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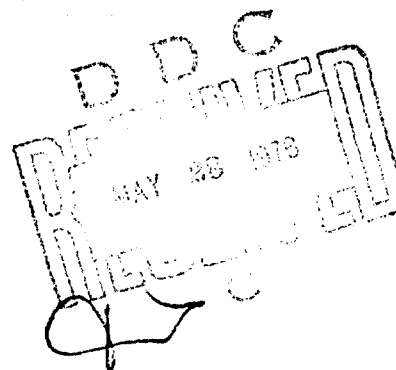
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BACKGROUND AND PERSONALITY CHARACTERISTICS RELATED TO STUDENT SATISFACTION AND PERFORMANCE IN FIELD MEDICAL SERVICE SCHOOL

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Background and Personality Characteristics Related to Student
Satisfaction and Performance in Field Medical Service School¹

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Abstract

Aptitude, background, and personality characteristics of 640 Navy Hospital Corpsmen (HMs) were related to satisfaction with assignment to the Fleet Marine Force (FMF), perceptions of the Field Medical Service School (FMSS) environment, and academic performance during the 5-week FMSS training course. Those individuals who were satisfied with an assignment to the FMF were more likely to have volunteered for FMF duty, to have been satisfied with having been designated an HM, and to have had higher scores on the Comrey Social Conformity and Activity scales than those individuals who were not satisfied with assignment to the FMF. Although satisfaction with assignment to FMF duty was significantly related to student perceptions of the training environment, student satisfaction and environmental perceptions were unrelated to academic performance. The explained variance in academic performance was accounted for largely by a student's aptitude test scores (GCT + ARI) and previous experience as an HM (pay grade). Overall, the results of this study have suggested that recruiting HMs who would be satisfied with FMF duty could be accomplished without any reduction in the quality of input.

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Background and Personality Characteristics Related to Student
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Few other occupational groups in the U. S. Navy are called upon to serve in as many different work settings as Hospital Corpsmen (HMs). Personnel in the HM rating are assigned to every major type of activity in the Navy and Marine Corps. In addition, HMs are expected to perform tasks unrelated to patient care such as personnel, supply, and other administrative jobs.

Most of the work settings that HMs serve in are familiar to them in that the work routines do not vary a great deal from one activity to another. An HM should be expected to adapt to working in a dispensary, hospital, or a medical department aboard ship with little difficulty.

One type of work setting that stands out as being quite dissimilar, however, is the Fleet Marine Force (FMF). The Marine Corps does not maintain its own medical services but depends upon the Navy Medical Department for such support. This requires the assignment of large numbers of HMs to the FMF to provide medical care to Marine Corps personnel in the field. Assignment of an HM to the FMF is based upon the pool of HMs available for assignment to sea duty and the manpower requirements of the FMF. Requests for this duty are neither required nor solicited.

Unlike the typically clean, comfortable, and familiar medical setting, duty with the FMF requires the HM to adjust to working in an organization having fewer resources (both material and personnel) and to adapt to a more rigorous daily routine such as working in the field on maneuvers. Fewer of the amenities of life to which they are accustomed in the Navy are available to them in the Marine Corps.

Prior to reporting to an FMF unit for duty, HMs are required to undergo a 5-week course of instruction in Field Medical Service School. The purpose of this school is to "... provide instruction in the knowledge and skills required to care for the medical needs of U. S. Marine Corps personnel in the field..." (Catalog of Navy Training Courses, 1975). This course includes instruction on such topics as organization of field (Marine Corps) units, medical supply in the field, first aid and emergency procedures, field first aid stations, casualty evacuations, field sanitation and preventive medicine, and specialized warfare medical requirements.

In view of the above, it should be of interest to assess how individuals react to assignment with the FMF and to identify factors which are associated with satisfaction with their assignment. This study was conducted to answer the following questions: (1) What aptitude, background, and personality characteristics are associated with satisfaction with assignment to FMF duty? (2) To what extent are perceptions of the training environment related to initial satisfaction with assignment to the FMF?, and (3) Are aptitude, background, personality, and training environment perceptions associated with academic performance in Field Medical Service School?

Method

Sample

The participants in this study included 640 male Hospital Corpsmen who entered the Field Medical Service School, Camp Pendleton, between October 1973 and April 1974.

