imagines Jack the shadow of himself. *The physician thereupon devises a plan to restore his reason, and that is to re-enact the episode, which scheme is successful.* It not only dissipates his horrible hallucination, but seems to lift him from his lethargic despondency. This subject is rather a novel idea, logical as well as ingenious (italics ours).

The novelty of the presentation of such treatment procedures was corroborated by the reviewer of the film, writing in the same *Moving Picture World* on November 20, 1909. He noted that "loss of reason" had been portrayed on the screen before, but that the noteworthy aspect of this film was its focus on the "restoration." He continued with the comments: "The picture contains a good many subtle psychological suggestions, perhaps offering suggestions for the modification, if not the cure, of similar cases." Then, in a burst of premature optimism, the reviewer concluded, "Apparently the motion picture is invading every field of human endeavor and offering suggestions along lines of thought hitherto deemed impossible of illustration. The effect upon an audience of a picture like this must be beneficial, since it sets them thinking, and that, after all, is the main purpose of all educational agencies and influences."

The Moving Picture World reviewer was right, of course, about the early motion pictures' "invasion" of every possible dimension of human experience, and it is fascinating to speculate on the impetus for Griffith's use of this "role-playing," cathartic technique. The Biograph films were produced, at that time, in New York, the one- and two-reelers being made in about six weeks, and although the New York papers did not give any contemporaneous coverage to the Worcester meetings, it is possible that Griffith or some assistant had heard of Freud's arrival and took the opportunity to appropriate and transmute some of his ideas into film form.

In any event, *The Restoration* remains an early landmark in the history of psychiatry's relationship to films, joining its important pre-talkie cousins *The Cabinet of Dr. Caligari* and Pabst's *Secrets of a Soul.* The honest, if overly dramatic, attempt of this film to present a form of therapy has, alas, been followed, in subsequent years, by far too many movies which elaborate the histrionics of *The Restoration* and ignore its interested concern.

REFERENCE

1. Kiell, N.: Psychoanalysis, Psychology and Literature. Madison, Wisc.: Univ. of Wisconsin Press, 1963.

Psychiatry and the Nuclear Submarine

BY AARON SATLOFF, M.D.

BECAUSE OF THE COMPLEXITY and destructive capability of the modern nuclear, missile-firing submarine, as well as the desire of the submarine service to carry out its mission as effectively as possible, it is understandable that increasing emphasis is being placed upon improving the over-all personnel reliability of the officers and men who serve aboard these vessels. Recent publications issued by the Department of the Navy stress the importance of a conscientiously applied, well-functioning personnel reliability program based in part on "continued day-to-day surveillance of personnel engaged in the performance of their duties"(3).

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Naturally, the early identification of individuals with emotional disorders and their prompt referral for psychiatric consultation would be of extreme importance in a program of this kind. Even in questionable instances, it is clear that "reasonable doubt should be resolved in favor of national security and the individual referred for clinical evaluation"(3). Therefore, knowledge of the kinds of disorders that a psychiatric consultant would be likely to encounter as well as an accurate estimate of the expected incidence of these disorders would be valuable information to have in order to ensure that this program will be intelligently carried out.

Unfortunately, existing statistical data on the incidence of emotional disturbance in submarine personnel are woefully inadequate. Statistics have frequently been obtained without accurate knowledge of the total population at risk. In addition, because of the very nature of submariner operations, many cases are referred for evaluation at naval installations far removed from the ship's home port, thus establishing a case-drain that is difficult to estimate. Finally, negative attitudes regarding emotional disorders and toward the individuals suffering from them may create still another case-drain. As Ninow correctly points out:

> United States Submarine Service estimates of the psychiatric attrition rates may be spuriously low, largely due to attitudes of commanding officers of submarines toward transferring a crewman with a psychiatric diagnosis. There is little evidence for the frequency of this practice, but a number of psychiatric casualties may have been, and may still be given a face-saving transfer from the submarine service with an innocuous label such as chronic *mal de mer*, upper respiratory disease, and the like. Moreover, the submarine commanding officer may, on the basis of his own or others' impressions, recommend that a man be disqualified for the submarine service as "Environmentally Unadaptable" prior to his breakdown. As inappropriate as it may seem, psychiatric involvement is not necessarily implied by this label and, as a result, another psychiatric casualty is lost, further diluting the attrition statistic(2).

In addition to "diluted" statistics, existing difficulties have been further compounded by the formulation of unwarranted generalizations based upon incomplete data and by the misapplication of epidemiological designations. The following will be illustrative:

> During the past war (WWII) there were recorded 114,000 enlisted-man patrols and 12,160 officer patrols. Fifty-six possible psychiatric casualties during the 126,160-man patrols gives a percentage of 0.00044 casualty cases of a psychiatric nature occurring per man patrol(4).
>
> A sample of 114 submariners referred for psychiatric evaluation during a typical work year was examined in terms of the kinds of psychopathology represented. With 5,620 submariners assigned to ships in the New London area, the size of the sample suggests that the incidence of psychiatric illness in the Submarine Service is remarkably low (about 20 per thousand) . . . (2).
>
> On purely statistical grounds, we would not expect an absence of psychiatric illness among submariners . . . even though the incidence due to the selection processes may be well below the often cited *incidence* (author's italics) of eight percent to ten percent [1] in the population at large(2).

