

REVIEW OF MEDICAL LITERATURE

OBJECTIVE

Public Law 95-479, Section 305 (a) (4) - "... a survey and analysis of the medical literature on the health-related problems of former prisoners of war."

INTRODUCTION

This review of the medical literature on the health-related problems of former prisoners of war discusses both the physical and psychological conditions characteristic of former American POWs from World War II, Korea, and Vietnam. A division between "soma" and "psyche" was made solely for purposes of improving report organization and enhancing reader convenience. This division should not be interpreted to mean that physical and psychological problems should be treated distinctly. Rather, these problems are considered interdependent, with the health of former POWs being viewed holistically. This "whole person" concept is consistent with the current trend in the general medical literature, which recognizes the reciprocal influence of "mind" and "body" on patient health.

A distinctive characteristic of the discussion of the physical problems of former POWs is that it includes eyewitness accounts by physicians who were themselves POWs or reports of those who participated in the repatriation process. However, these accounts often do not employ experimental methodology - i.e., randomly selected samples, carefully matched comparison groups - upon which valid inferences about entire POW populations can be made. Furthermore, even when these studies use the correct methods, they usually describe particular POW physical problems only at one point in time - generally, at a time shortly after repatriation.

Of greater scientific value are the long-term follow-up studies of former POWs, which describe mortality and morbidity conditions of entire POW samples and carefully matched controls over a period of years. These follow-up studies largely rely on questionnaires, interviews, and other indirect observations, rather than direct, clinical examination of former POWs and their controls in a scientific setting.

A salient feature of the section on the psychological problems of former POWs is its reliance on studies of concentration camp inmates with an analogy being made to POWs. This analogy should always be carefully qualified, as concentration camp victims suffered a greater degree of trauma than did POWs. This was due to the fact that concentration camp inmates faced a much

higher probability of death than POWs, as the ultimate purpose of the concentration camps was extermination rather than incarceration. Furthermore, unlike POWs, concentration camp inmates had to deal with the uncertain fate of family and friends, who might have been interned elsewhere or were already dead. Despite such differences, the analogy between concentration camp inmates and POWs remains valid, as the literature shows that both populations suffered - and are still suffering - from the same kinds of disabilities. Another important characteristic of the psychological problems section is that it deals with former POW social and family problems. Thus sociological, as well as purely psychological effects of the POW experience are discussed.

Another relevant characteristic of the psychological literature is that it implies, but does not confirm, a role that psychological factors play in causing excess POW mortality and morbidity. For example, excess trauma - accidents, suicides, and homicides - among POWs relative to controls could well be due to behavior caused by captivity. A significantly higher amount of cirrhosis due to alcohol abuse could well be due to the psychological stress of the POW experience which drives one to drink. Definitive answers to these questions are not presently known, and must await further study.

POW PHYSICAL PROBLEMS

Accounts of Captivity Disabilities

The bulk of the medical studies on POW physical problems experienced during captivity comes from American and other allied physicians who were prisoners of war, or who observed and treated specific injuries, malnutrition-related diseases and tropical diseases in newly repatriated prisoners. Furthermore, most of these studies were written about POWs interned in Asian theaters of operation.

Hocking points out the difference between the dietary deficiency suffered in Asian POW camps and that suffered in the concentration and POW camps of Europe.¹ He notes that in European concentration and POW camps the prominent features of malnutrition were lack of sufficient calorie intake without the clinical manifestations of vitamin deficiency. Thygesen, in a study of concentration camp survivors, describes the extreme form of this malnutrition as the "Mussulman"---a skeleton-like figure, manifesting no growth of hair or nails, generally disfigured by infested chafe sores and ulcers, pale, and virtually inanimate.² Hocking notes that the Asiatic type of malnutrition is characterized by vitamin deficiency (usually the vitamin B complex or vitamin A) with calorie intake occasionally approaching normal levels. Although the calorie-vitamin composition was different in the Orient than in Europe, the ultimate product of such malnutrition was much the same---a Mussulman-like skeleton.

