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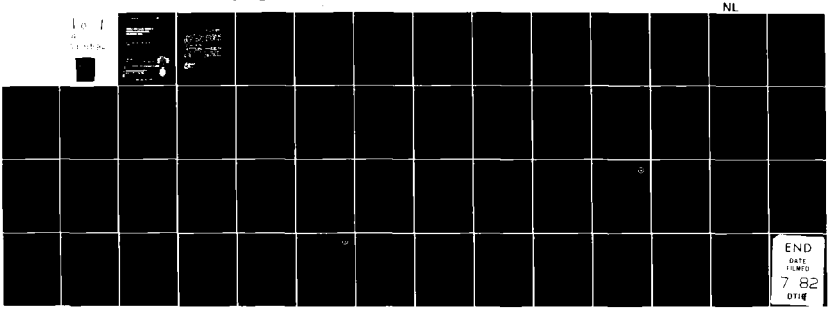

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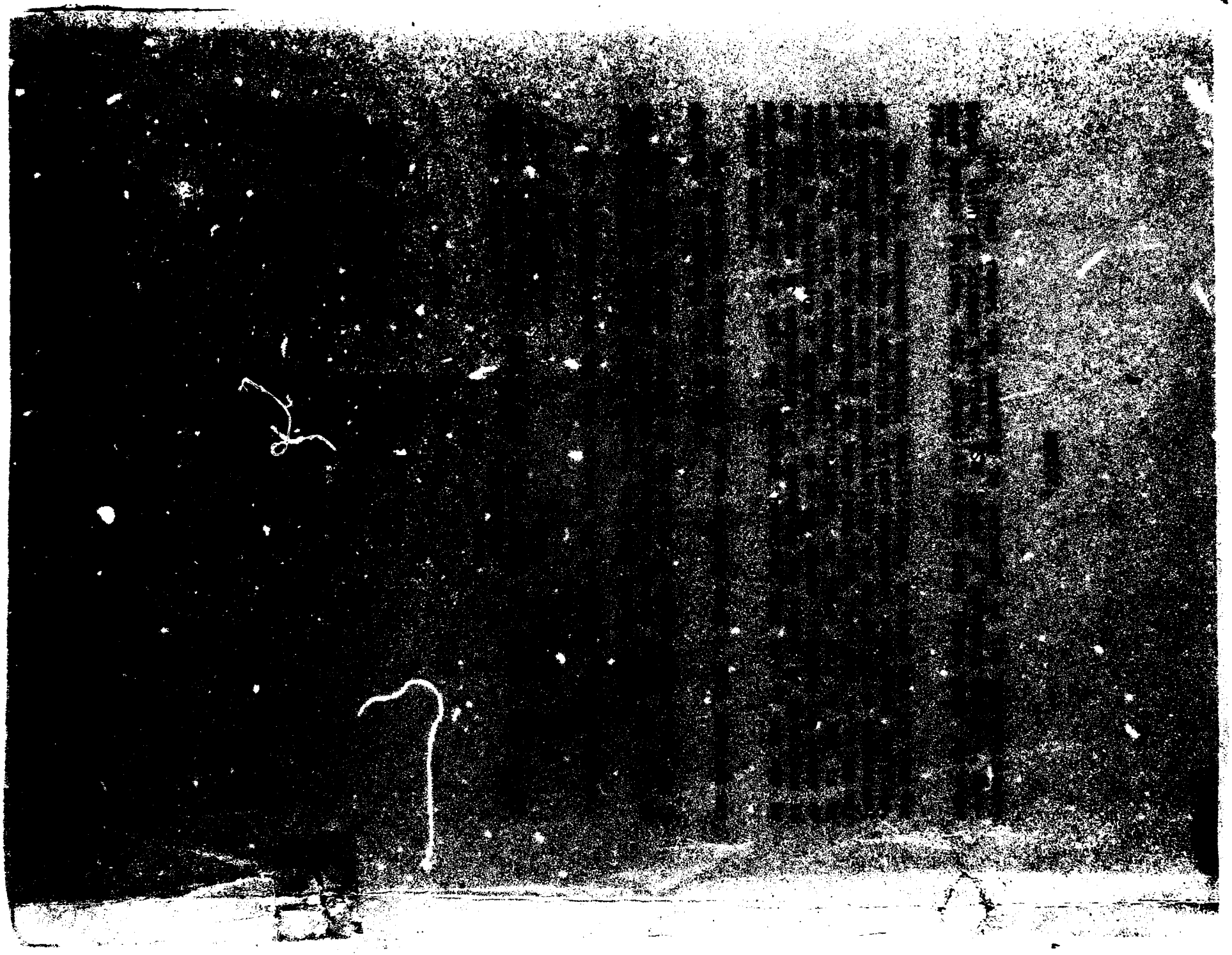

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Although much has been written about the emotional effects of disasters upon the victims, little study has been done of the effects on rescuers who were otherwise personally uninvolved. This report concerns a questionnaire survey of the emotional effects on the USAF personnel involved in recovering and identifying the mass suicide and murder victims from Jonestown, Guyana. Questionnaires were sent to 592 participants (225, 38%, responded) and to 352 controls (76, 22%, responded). These questionnaires inquired after demographic data,

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degree of exposure to remains, amount of emotional support available, and its perceived adequacy. Specific inquiry was made as to emotional status immediately before the Guyana project, 1 month after (the time required for the identification effort), and almost 8 months later -- at the time the questionnaire was filled out. Thus we hoped to differentiate short-term dysphoric effects from long-term effects. The control questionnaires were intended to give an estimate of the incidence of dysphoric effects due to the routine vicissitudes of life. Short-term dysphoria was reported by 32% of the "Guyana" respondents and 9% of the controls ($p < .001$); long-term dysphoric rates were 21% and 17% respectively (NS at the .05 level). Among the Guyana respondents, significantly higher rates of dysphoria were found in those under 25 years old, blacks (as compared to whites), and enlisted (as compared to officers). Higher rates were also noted among those reporting a greater exposure to the remains, more emotional support (who perhaps sought it out), or inadequate emotional support. Subjective comments reflected anger at the victims for being victimized and at the Air Force for getting the rescuers involved. Many reported that bodies of children evoked the strongest emotional responses. Some felt that the entire experience led to a feeling of personal growth and an increased appreciation of life. Group support and humor were mentioned as valuable supports through stressful times. Our conclusion is that in future undertakings of this nature, younger personnel should be teamed with older for individual support. Open expression of emotional responses should be encouraged in individual conversations, by group process, and perhaps in final debriefings. Support should be provided in advance by planners involved in such projects.

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PREFACE

The authors wish to acknowledge the base-level aid of Colonel Fred O. Bargatze, Charleston AFB, South Carolina; Lieutenant Colonel Darvin K. Suter and Colonel Norman Rudin, McGuire AFB, New Jersey; Lieutenant Colonel William J. King, Dover AFB, Delaware; Yeoman Third Class Stephen F. Binnall, Armed Forces Institute of Pathology, Washington, D.C.; and Colonel Frank H. Brunstetter, Aerospace Rescue and Recovery Service, Scott AFB, Illinois.

Thanks are due also to Mrs. Evelyn Siggins for extensive secretarial support.

Finally, this study could not have been made without the cooperation of the Air Force members upon whose experiences and memories it is based, and to whom it is dedicated.

EMOTIONAL EFFECTS ON USAF PERSONNEL OF RECOVERING AND IDENTIFYING VICTIMS FROM JONESTOWN, GUYANA

This study concerns information gathered by sending a questionnaire to Air Force personnel who had been involved with recovering, transporting, handling, and identifying bodies of men, women, and children who died at Jonestown, Guyana on 18 November 1978. The questionnaire was designed to provide a self-assessment by these military members of the emotional effects this experience had on them at the time and their emotional status some 8 months later.

The U.S. Air Force has long been concerned with recovering, stabilizing, and evacuating victims of natural and man-made disasters. USAF personnel have responded to earthquakes, tornadoes, hurricanes, floods, aircraft accidents, and combat situations. Every week the Air Force Times reports the humanitarian efforts of individuals and aircrews. Air Force security police, firefighters, medical and paramedical personnel, aircraft accident investigators, and crews of helicopters and transport aircraft are apt to have to deal with human remains. While preparing a lecture on the psychological effects of disasters on the victims, I (D.R.J.) became aware of the paucity of information about the emotional effects on rescue workers, particularly those from outside the stricken area who would otherwise not have been involved at all.

An extensive review of the medical literature on disaster response, as well as a summary review of the more extensive sociological literature on this subject, yielded little information concerning the emotional effects seen in rescuers of live victims, and almost nothing about the effects of recovering and identifying the dead. The available data generally touched on one of three areas:

1. When local organizations respond to a disaster, an immediate conflict may arise between loyalty to home and family and responsibility to duty. This conflict may be especially marked in members of the helping professions (1-4).

2. The psychological attitude of rescuers and medical personnel can have a direct effect upon the subsequent mental attitudes of the survivors (5, 6).

3. Occasionally statements appear about the effects of disaster relief on the rescuers or on other helping professionals. Davidson (7) reports that 30 of some 150 police officers involved in the aftermath of an airliner crash received psychological treatment for their posttraumatic stress symptoms. Lifton (8) writes that, even at a temporal distance from the bombing of Hiroshima, his work with the survivors left him emotionally drained and spent. In another sense, he comments upon the

> ... selective form of numbing, of the kind that surgeons and rescuers always have when they confront disaster. That is, you cannot permit yourself to feel every experience of pain around you because you must perform a constructive function that is professional and professionalized, except that you're not overwhelmed by the numbing itself and incapacitated. (9)

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Wallace (10), in reviewing 10,000 references to disaster in the literature up to 1956, concludes that rescuers can be effectively swamped, and thus may choose an overintellectualized approach to maintain their emotional defenses. A nurse comments that "I wouldn't let the patients see that I was frightened" and that she therefore kept herself calmer than she would have in other circumstances (3).

This reaction can also include an overwhelming sense of urgency, with a concurrent tendency to regress to an ineffective means of treatment, exemplified by physicians who unwisely suture minor wounds under unsterile conditions (11). Rayner (12) speaks of acting on a "reflexive" level leading to "intensification of only one task, and hence, narrowing of awareness, which results in blocks to information required for organization and logical functioning."