Measures

Three questionnaires were employed in this research: a background information form (BI), the Comrey Personality Scales (CPS), and the Work Environment Scales (WES). Questions on the BI pertained to the number of years of schooling completed prior to enlistment in the Navy, the number of suspensions or expulsions from school, whether or not the individual had volunteered for assignment to the FMF, the individual's satisfaction with having been assigned to the FMF, marital status, and pay grade. The CPS (Comrey, 1970) contains 180 items which assess the self-report characteristics of an individual on eight personality dimensions and two types of test taking behavior. The WES (Insel and Moos, 1974) contains 138 items which assess student perceptions of the training environment. Two forms of the WES were used in this research, an Expectations form which assessed what students expected the training environment to be like and an Actual form which assessed what students actually found the training environment to be like. The items in these two forms differed only in verb tense.

The BI, CPS, and Expectations forms of the WES were administered to students at the beginning of training. The Actual form was administered at the end of the five-week training program. General Classification (GCT) and Arithmetic Reasoning (ARI) test scores and final grades were extracted from the participants' service records. The GCT is a measure of verbal aptitude and the ARI is a measure of arithmetic aptitude. Scores on these two measures were combined in subsequent analyses.

Analysis

The aptitude, background, personality, and environmental perception variables were correlated with satisfaction with assignment to the FMF and final grade. These relationships were then summarized by using multiple regression procedures. Means and standard deviations were computed on these variables for students with high ($N = 151$), medium ($N = 190$), and low ($N = 299$) levels of satisfaction and for students with above average ($N = 162$), average ($N = 324$), and below average ($N = 140$) levels of academic performance during the course of training.

Results

Satisfaction with assignment to the FMF

The initial objective of this study was to identify individual characteristics which are related to the satisfaction of HMs with assignment to FMF duty. Correlations of the aptitude, background, and personality measures with expressed satisfaction are shown in Table I. To provide a graphic illustration of these relationships, means on these variables are also shown in Table I for HMs who reported high, medium, and low levels of satisfaction. The results of this comparison indicate that those HMs who had volunteered for FMF duty were much more satisfied with the assignment than those HMs who had not volunteered. The degree to which an individual was satisfied with having been designated an HM in the first place was also related to how satisfied he was with an FMF assignment. Although marital status was not significantly related to satisfaction, for those HMs who were married, the more favorable his wife's attitude toward his being in the Navy, the more satisfied he tended to be with his assignment to the FMF. Several significant relationships were also found between scores on the personality questionnaire and satisfaction. Those HMs who were most satisfied with an FMF assignment tended to describe themselves more frequently than the least satisfied HMs as preferring a structured and orderly lifestyle, as tending to accept and enforce the laws and standards of society as they are presently constituted, as liking physical activities, hard work, and exercise, and as being self-confident, emotionally stable, outgoing, and sociable. Aptitude and prior schooling experiences, as measured in this study, were unrelated to satisfaction with assignment to FMF duties.

When these relationships were summarized, using multiple regression procedures, it was found that 36% of the variance in satisfaction with assignment to the FMF could be explained by knowing whether or not an individual had volunteered for FMF duty, how satisfied the individual was with having been designated an HM, and how high the individual's scores were on the Conroy Social Conformity and Activity scales (multiple $R = .60$).

Table 1
Aptitude, background, and personality characteristics
related to satisfaction with assignment to the FMF

Variables	Satisfaction with assignment to the FMF			
	High	Medium	Low	r
Aptitude (GCT + ARI)	111.1	110.8	111.6	-.01
Background:				
Years' Schooling	12.3	12.3	12.4	-.03
Volunteered for FMF Assignment	37%	11%	1%	.41*
Satisfaction with HM Rating	3.4	3.1	2.7	.36*
Married	28%	39%	41%	-.11
Spouse's Attitude	2.2	1.9	1.6	.32*
Pay Grade	3.3	3.3	3.2	.01
Personality:				
Trust	63.5	82.4	81.5	.07
Order	94.5	92.3	88.3	.21*
Conformity	90.3	87.5	81.1	.31*
Activity	95.8	90.0	85.6	.30*
Emotional Stability	98.7	94.5	90.0	.26*
Extraversion	88.1	81.6	80.9	.16*
Masculinity	68.9	88.7	87.1	.09
Empathy	100.3	96.9	95.4	.15*