Observations by individual POW physicians usually focused on one particular disease. POW Pacific Theater physician Hibbs studied beriberi, which he believes is the most important of all the malnutrition-related diseases suffered by American POWs, in that it was directly responsible for more disability and death during captivity than any other vitamin deficiency disease.³ Hibbs estimates that nearly everyone in his camp suffered some form of beriberi. Nardini, another Pacific POW physician, also observed that most of the POWs in his camp suffered from beriberi.⁴ Hibbs identified two general types of beriberi - wet and dry. Wet beriberi was chiefly characterized by swelling (edema) of the feet. Pacific Theater POW physician Katz calls this edema "painful feet" or "burning feet".⁵ Katz observes that the onset of this neurological symptom is initial swelling of the ankles, followed by increased sweating of the feet, and intense redness of the toes. The soles of the feet became extremely tender, with even the slightest touch causing great pain. Hibbs described the principal symptoms of dry beriberi as being nerve inflammation (neuritis), beriberi heart disease, and gradual diminution of vision (optic atrophy). Fisher described the neurological symptoms of this disease in terms of loss of reflexes and impaired sensation.⁶

Hibbs identified three types of beriberi heart disease. The first type was characterized by an irregular heart beat, acute attacks of shortness of breath, and congestive heart failure. This type was the most common among Pacific Theater POWs, accounting for approximately 95% of diagnosed cases. Alleman and Stollerman also described this type of beriberi heart disease.⁷ The second and third types of beriberi heart disease - ventricular disease and coronary edema - accounted for the remaining five percent of diagnosed conditions. Hibbs observed that left and right ventricular disease was a chronic condition that usually resulted in death after repatriation. On the other hand, Hibbs declared that swelling of the heart muscles (coronary edema) was an acute condition which usually resulted in death shortly after the onset of the swelling. He reported that POWs suffering from this condition would be walking around at one moment, and at another moment they would collapse and die. This type of death struck all ages -- the young as well as the middle-aged -- in prison camp. The sudden death of even young prisoners from this disability was noted by Lewis.⁸

In a study of repatriated Pacific Theater POWs, Fischbach provides a dissenting view to the generally accepted medical opinion outlined above, by stating that there was not a significant amount of beriberi heart disease or other coronary problems in the Pacific POWs he examined shortly after repatriation.⁹

With regard to optic atrophy, Bloom, Merz, and Taylor did a study on American POWs liberated from Japanese camps and found that malnutrition due to a diet deficient in vitamin B can cause optic atrophy.¹⁰ Bell and O'Neill reported finding optic atrophy in a significant number

of Canadian World War II Pacific Theater POWs liberated at Hong Kong.¹¹ In another study of Canadian Pacific Theater POWs, Baird and MacDonald discovered that if treatment is not instituted early enough, this eye condition becomes irreversible.¹² In a study of American Pacific Theater POWs, Musselman reported that symptoms of optic atrophy and neuritis appeared in more than half the prisoners he examined.¹³

Katz examined over 1,000 allied Pacific Theater POWs who were suffering from cerebral malaria.¹⁴ The severe headaches which accompanied this type of malaria were not amenable to any form of treatment except spinal puncture, which reportedly offered spontaneous relief. In some cases, spinal puncture for POWs suffering from this disease was necessary once every two or three months for the entire three year period of their captivity.

Katz also described the effects of another neurological syndrome in Pacific Theater POWs - "dengue fever".¹⁵ This condition was characterized by symptoms of weakness in the muscles of the extremities, severe pains in the head, eyes, and joints, and sore throat. Katz described a POW walking along with his head drooping forward, and his eyes propped open with his fingers in order to see where he was going. Katz believed that this POW was suffering from sequelae of the "dengue fever".

Pacific Theater POW physician Gottlieb reported on malnutrition-related liver disease resulting in fatty changes in the liver, a high incidence of infectious hepatitis, and cirrhosis in young men who had no antecedent alcoholic condition.¹⁶ Jacobs, another Pacific Theater American POW physician noted the occurrence of breast enlargement (gynecomastia) as a result of liver destruction.¹⁷

Jacobs also coined the term "oculo-oro-genital syndrome" to describe the malnutrition-related and tropical skin disorders among his fellow POWs.¹⁸ This syndrome consisted of inflammation of the eyes (conjunctivitis) and mouth (stomatitis) and the skin of the scrotum (scrotal dermatitis). Simons confirmed many of Jacobs' findings in his study of dermatitis among Pacific Theater POWs.¹⁹

Jacobs also reported that malnutrition in Pacific POWs caused a loss of libido and normal functioning of the male sex organs. Prolonged malnutrition produced the "castration syndrome" characterized by atrophy of the hair follicles, loss of hair, thinning and loosening of the skin and atrophy of the sebaceous glands, which indicated a decrease in sex hormone production.²⁰ These sexual disorders diminished with adequate diet upon repatriation.