Little follow-up emotional data has been gathered on the rescuers/helpers. Laube (3) and Rayner (12) both comment that the nurses whom they interviewed seemed to welcome the opportunity to discuss their experiences, and Rayner mentions that the nurses interviewed soon after the disaster seemed more verbal than those interviewed later. Perhaps the interviews themselves might have been therapeutic, offering a chance for ventilation and even abreaction of the emotionally charged experience, hitherto denied and intellectualized, before it was further repressed.

I have had the personal experience of recovering human remains from aircraft accidents and can attest to the emotional distance that the people involved in this process place between themselves and the true horror of the event. This distance may be maintained by denial, macabre humor, an intense intellectual interest in peripheral details, or an unnatural eagerness to help. Informal bull sessions at the hospital or at the bar may be used to satisfy an instinctive need to discuss and digest the experience.

This report is based on a series of events which began on 18 November 1978 when a U.S. Congressman was killed at an airport in Guyana by a group of religious cult members. Shortly afterward came the shocking news of the mass suicide of members of the People's Temple at Jonestown, Guyana. The U.S. Air Force was involved in the rescue of the survivors of the shooting and continued to provide support in the recovery, transportation, storage, and identification of the 913 victims. The last two functions were carried out at Dover AFB, Delaware, which had previously provided these services for several hundred victims of the collision of two 747 jetliners on the runway at Tenerife in the Canary Islands. As I lectured to students in an Air Force training program for disaster control about general emotional reactions to disaster, questions from some who knew about the Guyana project, first- or second-hand, indicated that those involved had received some significant emotional effects. This information led me to undertake a retrospective study of some of the emotional effects that Air Force members had noted in themselves after having worked in some capacity with the remains of the Guyana victims.

Air Force men and women worked with these remains in a wide range of activities which varied greatly in duration and in degree of exposure. Some rescue specialists helped recover the remains in Jonestown, placing them in

waterproof canvas bags. (It is difficult to convey to someone who has not had first-hand experience what a week in a tropical climate can do to a human body. The changes in color and size, the infestation by various insects, and above all the overpowering and unforgettable odor of just one body are beyond imagination.) Helicopter crews flew the bodies to the airfield, where they were placed in casket-like metal containers. Aerial port workers helped aircraft loadmasters place the containers on transport aircraft which carried them to Dover AFB. There they were taken off the aircraft and stored in morgue facilities while awaiting identification, a process performed by medical and dental officers and technicians. Meanwhile, the body containers were washed and prepared for reuse.

In general, aircrew members who transported the remains were not volunteers; neither were some of the ancillary personnel. The work of moving the remains, cleaning the containers, and performing the identification processes was generally performed by volunteers, who were allowed to stop whenever they felt that they had had enough. The recovery phase took about 5 days; the identification process continued for about a month. Some Air Force people involved had worked with human remains under other circumstances; a great many had not. Thus, the Air Force "population at risk" varied in its composition, not only in the usual demographic parameters but also in the duration and intensity of exposure to the remains, in previous training and experience, and in volunteer status. The condition of the bodies has already been mentioned; the emotional impact was heightened by the fact that several hundred children were involved. Exact numbers are not available to me, but the mix of male and female bodies appears to have been approximately even; the majority of the victims were black.

METHOD

A questionnaire (See Appendix A) was developed to evaluate self-reported emotional changes in USAF personnel who were involved in recovering, transporting, and identifying the remains of the Guyana victims. The entire questionnaire was filled out by the subjects during the summer of 1979, some 6-9 months after the event. The first page dealt with demographic data: rank, age, sex, ethnic background, marital status, education, and service career field. Inquiry was made into whether the subject was "living with partner" in November 1978 and at the time of the survey; this term was chosen to cover a variety of live-in arrangements.

The second page introduced a scale for self-assessment of emotions, with a low value of 1 and a high value of 5, upon which the subjects were asked to rank themselves for physical health, happiness, quality of sleep, appetite, energy level, social relations, and job performance in October 1978, the month before the Guyana deaths. Other questions dealt with weight, hours of sleep, and physician visits that month. Concerning work with Guyana victims, subjects were asked if they worked at their usual Air Force job on the Guyana assignment, if they volunteered for this work, and the location at which the work was done. They were asked to estimate their amount of contact with the remains -- based on the range of exposure from "saw body containers - no odor" through "handled body bags" to "handled bodies directly," "number of bodies," and "duration of contact."

The next questions dealt with any previous experience with human remains or living accident victims and with any formal training or work in related fields. These were followed by a request for self-assessment of emotions as of 15 December 1978, about 1 month after the Guyana deaths. This date was picked as the end of the involvement of the personnel at Dover AFB with the identification phase of the assignment.

Subjects were then asked if they had sought any emotional support since their Guyana experience, and if so from what source. They were asked to rate emotional or morale support received from official USAF sources and from their co-workers. They were also asked to rate the adequacy of the total support available.

Finally, subjects were asked for a self-assessment of their emotional status as of the day they filled out the questionnaire. This was followed by three essay questions, asking for comments on any self-perceived personal changes, whether they were due to the Guyana experience or some other factor, and if the subject had any other comments or ideas on emotional support for people doing this sort of work in the future.

The questionnaire was designed so that the three requests for self-report of emotional status -- before, immediately after, and now (i.e., the summer of 1979 when the questionnaires were filled out) -- were on three nonfacing pages to make it a little difficult to copy answers between the three scales. Through my oversight, the questions dealing with weight, hours of sleep, and visits to a physician were not repeated, so no direct comparison of these items could be made to corroborate self-report of appetite, quality of sleep, or health.

A control questionnaire (Appendix B) was designed for use with Air Force personnel who were matched by rank and Air Force Service Code but who did not participate in the recovery and identification of the Guyana victims. It was exactly the same as the first questionnaire, except that instead of inquiring about the Guyana project, the control questionnaire asked about any experience with human remains during the period in question, as well as demographic information, prior training and experience, and the emotional status questions in October 1978, December 1978, and "now." [These two questionnaires will be referred to as GQ (Guyana questionnaire) and CQ (control questionnaire) in the remainder of this report.] Cover letters that accompanied these questionnaires informed participants of the purpose of the survey -- asking in the GQ about reactions to experience with the Guyana victims, and in the CQ about any experiences with human remains.

Both questionnaires were submitted through channels to the Air Force Military Personnel Center (as required by Air Force Regulation 30-23, para 8, dated 22 Sep 76), were approved by AFMPC/DPMYPS, and received control numbers 79-115A (GQ) and 79-115B (CQ). After clearance from the Military Airlift Command (MAC) Surgeon, I contacted physicians at McGuire, Dover, Charleston, and Howard AFBs, the bases primarily involved, and they agreed to distribute and collect the questionnaires. I also contacted the Aerospace Rescue and Recovery Service (ARRS) Surgeon, who agreed to disseminate the questionnaires

to all ARRS personnel who had participated (primarily from Eglin and McClellan AFBs.) Flight Surgeon personnel at Dover AFB, the base concerned in the identification process, obtained a list of about 500 personnel who were involved in the project, and their bases of assignment. The appropriate number of GQs and an equal number of CQs were sent to each base, and the physician contact at each base was instructed to obtain the cooperation of the various squadron commanders and to give out the GQs, preferably at a meeting during which they could be filled out and returned. In addition, the physicians were instructed to obtain a listing of personnel with the same rank and Air Force jobs who had not participated in the Guyana effort and to give them the CQs. This, I hoped, would provide control data on emotional changes due to the routine vicissitudes of life during this period.

A small number of GQs and CQs were sent to the Armed Forces Institute of Pathology, where administrative personnel agreed to give them to those involved in the Guyana effort and to a similar control group.

RESULTS

As the questionnaires were returned, a major problem became apparent in those coming from one particular base. The instructions had been misunderstood, and each person participating in the Guyana project was given both questionnaires stapled together, with the CQ on top. Because of the similarity of the questionnaires, most people filled out the CQ and left the GQ blank. These CQ responses were included in the GQ tabulation, since it was clear that they were filled out by people who had indeed worked with the Guyana victims' bodies and since the very similarity in questionnaires that led to the confusion also fortunately made it easy to interpret the answers. However, this led to 240 less CQs than planned since none were distributed to true controls at this base.

We received usable questionnaires from 225 of 592 Guyana participants (38%) and from 76 of 352 controls (22%). The actual number of questionnaires given to individuals could not be determined because of variations in technique from base to base; the above percentages are based on the worst-case assumption that every questionnaire sent to a base was given to a potential respondent. As is common in such surveys, we do not know if any bias is in our data from differences between those who returned their questionnaires and those who chose not to.

Of the respondents, 16 were female (4 CQ, 12 GQ) and 11 males were of races other than black or white (4 CQ, 7 GQ). We decided to eliminate these small samples, thus limiting the statistical analysis only to black and white males, giving us 68 control and 206 Guyana respondents. Throughout this analysis, the total counts will usually be somewhat short of these numbers because of missing data for various responses on some questionnaires.

Using information from the questionnaires, we classified each subject according to the ten factors listed and defined in Table 1. In addition we used the information from questions 10, 22, and 28 to measure the emotional effect of the Guyana experience. In essence, these questions asked, respectively: How did you feel before the Guyana experience? How did you feel 1 month after (when the work with the remains was finished)? How do you feel

TABLE 1. DEMOGRAPHIC AND EXPERIENTIAL FACTORS STUDIED

1. AGE: $\leq$ 25 years, 26-35 years, $\geq$ 36 years (Q 2)

2. RACE: Black, White (Q 4)

3. VOLUNTEER: Yes, No (Q 15)

4. RANK: Enlisted, Officer (Q 1)

5. EDUCATION: $\leq$ 12 years, 13-16 years, $\geq$ 17 years (Q 8)

6. PRIOR TRAINING AND EXPERIENCE:

   None (No to Q 19 and Q 20)

   T or E (Yes to Q 19 and No to Q 20, or vice versa)

   T and E (Yes to at least one choice of a through f in Q 19 and one choice of a through e in Q 20)

7. EXPOSURE TO REMAINS:

   Much (Yes to e, f, or g in Q 17)

   Some (Yes to b, c, or d in Q 17, but "no" to e, f, or g)

   None (neither of above)

8. EMOTIONAL SUPPORT (AF or other): We assigned numerical values 0 through 3 to choices a through d, respectively, in Q 25 and 26, and added the selected answers together to get one numerical value.