*p < .001

Perceptions of the FMSS training environment

The second objective of this study was to determine the extent to which satisfaction with assignment to the FMF was related to perceptions of the FMSS training environment. Correlations between WES scores and the satisfaction measure are shown in Table 2. Mean WES scores, both Actual form scores and Expected less Actual discrepancy scores, are also shown in Table 2 for HMs with high, medium, and low levels of expressed satisfaction. These figures indicate that those HMs who were most satisfied with their assignment to the FMF tended to perceive the training environment in more favorable terms than did those HMs who were least satisfied with an FMF assignment. The more satisfied HMs tended to perceive greater emphasis on students becoming self-sufficient and independent, greater effort by the staff to make school rules and policies clear to the students, and greater effort by the staff to assist and encourage students who were experiencing difficulties than did the less satisfied HMs. In addition, the more satisfied HMs tended to perceive the training environment as being more efficiently organized and operated and the students as being more committed to becoming effective HMs in the FMF than did the less satisfied HMs.

Satisfaction with assignment to the FMF was also related to discrepancies between what was expected and actually experienced during training. The disparity between expectations and actual perceptions was greater for the more satisfied HMs than for the less satisfied HMs on the environmental dimensions of enthusiasm and commitment among students for becoming effective FMF corpsmen and in the amount of support and encouragement provided to students by the staff. On the other hand, the more satisfied HMs tended to experience a smaller disparity than the less satisfied HMs in the environmental dimension of work pressure.

Overall, it was found that 29% of the variance in perceptions of the FMSS training environment could be explained by knowing how satisfied an HM was with his assignment to the FMF (multiple $R = .54$).

Academic performance

The final objective of this study was to determine whether the individual characteristics and environmental perceptions of students were related to academic performance during FMSS training. Correlations of the aptitude, background, and personality variables with final grade are shown in Table 3 along with means on these variables for those students whose final grades were above average, average, and below average. These figures indicate that academic performance in FMSS training is primarily a function of an individual's ability to learn, as assessed by the aptitude measures, and the student's previous experience as an HM, as indicated by his pay grade.

Table 2

Satisfaction with assignment to the FMF related to
student perceptions of the FMSS training environment

<u>Variables</u>	<u>Satisfaction with assignment to the FMF</u>			
	<u>High</u>	<u>Medium</u>	<u>Low</u>	<u>r</u>
Actual:				
Involvement	4.72	3.76	3.50	.18*
Peer Cohesion	8.03	7.58	7.20	.12
Staff Support	5.73	4.64	4.19	.20*
Autonomy	6.16	5.11	4.18	.26*
Task Orientation	8.84	8.28	7.25	.21*
Work Pressure	9.47	9.83	9.81	-.02
Clarity	8.14	7.26	6.73	.19*
Control	8.15	7.72	7.35	.14*
Innovation	4.23	3.85	3.99	.01
Physical Comfort	4.43	4.06	3.82	.10
Expected less Actual:				
Involvement	2.44	2.16	0.85	.28*
Peer Cohesion	1.35	1.14	1.15	.04
Staff Support	2.39	2.34	1.11	.21*
Autonomy	1.56	1.71	1.43	.06
Task Orientation	2.88	3.31	3.77	-.10
Work Pressure	1.50	1.98	2.81	-.19*
Clarity	2.42	2.57	2.51	.02
Control	1.35	1.41	1.77	-.07
Innovation	0.41	0.51	-0.34	.11
Physical Comfort	0.82	0.49	0.21	.09

*p < .001

Table 3

Aptitude, background, and personality characteristics
related to academic performance in FMSS training