From the foregoing, then, it is clear that the kinds of statistics that have heretofore been vaunted as being indicative of a generally high level of emotional stability among submariners have in actuality been gathered and interpreted under conditions that render them grossly inaccurate. Moreover, because these figures can mislead the very individuals who have the responsibility for the implementation of the Personnel Reliability Program, their value then becomes negative.

Method

A research study was designed to learn more about the nature of emotional disorders in nuclear submarine personnel and also to obtain a better estimate of the true incidence of such disorders. The study was conducted at the U. S. Naval Submarine Medical Center in the Personnel Assessment Division of the Submarine Medical Research Laboratory. This facility is located at the U. S. Naval Submarine Base New London, Groton, Conn.

[1] The eight-ten percent is meant to represent prevalence, not incidence; hence the two figures cannot be compared in this manner.

The population selected for the study comprised all those officers and men assigned to an operational nuclear submarine squadron for the period January 1-December 31, 1965. Also included were the crews of those vessels under construction as well as those undergoing overhaul and modernization at a local shipyard. The three major aspects of this type of duty could therefore be studied: new construction, overhaul, and operations.

In order to ensure that the case-drain tendency induced as little error as possible, it was necessary to obtain information on those cases seen at other naval installations as well as at the Submarine Medical Center. Accordingly, an instruction was distributed to all the ships in question requesting that data on all individuals referred for psychiatric evaluation be sent to the Submarine Medical Center. This procedure yielded material on an additional 17 cases that were included in the total sample and which would have otherwise been lost to the study.

The actual number assigned to each submarine was obtained from administrative sources and the effects of transfers of personnel were compensated for. Thus the figures given below represent the average number of men assigned to this duty for the time period under study.

Results

The total population at risk consisted of 2,634 officers and men of whom 1,250 (47 percent) were engaged in operational activities, 744 (28 percent) in new construction, and 650 (25 percent) in overhaul and modernization. During the one-year period, exactly 100 cases were referred for psychiatric consultation (83 seen by the author) resulting in an incidence of referral of 3.8 percent. Forty-nine of the 100 cases came from operational sources, 23 from ships in overhaul, and 28 from new construction. Since the case rate for each of the three potential sources almost coincides with the actual percentage of the total sample supplied by each source, one could therefore conclude (on the basis of these data) that the particular kind of activity is not crucial in the determination of the case rate and that the incidence of psychiatric disturbance for the time span under consideration is roughly equal for the three separate sources.

A diagnostic breakdown is outlined in Table 1. Since the number of cases is exactly 100, the figures given represent the actual number of cases in a particular category as well as the percentage of the whole.

TABLE 1
Diagnosis of Patients
(N = 100)

TYPE		TOTAL
Psychotic reaction		8
Paranoid schizophrenia	3	
Acute undifferentiated schizophrenia	1	
Chronic undifferentiated schizophrenia	1	
Manic-depressive (manic)	1	
Psychotic depression	2	
Neurotic reaction		18
Anxiety reaction	7	
Conversion reaction	1	
Obsessive-compulsive reaction	1	
Neurotic depressive reaction	9	
Personality disorder		40
Personality disorder (not further specified)	12	
Psychopathic personality	8	
Passive-aggressive personality	5	
Passive-dependent personality	6	
Inadequate personality	4	
Paranoid personality	2	
Schizoid personality	1	
Cyclothymic personality	1	
Obsessive-compulsive personality	1	
Sexual deviation		8
Homosexuality	4	
Pedophilia	1	
Exhibitionism	1	
Transvestism	2	
Situational reaction		10
Organic brain syndrome		2
Psychophysiological reaction		3
Miscellaneous		8
Alcoholism	3	
Somnambulism	2	
Impotency	2	
Speech disorder	1	
Without discernible psychopathology		3

In Table 2, the disposition of these cases is shown. The major diagnostic categories involved in each disposition are included for the purpose of discussion.

Of the 100 cases referred for psychiatric consultation, 48 were returned to full duty aboard submarines with no restrictions. Thus, while the incidence of referral is quite substantial, the actual incidence of attrition (1.9 percent) is much less so.

Other data obtained included such variables as age, rank, education, disciplinary record, family history, and prior psychiatric contact.

As expected, the group studied proved to be quite young, with 2.4 percent of the subjects seen by the author (N = 83) under age 20, 52.9 percent between 20 and 25, 28.2 percent between 25 and 30, and 16.5 percent over age 30. The range of ages was 17 to 39. Of the total sample of 100, 41 were third-class petty officers and below (E1-E4), 56 were second-class, first-class or chief petty officers (E5-9), and three were officers (two lieutenants, one lieutenant commander). Most of the men were high school graduates; only 12 had not finished high school, and three (the three officers) had graduated from college or the Naval Academy. The disciplinary record of the subjects was exemplary, with only three having been convicted of major civilian and/or military offenses in the past.