   None (0-1), Some (2-4), Much (5-6)

9. ADEQUACY OF SUPPORT: Yes, No (Q 27)

10. LIVING WITH SPOUSE OR PARTNER: (Q 6 AND 7)

    No (neither at time of Guyana recovery or "now"; includes the unmarried)

    Yes (both at time of Guyana recovery and now)

    (All respondents with yes/no, no/yes, or blanks were deleted from analysis of this factor.)

now (8-12 months later)? For each of these questions, the respondent rated himself from 1 (low) to 5 (high) on physical health, happiness, quality of sleep, appetite, energy level, social relations, and job performance. We computed a global score for each respondent in these time frames by summing his answers: the lowest possible score was 7, the highest was 35. We then computed global score differences ("after" minus "before") to represent the short-term effects. We repeated the process for long-term effects ("now" minus "before"). A negative difference thus represented a negative (or dysphoric) change in emotional status, no difference represented no change, and a positive difference represented an improvement.

Four portions of the questionnaire were collapsed in order to convert the responses to a computer format, as noted in Table 1.

1. So much variation was encountered in the answers to questions 19 and 20, concerning previous experience and training in dealing with human remains, that those items were collapsed into "Yes" or "No." Respondents were grouped into "None" (neither previous training nor experience), "T or E" (either training or experience), or "T & E" (training and experience).

2. Question 17, dealing with degree of exposure, was designed to measure the kind of exposure, the number of bodies, and the duration of the exposure. The nature of the responses revealed a great deal of guess work in the latter two factors, so they were omitted in our estimate. The type of exposure was collapsed as follows: "no exposure" (answer 17a) was called "None"; "saw body containers only," "odor only," and "saw bodies" (answers b, c, d) were called "Some"; "handled body containers," "handled body bags," and "handled bodies directly" were called "Much."

3. To stratify the amount of emotional support perceived, the four-point scale used for "USAF" (Q 25) and "other" (Q 26) support was graded 0, 1, 2, 3 for "none, little, some, much" respectively; and the two scores were added together (range 0-6). A combined score of 0-1 was called "None"; 2-4, "Some"; and 5-6, "Much."

4. Those living with a partner (marital or otherwise) both before and after the Guyana experience were called "Yes"; those not were called "No." The status of a few respondents changed during the event (No/Yes or Yes/No). These were too few for meaningful analysis, and so were dropped from further analysis of the emotional support derived from living with a partner.

Overall, 32% (63/200) of the Guyana respondents experienced short-term dysphoria, compared to only 9% (6/67) of the controls. These results differ statistically ($p < .001$). On a long-term basis, 21% (43/201) of the Guyana respondents and 17% (11/66) of the controls reported dysphoria, results not significantly different at the .05 level. Assuming that our samples are not a biased portion of the populations (recall the high percentage of nonresponders), we might conclude that the Guyana experience had a short-term dysphoric effect on a significant number of participants, but we found no statistical evidence that this effect was sustained.

We compared rates of short-term dysphoria for each age group, each race, officer and enlisted, each educational level, married and unmarried, and various levels of training and experience. In each instance, the Guyana respondents had a higher rate of dysphoria than the equivalent control respondents. In no demographic subgroup of controls did the rate of short-term dysphoria exceed 12%.

Was this short-term dysphoric effect among the Guyana respondents seen across the board or was it greater in some subgroup: the young, the inexperienced, the nonvolunteer? We defined the 10 factors we felt most likely pertinent, as listed in Table 1, and tested each independently for differences among the levels of those factors (e.g., various ages; volunteer vs. nonvolunteer; much, little or no training/experience). The results are summarized in Table 2. In the short-term dysphoria, significantly higher rates were found in subjects under age 25, the black, and the enlisted. Higher rates were also found among those who reported a greater exposure to the remains, those who perceived much emotional support, and those who perceived their support to be inadequate. The first three factors associated with dysphoria are demographic, and the last three are subjective and experiential. For the sake of comparison, we reviewed the same factors in the long-term respondents and found higher rates only among those reporting greater exposure to remains and those perceiving their emotional support to have been inadequate.

TABLE 2. RELATION OF DEMOGRAPHIC FACTORS TO DYSPHORIA

Factor		Short-Term Effect		Long-Term Effect	
		% Dysphoric	# Dysph/ Total	% Dysphoric	# Dysph/ Total
Age[a]	< 25 yr	45	34/75	29	22/76
	26-35	23	20/88	14	12/87
	≥ 36	24	9/37	24	9/38
	X^2	10.7 (2df)	P < .005	5.7 (2df)	P < .10
Race[a]	Black	50	15/30	30	9/30
	White	28	48/170	20	34/171
	X^2	5.6 (1df)	P < .025	1.6 (1df)	P = NS
Living with Partner	No	36	18/50	22	11/50
	Yes	27	29/106	19	20/106
	X^2	1.2 (1df)	P = NS	0.2 (1df)	P = NS
Rank[a]	Enlisted	36	51/142	24	35/143
	Officer	21	12/58	14	8/58
	X^2	4.4 (1df)	P < .05	2.8 (1df)	P < .10

Factor		Short-Term Effect % Dysphoric	Short-Term Effect # Dysph/ Total	Long-Term Effect % Dysphoric	Long-Term Effect # Dysph/ Total
Education	< 12 yr	33	29/87	25	22/87
	13-16	33	27/81	21	17/82
	≥ 17	19	6/31	13	4/31
	X^2	2.4 (2df)	P = NS	2.1 (2df)	P = NS
Training/ Experience (T/E)	None	36	42/118	24	29/119
	T or E	33	16/49	24	12/49
	T and E	15	5/33	6	2/33
	X^2	5.0 (2df)	P < .10	5.5 (2df)	P < .10
Volunteer	No	24	17/70	17	12/70
	Yes	38	32/85	24	20/85
	X^2	3.2 (1df)	P < .10	1.0 (1df)	P = NS
Exposure[b]	None	7	2/30	3	1/30
	Some	32	22/68	28	19/69
	Much	38	39/102	23	23/102
	X^2	10.7 (2df)	P < .005	7.5 (2df)	P <.025
Support (AF or other)[a]	None	21	9/42	24	10/42
	Some	27	20/74	20	15/75
	Much	47	33/70	24	17/70
	X^2	10.0 (2df)	P < .01	0.4 (2df)	P = NS
Support Adequate[b]	No	54	20/37	35	13/37
	Yes	28	42/148	19	29/149
	X^2	8.8 (1df)	P < .005	4.2 (1df)	P <.05

[a]Significant factor short term only.
[b]Significant factor short and long term.
Notes: All females and ethnic members other than blacks and whites have been eliminated from the analyses because of their small samples.

For "living with partner," subjects whose status changed (e.g., were married or divorced) during the period covered by the questionnaires were deleted from analysis of this variable.

Our next step was to determine if any of these demographic or experiential factors interacted. Theoretically, the dysphoria could be associated with many (or all) factors. However, an analysis testing 10 factors simultaneously would require a much larger sample than we had obtained. To look at as much information as our sample would allow, we decided to test all possible pairs of factors. For each pair, an analysis of categorical data using log linear models was performed, providing the following three tests:

1. Did the two factors interact? (For example, considering the factors of age and of race, did the difference in dysphoria between blacks and whites change across age levels?) In cases where there was interaction, test 3 listed below loses some of its importance.

2. Were the two factors disproportional? (For example, did the ratio of blacks to whites differ across age level?) This test provides information about the demographic makeup of the participants and their roles in the Guyana experience. It is statistically useful for determining the appropriate adjustment in test 3.

3. Was there a difference in dysphoria between the levels of the primary factor after properly adjusting for the other factor? (For example, did the percent of dysphoria continue to differ between blacks and whites after adjusting for any effects due to age?)

The results of these tests are shown in Table 3, A-J. In this report we will be discussing primarily the results of the third column of the table, "Primary (adjusted for other)." To aid with interpretation, cell percentages are shown in Table 4, A-I.

TABLE 3. TEST RESULTS FOR EACH PAIRED COMBINATION OF FACTORS, SUMMARIZED BY EACH PRIMARY FACTOR

	Short-term Effects			Long-term Effects		
Other factors	Interaction	Disproportionality	Primary (adjusted for other)	Interaction	Disproportionality	Primary (adjusted for other)
			A. AGE			
Race	NS	NS	< .005	NS	NS	< .05
Partner	NS	< .001	NS	< .10	< .001	NS
Rank	NS	< .001	< .05	NS	< .001	< .10
Education	NS	< .001	< .01	NS	< .001	< .10
Training/ Experience	NS	< .001	< .05	NS	< .001	< .10
Volunteer	NS	< .001	NS	NS	< .001	NS
Exposure	NS	< .005	< .05	NS	< .005	< .05
Amt support	NS	NS	< .01	NS	NS	< .10
Adeq support	NS	NS	< .05	< .10	NS	< .10

TABLE 3. (Continued)

Other factors	Short-term Effects: Interaction	Short-term Effects: Disproportionality	Short-term Effects: Primary (adjusted for other)	Long-term Effects: Interaction	Long-term Effects: Disproportionality	Long-term Effects: Primary (adjusted for other)
B. RACE						
Age	NS	NS	< .01	NS	NS	NS
Partner	NS	NS	< .05	NS	NS	NS
Rank		Insufficient data			Insufficient data	
Education[a]	NS	< .05	< .05	< .10	< .05	NS
Training/ Experience[a]	NS	< .10	< .05	NS	< .10	NS
Volunteer	NS	NS	< .05	NS	NS	NS
Exposure	NS	< .005	< .10	NS	< .005	NS
Amt support	NS	NS	< .05	NS	NS	NS
Adeq support	NS	< .05	< .10	NS	< .05	NS
C. LIVING WITH A PARTNER						
Age	NS	< .001	NS	< .10	< .001	NS
Race	NS	NS	NS	NS	NS	NS
Rank	NS	< .005	NS	NS	< .005	NS
Education[a]	NS	< .05	NS	NS	< .05	NS
Training/ Experience	NS	NS	NS	NS	NS	NS
Volunteer	NS	< .10	NS	NS	< .10	NS
Exposure	< .05	NS	NS	NS	NS	NS
Amt Support	NS	NS	NS	NS	NS	NS
Adeq Support	NS	NS	NS	NS	NS	NS
D. RANK						
Age	NS	< .001	NS	NS	< .001	NS
Race		Insufficient data			Insufficient data	
Partner	NS	< .005	< .10	NS	< .005	NS
Education		Insufficient data			Insufficient data	
Training/ Experience	NS	NS	< .05	< .05	NS	NS
Volunteer	NS	< .001	< .10	< .05	< .001	NS
Exposure	< .10	< .001	NS	NS	< .001	NS
Amt support	NS	NS	< .10	NS	NS	< .10
Adeq support	NS	NS	< .10	NS	NS	< .10

[a]Insufficient data in some cells. Interpret with caution.