<u>Variables</u>	<u>Academic Performance</u>			<u>r</u>
	<u>Above Average</u>	<u>Average</u>	<u>Below Average</u>	
Aptitude (GCT + ARI)	119.3	110.7	103.3	.53*
Background:				
Years' Schooling	12.6	12.3	12.3	.10
Volunteered	13%	14%	9%	.03
Satisfaction with FMF Assignment	2.6	2.6	2.5	.04
Satisfaction with HM Rating	1.9	2.0	2.0	.07
Married	41%	37%	32%	.08
Spouse's Attitude	1.8	1.8	1.6	.09
Pay Grade	3.7	3.2	2.9	.30*
Personality:				
Trust	83.7	82.5	80.9	.07
Order	90.7	91.6	90.7	.03
Conformity	87.0	83.8	86.6	.03
Activity	90.0	90.0	88.2	.05
Emotional Stability	96.1	93.6	91.2	.14*
Extraversion	81.8	82.4	85.1	-.03
Masculinity	90.2	88.1	85.0	.17*
Empathy	95.7	97.3	98.1	-.05

*p < .001

Less substantial relationships were found between academic performance and scores on two of the personality scales. Students who performed in an above average manner tended to describe themselves as emotionally stable and tended to be attentive while responding to the Comrey scales more frequently than students who performed in a below average manner.

When student perceptions of the training environment were related to academic performance, only one significant ($p < .05$) correlation was identified. Students who performed in an above average manner tended to perceive the FMSS training environment as placing a greater emphasis on variety and innovation in the daily routine than did the students who performed in a below average manner ($r = .16$).

When these relationships were summarized using multiple regression procedures, it was found that 34% of the variance in academic performance could be explained by knowing an individual's score on the GCT + ARI aptitude measure and his pay grade at the time of school entry (multiple $R = .58$).

Discussion

An assignment to the FME was clearly unpopular among the HMs who participated in this study. Almost half (47%) of the participants were dissatisfied with having received the assignment. Of the remaining participants, only 151 (23% of the sample) were satisfied with being assigned to the FME. Finally, only 11% of the sample (77 students) had volunteered for FME duty. This outcome supports the findings of a study conducted previously by Lawson (1972) which revealed that the morale among HMs serving with the FME was very low. Furthermore, since the HMs in this sample had not yet worked in the FME, these findings may indicate that the dissatisfaction with FME duty that was reported by Lawson may be pervasive throughout the Hospital Corps.

The negative reaction of many HMs toward FME duty suggests that a program might be developed for actively recruiting HMs who would be satisfied, or at least not dissatisfied, with serving in the FME. While the results of this study have not been cross-validated, they do provide some indications of the characteristics which distinguish HMs who are most likely to respond favorably to an FME assignment from those HMs who are not. These individuals appear to stand out not only in terms of attitudinal commitment to the job of an HM but also in terms of personality. The finding that HMs who prefer a more structured and physically active lifestyle tend to be more satisfied with an assignment to the FME was not particularly surprising. Actively recruiting HMs who would be predisposed to prefer FME duty might help to alleviate some of the dissatisfaction on the job which has been reported by Lawson. Since indices of ability, i.e., aptitude test

scores and years of schooling completed, were unrelated to satisfaction, increasing the number of satisfied HMs who are assigned to FMF duty would not change the quality of input.

Although satisfaction with an assignment to the FMF was clearly related to how an HM tended to perceive the FMSS training environment, neither of these factors was related to the academic performance of an HM. This finding is generally consistent with the results of a study conducted earlier on HM class "A" school students (Booth, 1976) where satisfaction with being designated to work in the health care specialties was essentially unrelated to academic performance during training. Perceptions of the HM class "A" school environment were found to be related to academic performance but these relationships were explained almost entirely by the characteristics of students entering the program.

The relationship between aptitude test scores and academic performance has been established in many studies (Ghiselli, 1966). What was of considerable interest in the results of this study was the relationship of a student's pay grade to final grade. This finding suggests that previous experience as an HM plays a significant role in determining academic performance during FMSS training. This finding, too, is consistent with the results of a previous study conducted with HM class "A" school students (Booth, McNally, and Barry, 1975) which suggested that the previous Navy experience of "strikers" helped them to perform more effectively, both in training and on the job, than students who entered HM class "A" school immediately after graduating from a Recruit Training Command.

This study focused on factors related to the attitudinal adjustment and academic performance of HMs at the FMSS. In addition to this, however, attention should be given to the satisfaction and performance of FMSS graduates after they have been on the job for several months. Likewise, attention should also be given to identifying factors associated with the willingness of HMs to volunteer for additional duty with the FMF. These topics will be the subject of future studies.

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