Of the men interviewed by the author, 18.6 percent reported that members of their immediate families had been or were currently patients in mental hospitals. Most frequently mentioned was the mother, followed by a sibling. Finally, 22 percent of the total sample reported previous contact with a psychiatrist. For 12 this was simply a single consultation, but five had had previous courses of outpatient treatment and five had been hospitalized.

TABLE 2
Disposition of Patients
(N = 100)

ACTION TAKEN		TOTAL
Hospitalization and disqualification from submarines		14
Schizophrenia	5	
Affective psychosis	3	
Anxiety reaction	2	
Conversion reaction	1	
Personality disorder	2	
Situational reaction	1	
Discharge from the naval service		22
Sexual deviant	8	
Neurotic reaction	1	
Personality disorder	13	
Transfer and disqualified from submarines		9
Personality disorder	4	
Situational reaction	1	
Neurotic reaction	4	
Declared security risk, disqualified and transferred		2
Personality disorder	2	
Transfer without disqualification		5
Situational reaction	3	
Personality disorder	2	
Returned to duty without restrictions		48

Discussion and Conclusions

It is clear from the foregoing that psychiatric difficulties constitute a substantial problem for the submarine service. The fact that almost four percent of a total population of submarine personnel were referred for psychiatric consultation certainly bears this out. This figure takes on added significance in view of the fact that a physician is assigned to duty aboard every missile submarine. This is because many minor maladjustments and situational problems are handled in situ, the cases referred representing more obvious psychopathology and a more profound degree of disturbance.

It is not within the scope of this article to speculate as to specific environmental stresses that may eventuate in a man's being referred for psychiatric consultation; very few men, in fact, attributed their difficulties directly to the submarine. However, some firsthand observers tend to support the notion that this kind of duty induces a low-level but constant environmental stress that in time can lead to the deterioration of many initially compensated individuals(1).

Along these lines, it should be pointed out that the 3.8 percent incidence figure was the highest of all the referral sources

that came under the author's purview. Non-missile-firing nuclear (fast-attack) submarines were the next highest source, followed by conventional (diesel) submarines, general sea duty, and shore duty.

It should be noted that a fairly rigorous psychological screening program consisting of written questionnaires and, for some, short personal interviews, is carried out at the time a man attends submarine school. This is prior to assignment to a submarine and is aimed at sorting out those volunteers who have questionable motivations, personality disorders, and/or demonstrated emotional instability. The fact, then, that the major portion of the cases referred had previously been screened and had not been disqualified at that time underscores the importance of continual on-the-job screening and surveillance.

In summary, while it is true that a program that could sort out the great majority of those individuals who were destined to undergo future decompensation would be an unprecedented boon, we must accept the fact that none of the currently known techniques or any combination thereof can accomplish this with anything approaching 100 percent accuracy. It is precisely this point that underlies one of the cardinal facets of the Navy's Personnel Reliability Proram: namely, the prior screening which approves an individual for submarine duty and/or reliability assignment does not preclude the possibility of future exigencies arising that could adversely affect that individual and his assignment. The prompt and effective use of the medium of psychiatric referral then becomes instrumental in the implementation of this program.

REFERENCES

1. Earls, J. E.: personal communication, May 1966.
2. Ninow, E.: Submarine Psychiatry, Arch. of Environ. Health 6:579-588, 1963.
3. Personnel Reliability Manual. Washington, D. C.: Department of the Navy, Bureau of Medicine and Surgery, NAVMED P-5090, 1965.
4. Submarine Medicine Practice. Washington, D. C.: Department of the Navy, Bureau of Medicine and Surgery, NAVMED P-5054, 1956.

An Unusual Monosymptomatic Psychosis Featuring Feelings of Coldness

BY OTTO H. SPOERL, M.D.

MOST PSYCHIATRIC case histories begin with a "chief complaint" or "presenting problem," but most psychiatrists are well aware of the fact that placing certain symptoms of their patients into this category often represents a rather arbitrary act on the part of the examiner. A great majority of today's psychiatric patients appear to the contemporary observer to be suffering not so much from isolated symptoms in one area of functioning as from subtle or not so subtle pervasive disturbances in interpersonal relationships. These manifest themselves usually in a variety of areas and thus lead to a complex and multisymptomatic picture.

A monosymptomatic illness, although a clinical rarity these days, presents a unique opportunity to examine closely the psychopathology and to observe the psychodynamic processes involved in symptom formation. The following is a study of an essentially monosymptomatic psychosis featuring the unusual symptom of "feeling cold," combined with speculations about the meaning of the symptom and an account of the changes which occurred under treatment.

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