TABLE 3. (Continued)

Other factors	Short-term Effects: Interaction	Short-term Effects: Disproportionality	Short-term Effects: Primary (adjusted for other)	Long-term Effects: Interaction	Long-term Effects: Disproportionality	Long-term Effects: Primary (adjusted for other)
E. EDUCATION						
Age	NS	< .001	NS	NS	< .001	NS
Race[a]	NS	< .05	NS	< .10	< .05	NS
Partner[a]	NS	< .05	NS	NS	< .05	NS
Rank	Insufficient data			Insufficient data		
Training/ Experience	NS	< .001	NS	< .05	< .001	NS
Volunteer	< .05	< .001	NS	NS	< .001	NS
Exposure	NS	NS	NS	NS	NS	NS
Amt support	< .10	NS	NS	< .01	NS	NS
Adeq support	NS	NS	NS	NS	NS	NS
F. TRAINING/EXPERIENCE						
Age	NS	< .001	NS	NS	< .001	< .05
Race[a]	NS	< .10	< .10	NS	< .10	< .05
Partner	NS	NS	NS	NS	NS	NS
Rank	NS	NS	< .10	< .05	NS	< .05
Education	NS	< .001	NS	< .05	< .001	< .10
Volunteer	NS	< .05	NS	NS	< .05	< .10
Exposure	NS	NS	< .05	NS	NS	< .05
Amt Support	NS	NS	NS	NS	NS	< .10
Adeq Support	NS	NS	NS	NS	NS	< .01
G. VOLUNTEER STATUS						
Age	NS	< .001	NS	NS	< .001	NS
Race	NS	NS	NS	NS	NS	NS
Partner	NS	< .10	NS	NS	< .10	NS
Rank	NS	< .001	NS	< .05	< .001	NS
Education	< .05	< .001	NS	NS	< .001	NS
Training/ Experience	NS	< .05	NS	NS	< .05	NS
Exposure	NS	< .001	NS	NS	< .001	NS
Amt support	NS	< .001	NS	NS	< .001	NS
Adeq support	NS	NS	< .10	NS	NS	NS

[a]Insufficient data in some cells. Interpret with caution.

TABLE 3. (Continued)

Other factors	Short-term Effects: Interaction	Short-term Effects: Disproportionality	Short-term Effects: Primary (adjusted for other)	Long-term Effects: Interaction	Long-term Effects: Disproportionality	Long-term Effects: Primary (adjusted for other)
H. AMOUNT OF EXPOSURE TO REMAINS						
Age	NS	< .005	< .005	NS	< .005	< .01
Race[a]	NS	< .005	< .005	NS	< .005	< .05
Partner	< .05	NS	< .05	NS	NS	< .10
Rank	< .10	< .001	< .01	NS	< .001	< .05
Education	NS	NS	< .005	NS	NS	< .01
Training/ Experience	NS	NS	< .001	NS	NS	< .01
Volunteer	NS	< .001	< .005	NS	< .001	< .01
Amt support[a]	< .05	< .005	< .05	NS	< .005	< .05
Adeq support[a]	NS	NS	< .001	NS	NS	< .05
I. PERCEIVED AMOUNT OF EMOTIONAL SUPPORT						
Age	NS	NS	< .05	NS	NS	NS
Race	NS	NS	< .01	NS	NS	NS
Partner	NS	NS	< .05	NS	NS	NS
Rank	NS	NS	< .05	NS	NS	NS
Education	< .10	NS	< .05	< .01	NS	NS
Training/ Experience	NS	NS	< .05	NS	NS	NS
Volunteer	NS	< .001	NS	NS	< .001	NS
Exposure[a]	< .05	< .005	< .10	NS	< .005	NS
Adeq support	NS	< .001	< .001	NS	< .001	NS
J. PERCEIVED ADEQUACY OF EMOTIONAL SUPPORT						
Age	NS	NS	< .005	< .10	NS	< .10
Race	NS	< .05	< .01	NS	< .05	< .10
Partner	NS	NS	< .10	NS	NS	< .10
Rank	NS	NS	< .01	NS	NS	< .10
Education	NS	NS	< .005	NS	NS	< .05
Training/ Experience	NS	NS	< .005	NS	NS	< .05
Volunteer	NS	NS	< .05	NS	NS	NS
Exposure[a]	NS	NS	< .01	NS	NS	< .10
Amt Support	NS	< .001	< .001	NS	< .001	< .05

[a]Insufficient data in some cells. Interpret with caution.

TABLE 4. PERCENT DYSPHORIA IN EACH CELL OF EACH TWO-FACTOR COMBINATION

[% (number dysphoric/total number in cell)]

A. AGE

(1) RACE

	Short Term		Long Term	
	Black	White	Black	White
< 25	50%(4/8)	45%(30/67)	38%(3/8)	28%(19/68)
26-35	47%(8/17)	17%(12/71)	18%(3/17)	13%(9/70)
≥ 36	60%(3/5)	19%(6/32)	60%(3/5)	18%(6/33)

(2) LIVING W/PARTNER

	Short Term		Long Term	
	No	Yes	No	Yes
< 25	50%(15/30)	32%(6/19)	20%(6/30)	37%(7/19)
26-35	14%(2/14)	26%(15/57)	29%(4/14)	9%(5/56)
≥ 36	17%(1/6)	27%(8/30)	17%(1/6)	26%(8/31)

(3) RANK

	Short Term		Long Term	
	Enlisted	Officer	Enlisted	Officer
< 25	47%(30/64)	36%(4/11)	31%(20/65)	18%(2/11)
26-35	29%(17/59)	10%(3/29)	17%(10/58)	7%(2/29)
≥ 36	21%(4/19)	28%(5/18)	25%(5/20)	22%(4/18)

(4) EDUCATION

	Short Term			Long Term		
	≤ 12	13-16	≥ 17	≤ 12	13-16	≥ 17
<25	44%(20/45)	50%(13/26)	25%(1/4)	30%(14/46)	27%(7/26)	25%(1/4)
26-35	19%(6/31)	26%(11/43)	15%(2/13)	13%(4/30)	16%(7/43)	8%(1/13)
≥36	27%(3/11)	25%(3/12)	21%(3/14)	36%(4/11)	23%(3/13)	14%(2/14)

(5) TRAINING/EXPERIENCE

	Short Term			Long Term		
	None	T or E	T and E	None	T or E	T and E
< 25	46%(25/54)	50%(8/16)	20%(1/5)	29%(16/55)	38%(6/16)	0 (0/5)
26-35	24%(13/55)	21%(4/19)	21%(3/14)	15%(8/54)	21%(4/19)	0 (0/14)
≥ 36	44%(4/9)	29%(4/14)	7%(1/14)	50%(5/10)	14%(2/14)	14%(2/14)

TABLE 4. (Continued)

[% (number dysphoric/total number in cell)]

A. AGE (continued)

(6) VOLUNTEER

	Short Term		Long Term	
	No	Yes	No	Yes
< 25	29%(4/14)	48%(22/46)	27%(4/15)	28%(13/46)
26-35	22%(9/40)	26%(8/31)	10%(4/39)	16%(5/31)
≥ 36	25%(4/16)	25%(2/8)	25%(4/16)	25%(2/8)

(7) EXPOSURE

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
< 25	22%(2/9)	53%(8/15)	47%(24/51)	11%(1/9)	38%(6/16)	29%(15/51)
26-35	0 (0/16)	26%(10/39)	30%(10/33)	0 (0/16)	21%(8/39)	12%(4/32)
≥ 36	0 (0/5)	29%(4/14)	28%(5/18)	0 (0/5)	36%(5/14)	21%(4/19)

(8) AMOUNT OF SUPPORT

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
< 25	42%(5/12)	41%(12/29)	57%(17/30)	50%(6/12)	27%(8/30)	27%(8/30)
26-35	21%(4/19)	13%(4/31)	36%(12/33)	11%(2/19)	16%(5/31)	16%(5/32)
≥ 36	0 (0/11)	29%(4/14)	57%(4/7)	18%(2/11)	14%(2/14)	50%(4/8)

(9) ADEQUACY OF SUPPORT

	Short Term		Long Term	
	No	Yes	No	Yes
< 25	67%(10/15)	41%(23/56)	40%(6/15)	28%(16/57)
26-35	53%(8/15)	18%(12/65)	40%(6/15)	9%(6/64)
≥ 36	29%(2/7)	26%(7/27)	14%(1/7)	25%(7/28)

TABLE 4. (Continued)

[% (number dysphoric/total number in cell)]

B. RACE

(1) LIVING W/PARTNER

	Short Term		Long Term	
	No	Yes	No	Yes
Black	50%(3/6)	53%(9/17)	50%(3/6)	24%(4/17)
White	34%(15/44)	22%(20/89)	18%(8/44)	18%(16/89)

(2) RANK

	Short Term		Long Term	
	Enlisted	Officer	Enlisted	Officer
Black	54%(15/28)	0 (0/2)	32%(9/28)	0 (0/2)
White	32%(36/114)	21%(12/56)	23%(26/115)	14%(8/56)

(3) EDUCATION

	Short Term			Long Term		
	$\leq$ 12	13-16	$\geq$ 17	$\leq$ 12	13-16	$\geq$ 17
Black	53%(9/17)	50%(6/12)	0 (0/1)	47%(8/17)	8%(1/12)	0 (0/1)
White	29%(20/70)	30%(21/69)	20%(6/30)	20%(14/70)	23%(16/70)	13%(4/30)

(4) TRAINING/EXPERIENCE

	Short Term			Long Term		
	None	T or E	T and E	None	T or E	T and E
Black	48%(11/23)	75%(3/4)	33%(1/3)	35%(8/23)	25%(1/4)	0 (0/3)
White	33%(31/95)	29%(13/45)	13%(4/30)	22%(21/96)	24%(11/45)	7%(2/30)

