Too Demanding	35.6	*	68.7	26.8	*	46.6
Not Enough Ability	37.4	*	62.9	30.5	*	41.2
Confrontation	33.2	*	53.9	32.3	*	50.4
Unrecognized	34.4	*	53.3	33.1		36.7
Not Fitting In	39.2	*	63.0	34.8		40.6
Sexually Harassed	21.7		19.2	17.2		10.7
Hostile Environment	32.0	*	52.6	30.1	*	40.2
Poisonous Plants	26.6	*	35.4	21.9	*	34.6
Darkness	19.8	*	36.9	13.4	*	28.5
Venomous Animals	39.3		45.1	30.1		30.5
Insects	36.2	*	52.8	28.5	*	36.3
Fast/Deep Water	28.7		39.8	24.0	*	31.2
High Winds	21.1		23.9	19.0		24.0
Inadequate Clothing	33.6		33.8	33.2	*	43.2
Not Enough Training	40.1		40.7	30.2		28.8
Insufficient Food	37.1	*	60.3	34.6	*	59.1
Money's Worth	25.3	*	34.8	28.0		35.1

[1]Mean scores with a range of 0.0 to 100.0, with a higher score indicating a higher level of fear.
*Significant difference between adjacent measurements at .05 level.

TABLE 3

Patterns of Effect for Baseline Measurement[1]

Situation	Variable	Effect		P
Lack of Control	Gender	Female	36.5	.04
		Male	30.18	
Making Wrong Decisions	Age	Younger	50.7	.02
		Older	41.4	
	Length	Shorter	42.4	.00
		Longer	50.5	
Letting Myself Down	Gender	Female	55.6	.00
		Male	44.7	
Task Too Demanding	Gender	Female	42.1	.00
		Male	31.8	
Not Enough Ability	Gender	Female	42.7	.04
		Male	34.3	
Not Fitting In	Age	Younger	43.5	.00
		Older	29.7	
Sexually Harassed	Gender	Female	26.8	.00
		Male	18.9	
Hostile Environment	Gender	Female	40.5	.00
		Male	27.0	
Darkness	Gender	Female	28.3	.00
		Male	15.1	
Venomous Animals	Gender	Female	45.7	.01
		Male	35.6	
Insects	Gender	Female	42.3	.00
		Male	32.5	
Fast/Deep Water	Gender	Female	38.5	.00
		Male	23.1	
	Age	Younger	25.4	.02
		Older	36.6	
Not Enough Training	Gender	Female	49.7	.00
		Male	34.9	
Insufficient Food	Age	Younger	41.3	.00
		Older	26.9	
Money's Worth	Age	Younger	28.5	.02
		Older	17.4	

[1]Means on a scale of 0.0 to 100.0 with higher numbers indicating a higher level of fear

TABLE 4

Patterns of Effect for Post Intervention Measurement[1]

Situation	Variable	Effect		P
Lack of Control	Age	Younger Older	34.5 27.9	.01
Unexpected Situations	Age	Younger Older	34.7 26.1	.00
Making Wrong Decisions	Age	Younger Older	47.4 34.8	.01
Letting Self Down	Age	Younger Older	49.5 40.9	.03
Task Too Demanding	Gender	Female Male	30.4 34.7	.03
Darkness	Gender	Female Male	16.8 11.4	.01
Venomous Animals	Gender	Female Male	35.3 27.2	.00
Insects	Age	Younger Older	30.8 23.3	.04
High Winds	Gender	Female Male	25.0 15.5	.00
Insufficient Food	Gender	Female Male	25.1 40.0	.00
	Age	Younger Older	40.4 21.2	.00
Money's Worth	Age	Younger Older	32.3 18.0	.00

[1]Means on a scale of 0.0 to 100.0 with higher numbers indicating a higher level of fear.

TABLE 5

Differences Between Student Reported Levels of Fears and Instructor Perceptions of Student Fears[1]

	Baseline			Post		
	Students		Instructors	Students		Instructors
Situations	M		M	M		M
Lack of Control	32.5	*	48.6	32.5	*	40.5
Unexpected Situations	36.9	*	61.8	32.1	*	39.4
Physically Trap	42.8		42.0	37.8	*	27.3
Becoming Hurt	39.6	*	53.8	38.3		35.4
Wrong Decisions	47.9	*	60.3	43.6	*	52.5
Letting Self Down	48.7		48.9	46.9		49.0
Task Too Demanding	35.6	*	68.7	26.8	*	46.6
Not Enough Ability	37.4	*	62.9	30.5	*	42.2
Confrontation	33.2	*	53.9	32.3	*	50.4
Unrecognized	34.4	*	53.3	33.1		36.7
Not Fitting In	39.2	*	63.0	34.8		40.6
Sexually Harassed	21.7		19.2	17.2		10.7
Hostile Environ	32.0	*	52.6	30.1	*	40.2
Poisonous Plants	26.6	*	35.4	21.9	*	34.6
Darkness	19.8	*	38.9	13.4	*	28.5
Venomous Animals	39.3		45.1	30.1		30.5
Insects	36.2	*	52.8	28.5	*	36.3
Fast/Deep Water	28.7		39.8	24.0	*	31.2
High Winds	21.1		23.9	19.0		24.0
Inadequate Cloth	33.6		33.8	33.2	*	43.2
Not Enough Train	40.1		40.7	30.2		28.8
Insufficient Food	37.1	*	60.3	34.6	*	39.1
Money's Worth	25.3	*	34.8	28.0		35.1

[1]Mean scores with a range of 0.0 to 100.0, with a higher score indicating a higher level of fear

*Significant difference between adjacent measurements at .05 level.

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