(5) VOLUNTEER

	Short Term		Long Term	
	No	Yes	No	Yes
Black	56%(5/9)	53%(9/17)	33%(3/9)	29%(5/17)
White	20%(12/61)	34%(23/68)	15%(9/61)	22%(15/68)

(6) EXPOSURE

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
Black	--(0/0)	50%(6/12)	50%(9/18)	--(0/0)	25%(3/12)	33%(6/18)
White	7%(2/30)	29%(16/56)	36%(30/84)	3%(1/30)	28%(16/57)	20%(17/84)

TABLE 4. (Continued)

[% (number dysphoric/total number in cell)]

B. RACE (continued)

(7) AMOUNT OF SUPPORT

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
Black	40%(2/5)	45%(5/11)	62%(8/13)	40%(2/5)	27%(3/11)	31%(4/13)
White	19%(7/37)	24%(15/63)	44%(25/57)	22%(8/37)	19%(12/64)	23%(13/57)

(8) ADEQUACY OF SUPPORT

	Short Term		Long Term	
	No	Yes	No	Yes
Black	60%(6/10)	47%(9/19)	40%(4/10)	26%(5/19)
White	52%(14/27)	26%(34/129)	33%(9/27)	18%(23/130)

C. LIVING WITH PARTNER

(1) RANK

	Short Term		Long Term	
	Enlisted	Officer	Enlisted	Officer
Yes	33%(23/69)	16%(6/37)	20%(14/69)	16%(6/37)
No	36%(16/44)	33%(2/6)	25%(11/44)	0 (0/6)

(2) EDUCATION

	Short Term			Long Term		
	$\leq$ 12	13-16	$\geq$ 17	$\leq$ 12	13-16	$\geq$ 17
Yes	27%(11/41)	32%(14/44)	15%(3/20)	18%(7/40)	24%(11/45)	10%(2/20)
No	43%(12/28)	32%(6/19)	0 (0/3)	25%(7/28)	21%(4/19)	0 (0/3)

TABLE 4. (Continued)

[% (number dysphoric/total number in cell)]

C. LIVING WITH PARTNER (continued)

(3) TRAINING/EXPERIENCE

	Short Term			Long Term		
	None	T or E	T and E	None	T or E	T and E
Yes	30%(17/57)	31%(8/26)	17%(4/23)	23%(13/57)	19%(5/26)	9%(2/23)
No	41%(12/29)	33%(5/15)	17%(1/6)	21%(6/29)	33%(5/15)	0 (0/6)

(4) VOLUNTEER

	Short Term		Long Term	
	Yes	No	Yes	No
Yes	32%(12/38)	22%(9/41)	18%(7/38)	18%(7/40)
No	35%(9/26)	29%(4/14)	23%(6/26)	14%(2/14)

(5) EXPOSURE

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
Yes	0 (0/18)	31%(12/39)	35%(17/49)	6%(1/18)	21%(8/39)	22%(11/49)
No	40%(2/5)	35%(7/20)	36%(9/25)	0 (0/5)	35%(7/20)	16%(4/25)

(6) AMOUNT OF SUPPORT

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
Yes	12%(3/24)	24%(9/37)	46%(16/35)	21%(5/24)	16%(6/37)	23%(8/35)
No	36%(4/11)	30%(6/20)	47%(8/17)	18%(2/11)	25%(5/20)	24%(4/17)

(7) ADEQUACY OF SUPPORT

	Short Term		Long Term	
	Yes	No	Yes	No
Yes	26%(20/77)	47%(9/19)	17%(13/77)	32%(6/19)
No	33%(13/39)	50%(4/8)	21%(8/39)	38%(3/8)

TABLE 4. (Continued)

[% (number dysphoric/total number in cell)]

D. RANK

(1) EDUCATION

	Short Term			Long Term		
	≤ 12	13-16	≥ 17	≤ 12	13-16	≥ 17
Enlisted	33%(29/87)	40%(21/53)	0 (0/1)	25%(22/87)	24%(13/54)	0 (0/1)
Officer	-- (0/0)	21%(6/28)	20%(6/30)	-- (0/0)	14%(4/28)	13%(4/30)

(2) TRAINING/EXPERIENCE

	Short Term			Long Term		
	None	T or E	T and E	None	T or E	T and E
Enlisted	40%(34/86)	36%(13/36)	20%(4/20)	28%(24/87)	31%(11/36)	0 (0/20)
Officer	25%(8/32)	23%(3/13)	8%(1/13)	16%(5/32)	8%(1/13)	15%(2/13)

(3) VOLUNTEER

	Short Term		Long Term	
	Yes	No	Yes	No
Enlisted	40%(30/75)	30%(11/37)	27%(20/75)	16%(6/37)
Officer	20%(2/10)	18%(6/33)	0 (0/10)	18%(6/33)

(4) EXPOSURE

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
Enlisted	17%(2/12)	30%(14/47)	42%(35/83)	8%(1/12)	27%(13/48)	25%(21/83)
Officer	0 (0/18)	38%(8/21)	21%(4/19)	0 (0/18)	29%(6/21)	11%(2/19)

(5) AMOUNT OF SUPPORT

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
Enlisted	26%(7/27)	33%(17/52)	49%(27/55)	22%(6/27)	26%(14/53)	27%(15/55)
Officer	13%(2/15)	14%(3/22)	40%(6/15)	27%(4/15)	5%(1/22)	13%(2/15)

(6) ADEQUACY OF SUPPORT

	Short Term		Long Term	
	No	Yes	No	Yes
Enlisted	57%(17/30)	32%(33/103)	37%(11/30)	23%(24/104)
Officer	43%(3/7)	20%(9/45)	29%(2/7)	11%(5/45)

TABLE 4. (Continued)

[% (number dysphoric/total number in cell)]

E. EDUCATION

(1) TRAINING/EXPERIENCE

	Short Term			Long Term		
	None	T or E	T and E	None	T or E	T and E
< 12	32%(20/62)	41%(7/17)	25%(2/8)	26%(16/62)	35%(6/17)	0 (0/8)
13-16	39%(18/46)	33%(7/21))	14%(2/14)	23%(11/47)	29%(6/21)	0 (0/14)
≥ 17	33%(3/9)	18%(2/11)	9%(1/11)	22%(2/9)	0 (0/11)	18%(2/11)

(2) VOLUNTEER

	Short Term		Long Term	
	Yes	No	Yes	No
< 12	35%(17/49)	32%(6/19)	29%(14/49)	21%(4/19)
13-16	48%(14/29)	19%(7/37)	21%(6/29)	14%(5/37)
≥ 17	0 (0/6)	29%(4/14)	0 (0/6)	21%(3/14)

(3) EXPOSURE

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
< 12	20%(2/10)	31%(8/26))	37%(19/51)	10%(1/10)	26%(7/27)	28%(14/50)
13-16	0 (0/15)	34%(10/29)	46%(17/37)	0 (0/15)	31%(9/29)	21%(8/38)
≥ 17	0 (0/5)	31%(4/13)	15%(2/13)	0 (0/5)	23%(3/13)	8%(1/13)

(4) AMOUNT OF SUPPORT

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
< 12	40%(6/15)	26%(8/31)	41%(15/37)	27%(4/15)	31%(10/32)	22%(8/36)
13-16	6%(1/17)	29%(10/34)	62%(15/24)	12%(2/17)	15%(5/34)	36%(9/25)
≥ 17	20%(2/10)	22%(2/9)	25%(2/8)	40%(4/10)	0 (0/9)	0 (0/8)

(5) ADEQUACY OF SUPPORT

	Short Term		Long Term	
	No	Yes	No	Yes
< 12	53%(8/15)	30%(20/66)	40%(6/15)	24%(16/66)
13-16	53%(9/17)	31%(18/59)	29%(5/17)	20%(12/60)
≥ 17	60%(3/5)	14%(3/22)	40%(2/5)	5%(1/22)

TABLE 4. (Continued)

[% (number dysphoric/total number in cell)]

F. TRAINING/EXPERIENCE

(1) VOLUNTEER

	Yes	No	Yes	No
None	44%(26/59)	21%(8/38)	25%(15/59)	26%(10/38)
T or E	26%(5/19)	29%(5/17)	26%(5/19)	6%(1/17)
T and E	14%(1/7)	27%(4/15)	0 (0/7)	7%(1/15)

(2) EXPOSURE

	None	Some	Much	None	Some	Much
None	9%(2/22)	36%(14/39)	46%(26/57)	5%(1/22)	30%(12/40)	28%(16/57)
T or E	0 (0/4)	24%(5/21)	46%(11/24)	0 (0/4)	29%(6/21)	25%(6/24)
T and E	0 (0/4)	38%(3/8)	10%(2/21)	0 (0/4)	12%(1/8)	5%(1/21)

(3) AMOUNT OF SUPPORT

	None	Some	Much	None	Some	Much
None	29%(6/21)	26%(11/42)	50%(25/50)	24%(5/21)	26%(11/43)	26%(13/50)
T or E	17%(2/12)	29%(6/21)	58%(7/12)	25%(3/12)	19%(4/21)	33%(4/12)
T and E	11%(1/9)	27%(3/11)	12%(1/8)	22%(2/9)	0 (0/11)	0 (0/8)

(4) ADEQUACY OF SUPPORT

	No	Yes	No	Yes
None	65%(13/20)	31%(28/91)	45%(9/20)	22%(20/92)
T or E	55%(6/11)	29%(10/35)	36%(4/11)	23%(8/35)
T and E	17%(1/6)	18%(4/22)	0 (0/6)	5%(1/22)

TABLE 4. (Continued)

[% (number dysphoric/total number in cell)]

G. VOLUNTEER

(1) EXPOSURE

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
No	4%(1/24)	34%(10/29)	35%(6/17)	0 (0/24)	33%(10/30)	12%(2/16)
Yes	17%(1/6)	32%(6/19)	42%(25/60)	17%(1/6)	26%(5/19)	23%(14/60)

(2) AMOUNT OF SUPPORT

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
No	21%(4/19)	23%(8/35)	40%(4/10)	21%(4/19)	14%(5/36)	22%(2/9)
Yes	25%(3/12)	31%(8/26)	47%(21/45)	17%(2/12)	23%(6/26)	27%(12/45)

(3) ADEQUACY OF SUPPORT

	Short Term		Long Term	
	No	Yes	No	Yes
No	39%(7/18)	20%(9/44)	22%(4/18)	16%(7/44)
Yes	60%(9/15)	33%(23/69)	40%(6/15)	20%(14/69)

H. EXPOSURE

(1) AMOUNT OF SUPPORT

	Short Term			Long Term		
	None	Some	Much	None	Some	Much
None	11%(1/9)	0 (0/15)	50%(1/2)	0 (0/9)	7%(1/15)	0 (0/2)
Some	35%(6/17)	21%(5/24)	48%(10/21)	29%(5/17)	32%(8/25)	24%(5/21)
Much	12%(2/16)	43%(15/35)	47%(22/47)	31%(5/16)	17%(6/35)	26%(12/47)

(2) ADEQUACY OF SUPPORT

	Short Term		Long Term	
	No	Yes	No	Yes
None	0 (0/3)	5%(1/22)	0 (0/3)	5%(1/22)
Some	62%(8/13)	29%(14/48)	46%(6/13)	24%(12/49)
Much	57%(12/21)	35%(27/78)	33%(7/21)	21%(16/78)

TABLE 4. (Continued)

[% (number dysphoric/total number in cell)]

	Short Term		Long Term	
I. AMOUNT OF SUPPORT				
	ADEQUACY OF SUPPORT			
	No	Yes	No	Yes
None	43%(6/14)	9%(2/22)	29%(4/14)	23%(5/22)
Some	63%(12/19)	15%(8/54)	37%(7/19)	15%(8/55)
Much	50%(2/4)	47%(31/66)	50%(2/4)	23%(15/66)

Because of the relatively small samples involved, data in some cases were insufficient for testing; in other cases we considered the tests questionable because some cell counts were too low. (We defined a cell count < 4 as "too low.") However, we believe that our results indicate which personal factors were important and which were unimportant in the USAF response to the Guyana tragedy, information that may be of value in selection and support of personnel involved in future efforts to recover and identify mass casualties. We will consider each factor separately and summarize the results in the final section of this report. The factors are considered only for the difference between emotional status before and immediately after the experience (short-term effects), when dysphoria was the greatest.

Age

Unadjusted for other factors, significantly more younger respondents reported dysphoria than did the older ones. Those 25 and under had a 45% rate of dysphoria, compared with 23% of those aged 26-35 and 24% of those 36 and over ($p < .005$, Table 2). When age was adjusted for each of the other factors, the results were essentially the same: the younger reported more dysphoria (Tables 3-A and 4-A(1-9)). There were two exceptions to this. When adjusted for either Partner or Volunteer, no age differences were detected. In both cases we were working with a reduced sample size, thus giving us a less powerful test. The trends (see Table 4-A(2 and 6)) were at least in the same direction as the overall results, so we might conclude that young people generally react more to carnage than do older people.

Race

Unadjusted for other factors, significantly more blacks than whites reported dysphoric effects (50% vs. 28%, $p < .025$, Table 2). When race was adjusted for each other factor, the tests indicated essentially the same results (Tables 3-B, 4-A(1), and 4-B(1-8)). Two instances were borderline ($p < .10$): race adjusted for "degree of exposure to remains" and for the perceived "adequacy of emotional support" (Table 4-B(6 and 8)). In both instances, however, the trends are fairly compatible with the overall results.

Living with Partner

There was no significant difference between dysphoric effects reported by respondents who were married or living with a partner and those who were not (Table 2). This lack of a significant difference held true when combined with other factors (Table 3-C), except for an interaction with "exposure to remains" (Table 4-C(5)). In this case, those living with a partner and not having been exposed experienced less dysphoria than did others.

Rank

More enlisted men reported dysphoria than did officers (36% vs. 21%, $p < .05$, Table 2). However, this difference becomes borderline or disappears when "rank" is adjusted for some of the other factors (Table 3-D). This implies that the difference between ranks may be due to other factors closely related to rank. Table 4-D(4) shows that 92% (130 of 142) of the enlisted had at least some exposure to remains, whereas only 69% (40 of 58) of the officers were exposed. (Many of the officers on flight crews reported that they never went back to their aircraft to look at the body containers.) This and the fact that more of the enlisted were 25 or younger (64 of 142 (45%) enlisted vs. 11 of 58 (19%) officers, Table 4-A(3)), seem to relate the increased dysphoria among enlisted men more to factors of exposure and age.

Education

Unadjusted, the differences in dysphoria between "no college," "college," and "postgraduate" groups were not significant (33%, 33%, and 19%, p = NS, Table 2). Adjusting for each other factor separately produced only one significant interaction, with "volunteer." Table 4-E(2) suggests that volunteers without college education were affected about the same as nonvolunteers; volunteers with college educations were affected more than similarly educated nonvolunteers, and volunteers with postgraduate educations were affected less than nonvolunteers. This irregular interaction may be tied to other factors, but the sample cells are too small to pursue it further statistically.

Training and Experience

Unadjusted, there was only borderline evidence of differences in dysphoria between those with neither prior training nor prior experience in dealing with human remains, those with either training or experience, and those with both training and experience (36%, 33%, and 15%, $p < .10$, Table 2). Adjusted for other factors, there was only one case (adjusted for "exposure") in which the training and experience levels differed statistically (Table 3-F). Table 4-F(2) suggests that personnel with both training and experience may show less dysphoria than those with only one or neither background, but only in the extreme (i.e., much exposure category).

Volunteers

We found only a borderline statistical difference between the dysphoric rates of nonvolunteers and volunteers (24% vs. 38%, $p < .10$, Table 2). Adjusting volunteer status for every other factor yielded no evidence that a real difference existed (Table 3-G). This information ran counter to our informal prediction that nonvolunteers might react more than volunteers. Specifically, this lack of difference held true even when the exposure to the remains was rated "Much" (Table 4-G(1)). The only suggestion that volunteers differed from nonvolunteers in their emotional reactions under these circumstances was the paradoxical interaction with education, noted in that section.

Exposure to Remains

Unadjusted for other factors, the rate of dysphoria reported was significantly less in respondents with no exposure to the remains than those with some or much exposure (7% vs. 32% and 38%, $p < .005$, Table 2). When exposure is adjusted for each other factor (Tables 3-H and 4), the results show little evidence contrary to this finding. In two cases exposure interacts with other factors: "living with partner," which has been discussed previously, and "amount of support" perceived (Table 4-H(1)), which has no internal consistency and may be a chance finding.

Emotional Support Received During and After the Guyana Project

The emotional support questions covered the source, amount, and perceived adequacy of the support. Note that unlike with age, education, rank, and other demographic data, the questions concerning emotional support elicited matters of opinion.

a. Amount of Support (Air Force and Other) During the Project. Unadjusted, the percentage of respondents reporting dysphoria parallels their perception of the amount of support available: 21% dysphoria in those reporting no support, 27% in those reporting some support, and 47% in those reporting much support; $p < .01$ (Table 2). The same results were generally seen in combination with other factors (Table 3-I). There were two exceptions in which no significant difference was recorded, but in both cases the trend was in the same direction of increasing dysphoria with increasing support (Table 4-G(2), which combines levels of perceived support with volunteer status, and Table 4-H(1), which examines levels of perceived support in various degrees of exposure to remains). Thus, there generally seems to be a relationship between dysphoria and the amount of perceived support. We have examined this finding carefully, and have no clear explanation for it. Possibly this is a causal relationship: those that experienced dysphoria may have sought and acknowledged more support than those who did not feel dysphoric.

b. Adequacy of Support During the Project. Chaplains and mental health personnel were available for support and counseling. Several respondents commented that chaplains in particular were present where the work was being done. The perception of this support will be discussed later. Unadjusted, the percentage of those reporting dysphoria was greater in respondents who

felt the total support was inadequate than in those who felt it was adequate (54% vs. 28%, $p < .005$, Table 2). This finding held true when adjusted for each of the other factors (Table 3-J), and the various percentages in the item-by-item analyses in Table 4 generally follow the same pattern. For the Guyana group as a whole, the greater the amount of emotional support received on the job from Air Force and co-worker sources, the more likely that support was perceived to be adequate. Sixty-one percent (22 of 36) of those perceiving no support felt that it was adequate (perhaps this group felt no need for support). Of those receiving "some" support, 74% (54 of 73) felt that it was adequate, and 94% (66 of 70) of those receiving "much" support found it adequate.

c. Subsequent Support. Of the 15 people who reported that they had actively sought emotional support after the Guyana project ended, 3 went to Air Force Medical facilities, 3 to civilian clergy, 8 to family or friends, and 1 did not specify. Twelve of these 15 were dysphoric, an 80% rate that far exceeded the 32% of the Guyana group as a whole. One would expect this in a group that felt it necessary to seek emotional support. Of the 3 who were not dysphoric, 1 indicated no change in emotional status, and 2 indicated a change in a positive direction. One of the two reporting a positive change indicated that it was the result of concurrent marital therapy and had nothing to do with the Guyana episode.

DISCUSSION

The periodic assignment of USAF personnel to help recover and identify human remains will continue, both on a local level, as with USAF aircraft accidents, and on a larger scale, as with the Tenerife aircraft collision and the Jonestown, Guyana deaths. This study reports a self-analysis of the emotional effects by those concerned in the latter effort. The proportion of the involved personnel who reported short-term emotional upset was significantly higher than a control group who were not involved. Of those involved, a greater proportion of the upset was reported by the younger troops, by the blacks, by the lower ranking, by those with a greater exposure to the remains, by the group who perceived (or sought) more emotional support, and by the group who perceived that support to be inadequate.

The proportion of the involved personnel who reported long-term emotional effects was not significantly different from a control group of uninvolved personnel. Long-term dysphoria effects reported by the involved personnel tended to vary directly with their exposure to the remains and inversely with the perceived adequacy of the emotional support they received.

Using a retrospective questionnaire to assess emotional status has distinct disadvantages. There may be inherent inaccuracies of self-assessment, selection factors in those who chose to respond and not to respond, and vagaries of memory. Unfortunately, limitations of staff and budget prevented face-to-face interviews or the administration of standardized psychological tests of stress response and emotional status. Nevertheless, valuable information has been obtained concerning a little-studied aspect of human stress.

Some of the results were as one might predict, and some were surprising. Youth, inexperience, lower rank, and degree of exposure all were associated with more emotional stress and tended to interrelate. The increased dysphoria in the black personnel involved may have been a cultural manifestation having to do with a greater awareness (less denial) of the emotional impact, or it may have been due to a greater identification with the predominantly black victims. The lack of difference in emotional effects on volunteer and nonvolunteer personnel was somewhat surprising; this held true regardless of correction for other factors. Similarly, there was no significant difference in the emotional effects reported by those who were living with a spouse or partner during the Guyana experience and by those who were not. The group support experienced during the stressful period apparently substituted for marital support.

The subjective comments made by respondents did not lend themselves to grouping or to statistical analysis. Many comments reflected anger. Some directed it at the victims: "You can't look at the people in Jonestown as people who didn't want to die. It was their choice." "At first the magnitude of the operation prohibited me from realizing they were really humans instead of, frankly, just slabs." "I can understand a humanitarian effort, but not for a bunch of fanatics who denounced their own country to be there in the first place."

Others directed their anger at the Air Force: "I think the mission was repulsive and non-military. If the USA intends to accomplish such a mission in the future, compensate military members accordingly." Still others attacked the organization of the effort, and the rewards for it: "I feel that Maint[enance] personnel should not be expected or required to pull Grave Registration Duties"...[from a nonvolunteer who handled body containers]. "I was appalled by the politics of trying to get those bodies buried--they were looked on as so much trash...." "All of us worked very hard but when it was all over with they did not treat everyone equal." "I felt a certain comradery [sic] with other members of my shift. We worked hard together--but were not recognized in full--only a certain percentage were allowed to be given decorations."

Many referred to the bodies of the children as evoking the strongest emotional response: "Yes, seeing the decomposed bodies of the children put an extreme emotional stress on me, for about 3-4 days after which I was ok!" "It is quite a shock to see three or four babies in a bag." "The bodies of the children were of innocent victims and it shouldn't have been that way...." "I think what touched me most was the sight of the infants, they never had any say so in the matter." "Can't sleep. Cannot get the small children out of my mind."

Some spoke of the entire experience as one leading to personal growth, one which was beneficial and might be repeated if necessary: "Long lasting friends have sprung from this incident." "I have tried...to improve my life and enjoy it. Seeing all those people dead makes you realize your mortality." "I got the feeling I was contributing." "This experience has given me a more adult look on life...." "...I matured a great deal." "I feel and felt then that I was a kind of hero." "I take life more serious." "I've devoted my

future to living life better. ...You've got to give a damn." "I had never experienced death before this incident. It made me aware of how beautiful life is. And, how ugly death can be."

Group support and humor were both mentioned as valuable in supporting each other through the stress: "At one time about 15 of us got together prior to going home and discussed how we felt and many seemed relieved to find out others were having trouble sleeping, etc." "The Air Force members seemed to work more as a group of friends toward a common goal." "To tell you the truth, the only way me and my friends found to keep one sane was to joke around so much and to keep laughing, even if it meant making fun of the bodies." "Perhaps it's like tension in the O.R. [operating room], a joke, good or bad, breaks the tension, and takes people's minds off of what they are doing. During the Jonestown detail the grosser the joke, the better. I invented...a great idea for a Timex commercial (it really was 'still ticking'), a Kool-Aid commercial, and several other items of general idiocy. ...I think the chaplains did a good job in lending their support, but beyond that we received our emotional and morale [sic] support from each other." "[We] require a great deal of moral support from Supervisors, Commanders, and Family. Personnel working with the remains tend to make, what would normally be distasteful, jokes...about the remains." "These people went above and beyond their duty, and I am proud to have worked with them."

CONCLUSIONS AND RECOMMENDATIONS

Rescuers usually work only briefly with living victims. Their work in this situation, as in previous mass deaths from aircraft disasters, was prolonged. When similar situations arise again, those responsible for furnishing and assigning personnel should use older, experienced people whenever possible. Younger troops should be paired with older ones. Rotation of jobs may be desirable. Careful attention should be paid to day-by-day emotional support, perhaps in a group discussion setting, by mental health professionals. There is real value, especially for young men, in understanding that others feel the same strong emotions under such circumstances, that they are not alone. The use of humor as a coping mechanism in situations of extreme stress (combat, surgery, disasters) is well known. Similarly, a feeling of group participation in a worthy cause can give meaning to otherwise intolerable situations. Altruism, working for a greater good, is a strong and mature coping skill (13).

Certainly, such a project should have a formal termination for individuals or for the whole group. Recognition by valued authority is a powerful antidote for perceived suffering, as we are now learning from our Vietnam veterans. Judicious, equitable distribution of awards, decorations, and certificates is important. A sensitive debriefing for those involved in such an undertaking may defuse future emotional effects. Necessary follow-up care may be given, using the crisis intervention model (14, 15). We strongly suggest that operational plans for dealing with future mass casualty situations include specific provisions for mental health professionals to monitor those involved and to provide nonthreatening group opportunities for emotional support.

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APPENDIX A

QUESTIONNAIRE FOR WORKERS WITH GUYANA VICTIMS

DEPARTMENT OF THE AIR FORCE
USAF SCHOOL OF AEROSPACE MEDICINE (AFSC)
BROOKS AIR FORCE BASE, TEXAS 78235

REPLY TO ATTN OF: NGN

SUBJECT: Questionnaire (Work With Guyana Victims)

TO:

1. We at the School of Aerospace Medicine are interested in trying to understand how USAF personnel respond to stressful experiences. We believe this knowledge may be helpful in preparing disaster training programs in the future.

2. Enclosed is a questionnaire which asks for some of your reactions to your experience with the Guyana victims. We hope you will help us in our effort by completing the questionnaire and returning it in the enclosed envelope within three days of receiving it. This questionnaire is being mailed to all USAF personnel whom we can locate who were involved in the Guyana experience, and each one is important to us in order to get a meaningful sample of information. You will notice that the questionnaire is numbered. This is for administrative purposes only. Your responses to the questionnaire will remain anonymous and will not be identified with you. Please note that the enclosed Privacy Act Statement insures anonymity and does not need to be returned to us.

3. Thank you for your cooperation.

DAVID R. JONES, Colonel, USAF, MC, CFS
Chief, Psychiatry Function
Neuropsychiatry Branch

2 Atch
1. Questionnaire
2. Privacy Act Statement

PRIVACY STATEMENT

In accordance with paragraph 30, AFR 12-35, Air Force Privacy Act Program, the following information about this survey is provided:

a. Authority. 10 U.S.C., 8012, Secretary of the Air Force: Powers and Duties, Delegation by.

b. Principal Purpose. This survey is being conducted to assess the emotional impact upon rescuers of working with human remains and disaster victims.

c. Routine Use. This survey data will be used to determine the need for increased support of morale of personnel assigned to such duties.

d. Participation in this survey is entirely voluntary.

e. No adverse action of any kind may be taken against any individual who elects not to participate in this survey.

YOUR RESPONSES ON THIS SURVEY ARE CONFIDENTIAL AND YOU WILL REMAIN ANONYMOUS. AT NO TIME WILL ANY ATTEMPT BE MADE TO DETERMINE HOW YOU, AS AN INDIVIDUAL, RESPONDED TO THESE QUESTIONS.

QUESTIONNAIRE
(WORK WITH GUYANA VICTIMS)

1. Rank _____

2. Age _____

3. Sex _____M _____F

4. Race/Ethnic Background

____ Black/Black American/Afro American

____ Oriental/Oriental American (Filipino, Chinese, Japanese, Korean, Asian American)

____ Spanish Speaking Origin (Chicano, Mexican American, Puerto Rican, Latin American, Cuban)

____ Caucasian/White (Other than Spanish Speaking)

____ American Indian

____ Other

5. Marital (current status)

____ Single _____ Married _____ Widowed _____ Separated

____ Divorced _____ Remarried

6. Living with your partner in Nov 78 _____ YES _____ NO

7. Living with your partner now _____ YES _____ NO

8. Education _____ Years Public School (Through 12th Grade)

_____ Years College. Graduated? _____ YES _____ NO

_____ Years Graduate School. Graduated? _____ YES ____NO

_____ DEGREE

9. Duty AFSC _____ TITLE_____

Primary AFSC _____ TITLE_____

Other AFSC(s) _____ TITLE(s)_____

10. Please rate yourself as you were in Oct 1978, with 1 being the low end of the scale and 5 the high (best) end:

	LOW				HIGH
a. Physical Health	1	2	3	4	5
b. Happiness	1	2	3	4	5
c. Quality of Sleep	1	2	3	4	5
d. Appetite	1	2	3	4	5
e. Energy Level	1	2	3	4	5
f. Social Relations	1	2	3	4	5
g. Job Performance	1	2	3	4	5

11. What was your weight in Oct 1978? _____

12. How many hours were you sleeping per night? _____

13. How may times did you visit a doctor that month? _____

Concerning your work with the Guyana victims:

14. Did you work within your AFSC on this assignment?

a. _____YES b. _____ NO

15. Did you volunteer for this assignment?

a. _____ YES b. _____ NO

16. Where did you work on this assignment? (Check as many as applicable.)

a. _____ In Guyana at Jonestown

b. _____ In Guyana at Air Terminal

c. _____ In flight, Guyana to Dover

d. _____ At Dover, Air Terminal

e. _____ At Dover, In Mortuary

f. _____ Other (Specify)

17. Please estimate your degree of contact with the remains of the victims

		Degree of Exposure	No. of Bodies	Duration of Contact (hrs)
a.	_____	No exposure to remains	N/A	
b.	_____	Saw body containers - no odor	_____	_____
c.	_____	Odor only	_____	_____
d.	_____	Saw bodies	_____	_____
e.	_____	Handled body containers	_____	_____
f.	_____	Handled body bags	_____	_____
g.	_____	Handled bodies directly	_____	_____
h.	_____	Other (Specify)	_____	_____

18. How many days did you do this work? _____

19. Have you had any previous experience that was in any way similar to working with the bodies of the victims?

a. _____ Worked in morgue or mortuary

b. _____ Witnessed an autopsy or embalming

c. _____ Picked up remains of accident victims

d. _____ Worked with live accident victims (Emergency Room, X-ray, etc.)

e. _____ Had combat experience

f. _____ Worked in operating room

g. _____ Done biologic specimen dissection

h. _____ Other (Specify)

20. Have you had any specific training that applied to working with the bodies of the victims?

a. _____ USAF Technical Training

b. _____ USAF OJT

c. _____ Civilian Technical Training

d. _____ Civilian OJT

e. _____ Occupation prior to service

f. _____ Personal association with someone in a related occupation

g. _____ Other

21. Please specify briefly the nature of the above training.

22. Please rate yourself as of 15 Dec 1978 (After the Guyana experience), using a scale of 1 to 5, with 1 being the low end of the scale and 5 the high (best) end.

	LOW				HIGH
a. Physical Health	1	2	3	4	5
b. Happiness	1	2	3	4	5
c. Quality of Sleep	1	2	3	4	5
d. Appetite	1	2	3	4	5
e. Energy Level	1	2	3	4	5
f. Social Relations	1	2	3	4	5
g. Job Performance	1	2	3	4	5

23. Have you sought any emotional support since the Guyana experience?

a. _____ YES b. _____ NO

24. If so, from what source?

a. _____ USAF Medical Source

b. _____ USAF Chaplain

c. _____ Other USAF Source (Specify)

d. _____ CHAMPUS Medical Source

e. _____ Civilian Clergy

f. _____ Other (Specify)

25. During the Guyana experience, how would you rate the emotional or morale support that you received from official USAF sources?

a. _____ None b. _____ Little c. _____ Some d. _____ Much

26. How would you rate the emotional or morale support that you received from others working with you?

a. _____ None b. _____ Little c. _____ Some d. _____ Much

27. Do you consider the total support that was available to you adequate?

a. _____ YES b. _____ NO

28. Please rate yourself as you are now. Use a scale of 1 to 5; with 1 being the low end of the scale and 5 the high (best) end.

		LOW				HIGH
a.	Physical Health	1	2	3	4	5
b.	Happiness	1	2	3	4	5
c.	Quality of Sleep	1	2	3	4	5
d.	Appetite	1	2	3	4	5
e.	Energy Level	1	2	3	4	5
f.	Social Relations	1	2	3	4	5
g.	Job Performance	1	2	3	4	5

29. Please comment on any significant personal change that you feel has taken place since the Guyana experience. Include timing, duration of change, its intensity, and whether or not you have experienced such a change before.

30. Do you feel it was due to the Guyana experience, or to some unrelated factor in your life?

31. Please note any comments or ideas you have concerning the sort of emotional support necessary for people doing this sort of work in the future.

APPENDIX B

QUESTIONNAIRE FOR WORKERS WITH HUMAN REMAINS
OTHER THAN FROM GUYANA

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DEPARTMENT OF THE AIR FORCE
USAF SCHOOL OF AEROSPACE MEDICINE (AFSC)
BROOKS AIR FORCE BASE, TEXAS 78235

REPLY TO ATTN OF: NGN

SUBJECT: Questionnaire (Work With Human Remains)

TO

1. We at the School of Aerospace Medicine are interested in trying to understand how USAF personnel respond to stressful experiences. We believe this knowledge may be helpful in preparing disaster training programs in the future.

2. Enclosed is a questionnaire which asks for some of your reactions to working with human remains. We hope you will help us in our effort by completing this questionnaire and returning it in the enclosed envelope within three days of receiving it. This questionnaire is being given to selected personnel, and the responses of each individual are important to us in order to get a meaningful sample of information. You will notice that the questionnaire is numbered. This is for administrative purposes only. Your responses will remain anonymous and will not be identified with you. Please note that the enclosed Privacy Act Statement insures anonymity and does not need to be returned to us.

3. Thank you for your cooperation.

DAVID R. JONES, Colonel, USAF, MC, CFS
Chief, Psychiatry Function
Neuropsychiatry Branch

2 Atch
1. Questionnaire
2. Privacy Act Statement

PRIVACY STATEMENT

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a. Authority. 10 U.S.C., 8012, Secretary of the Air Force: Powers and Duties, Delegation by.

b. Principal Purpose. This survey is being conducted to assess the emotional impact upon rescuers of working with human remains and disaster victims.

c. Routine Use. This survey data will be used to determine the need for increased support of morale of personnel assigned to such duties.

d. Participation in this survey is entirely voluntary.

e. No adverse action of any kind may be taken against any individual who elects not to participate in this survey.

YOUR RESPONSES ON THIS SURVEY ARE CONFIDENTIAL AND YOU WILL REMAIN ANONYMOUS. AT NO TIME WILL ANY ATTEMPT BE MADE TO DETERMINE HOW YOU, AS AN INDIVIDUAL, RESPONDED TO THESE QUESTIONS.

QUESTIONNAIRE
(WORK WITH HUMAN REMAINS)

1. Rank _____

2. Age _____

3. Sex _____M _____F

4. Race/Ethnic Background

____ Black/Black American/Afro American

____ Oriental/Oriental American (Filipino, Chinese, Japanese, Korean, Asian American)

____ Spanish Speaking Origin (Chicano, Mexican American, Puerto Rican, Latin American, Cuban)

____ Caucasian/White (Other than Spanish Speaking)

____ American Indian

____ Other

5. Marital (current status)

____ Single _____ Married _____ Widowed _____ Separated

____ Divorced _____ Remarried

6. Living with your partner in Nov 78 _____ YES _____ NO

7. Living with your partner now _____ YES _____ NO

8. Education _____ Years Public School (Through 12th Grade)

_____ Years College. Graduated? _____ YES _____ NO

_____ Years Graduate School. Graduated? _____ YES ____NO

_____ DEGREE

9. Duty AFSC _____ TITLE_____

Primary AFSC _____ TITLE_____

Other AFSC(s) _____ TITLE(s)_____

10. Please rate yourself as you were in Oct 78, with 1 being the low end of the scale and 5 being the high (best) end. Circle the applicable number.

	LOW				HIGH
a. Physical Health	1	2	3	4	5
b. Happiness	1	2	3	4	5
c. Quality of Sleep	1	2	3	4	5
d. Appetite	1	2	3	4	5
e. Energy Level	1	2	3	4	5
f. Social Relations	1	2	3	4	5
g. Job Performance	1	2	3	4	5

11. What was your weight in Oct 1978? _____

12. How many hours were you sleeping per night? _____

13. How many times did you visit a doctor that month? _____

CONCERNING YOUR WORK WITH HUMAN REMAINS

14. Did you work within your AFSC in Nov 1978?

a. _____YES b. _____ NO

15. Did you do your usual work in Nov 1978?

a. _____ YES b. _____ NO

16. Where did you work during Nov 1978? (Check as many as applicable.)

a. _____ Foreign Air Terminal

b. _____ Domestic Air Terminal

c. _____ In flight

d. _____ Medical Duties out of the Hospital (as in ambulance runs)

e. _____ Emergency Room

f. _____ X-ray Unit

g. _____ Clinic (Specify)

h. _____ Ward

i. _____ Morgue

j. _____ Other (Specify)

17. Please estimate your degree of contact with the human remains during Nov 1978.

		Degree of Exposure	No. of Bodies	Duration of Contact (hrs)
a.	_____	No exposure to remains	N/A	
b.	_____	Saw body containers - no odor	_____	_____
c.	_____	Odor only	_____	_____
d.	_____	Saw bodies	_____	_____
e.	_____	Handled body containers	_____	_____
f.	_____	Handled body bags	_____	_____
g.	_____	Handled bodies directly	_____	_____
h.	_____	Other (Specify)	_____	_____

18. Over how many days was this experience spread? _____

19. Have you had any previous experience that was in any way similar to working with human remains?

a. _____ Worked in morgue or mortuary

b. _____ Witnessed an autopsy or embalming

c. _____ Picked up remains of accident victims

d. _____ Worked with live accident victims (Emergency Room, X-ray, etc.)

e. _____ Had combat experience

f. _____ Worked in operating room

g. _____ Done biologic specimen dissection

h. _____ Other (Specify)

20. Have you had any specific training that applied to working with human remains?

a. _____ USAF Technical Training

b. _____ USAF OJT

c. _____ Civilian Technical Training

d. _____ Occupation Prior to Service

e. _____ Personal association with someone in a related occupation

f. _____ Other (Specify)

21. Please specify briefly the nature of the above training.

22. Please rate yourself as of 15 Dec 78, using a scale of 1 to 5, with 1 being the low end of the scale and 5 the high (best) end. Circle applicable number.

	LOW				HIGH
a. Physical Health	1	2	3	4	5
b. Happiness	1	2	3	4	5
c. Quality of Sleep	1	2	3	4	5
d. Appetite	1	2	3	4	5
e. Energy Level	1	2	3	4	5
f. Social Relations	1	2	3	4	5
g. Job Performance	1	2	3	4	5

23. Have you sought any emotional support since Dec 1978?

a. _____ YES b. _____ NO

24. If so, from what source?

a. _____ USAF Medical Source

b. _____ USAF Chaplain

c. _____ Other USAF Source (Specify)

d. _____ CHAMPUS Medical Source

e. _____ Civilian Clergy

f. _____ Other (Specify)

25. During Dec 1978, how would you rate the emotional or morale support that you received from official USAF sources?

a. _____ None b. _____ Little c. _____ Some d. _____ Much

26. How would you rate the emotional or morale support that you received from others working with you?

a. _____ None b. _____Little c. _____ Some d. ____ Much

27. Do you consider the total support that was available to you adequate?

a. _____ YES b. _____ NO

28. Please rate yourself as you are now. Use a scale of 1 to 5; with 1 being the low end of the scale and 5 the high (best) end. Circle applicable number.

	LOW				HIGH
a. Physical Health	1	2	3	4	5
b. Happiness	1	2	3	4	5
c. Quality of Sleep	1	2	3	4	5
d. Appetite	1	2	3	4	5
e. Energy Level	1	2	3	4	5
f. Social Relations	1	2	3	4	5
g. Job Performance	1	2	3	4	5

29. Please comment on any significant personal or emotional change that you feel has taken place since Dec 1978. Include timing, duration of change, its intensity, and whether or not you have experienced such a change before.

30. Do you feel it had anything to do with working with human remains, or to some unrelated factor in your life?

31. Please note any comments or ideas you have concerning the sort of emotional support necessary for people working with live accident victims or with human remains in the future.

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