Starkey and Poole²¹ and Williams²² noted the existence of significant amounts of intestinal infections caused by parasites in a study of Canadian Pacific Theater POWs. The wide variety of worms, amoebae, and other micro-organisms found in these Pacific POWs was due to their unsanitary living conditions in the Pacific POW camps. Nardini noted the presence of severe diarrhea leading to dysentery in these camps.²³

Unlike the abovementioned studies of particular diseases conducted by POW physicians, some of the studies performed at repatriation reported on the whole array of physical conditions discovered during the repatriation physical examination. For example, Wright and Van Ravenswaay described most of the above mentioned diseases, as well as others, in their summary of the findings of the "Morgan Board", which described the results of the repatriation examination given American POWs returning from the Pacific Theater.²⁴ The existence of most of these malnutrition-related diseases is also chronicled by McDaniel in his report of the physical examinations conducted on American aviators newly liberated from prison camps in Japan.²⁵ The existence of most of these same diseases (as well as other disorders such as spastic paraplegia and anemia) were also noted by Smith and Woodruff in their comprehensive study for the British government of the physical effects of captivity on English and Australian troops detained in Japanese POW camps during World War II.²⁶ Burgess' account of the physical disabilities of POWs on Singapore provides another thorough reference to the physical effects of internment upon British Commonwealth POWs.²⁷ In their studies of repatriated Vietnam POWs, Berg and Richlin not only discuss most of the above mentioned POW illnesses, but also described POW injuries.²⁸ Examples of such injuries are fractures and dislocations sustained by Vietnam POWs during aircraft ejection at the time of shoot-down or during torture while in prison.

Follow-Up Studies of Residual Disabilities

The POW physician authors of many of the abovementioned studies acknowledged that they had conducted only one-time studies which needed to be followed-up if definitive conclusions were to be drawn on the ultimate residuals of particular POW-related physical disabilities. However, many of these follow-up studies of particular diseases never materialized. Consequently, information on the long-term effects of POW physical disabilities is currently found not in detailed studies of certain diseases in specific POW groups but rather in broad epidemiological studies of a host of physical problems conducted on large, representative samples of entire POW and/or concentration camp populations.

One such follow-up analysis was the report of the World Veterans Association 1961 International Conference on the Later Effects of Imprisonment and Deportation which identified a process of "premature aging" - characterized by memory deficits, decreased powers of

concentration, and increased fatigue - in former World War II concentration camp inmates and POWs. After analyzing a wide variety of studies on representative samples of concentration camp inmate and POW-populations, the report declared: "In conclusion, the Conference was of the opinion that there exists ailments and disabilities which appear long afterwards among persons who were interned or imprisoned in concentration camps. . . These effects can also be found among former POWs who lived under exceptional conditions of stress. The conference was of the opinion, on the basis of the above medical conclusions, that it is necessary to eliminate for the persons concerned all legal time limits for submitting applications in connection with disabilities."²⁹ Delayed Disease and Ill Health, a book published in 1969 by the Norwegian Association of Disabled Veterans, was another follow-up analysis which outlined the variety of long-term physical disabilities which are manifest in survivors of concentration and POW camps.³⁰

In a 20 year follow-up study of Norwegian political prisoners deported to Germany during World War II, Eitinger and Strom found a significantly higher morbidity and mortality in the prisoner group as compared to the Norwegian general population control group.³¹ In particular, significantly higher morbidity rates for the prisoners were found for diseases of the nerves, lungs, digestive tract, muscles, and bones. The most excessive cause of death among the prisoners, as compared to controls, was tuberculosis.

Eitinger and Strom concluded that the higher mortality and morbidity resulted from the excessive stress that the former prisoners experienced, as it lowered their resistance to infection, and permanently lessened their ability to adjust to environmental changes. They contend that to this day the former prisoners are vulnerable to all kinds of stress which can upset their equilibrium and result in a manifest illness. They stated that, "the limited sentence that internment in a concentration or prison camp was intended to be has thus become a life-long sentence, affecting both the prisoners' life spans and their health".

Thygesen surveyed the long-term physical effects of incarceration on Danes who were deported to Germany for being resistance fighters.³² He described the physical effects of their internment in terms of an abnormal incidence of such symptoms as wrinkled face and pale skin, weight loss, muscle and joint pains, periodic diarrhea, gastrointestinal diseases such as ulcers, excessive nocturnal sweating, heart palpitations, headaches, dizziness, dermatitis, reduction in libido, and recurrent infections. Thygesen confirmed the existence of one or more of the above problems in approximately one-half of the former prisoners more than 20 years after liberation. Thygesen also contends that while the Nazi concentration camp internment which his Danish population experienced was much more severe than that undergone by POWs, the two experiences were comparable in kind if not in degree. Thygesen also points out that there were pathological

conditions in the POW camps which, in many respects, were similar to those to which concentration camp inmates were subjected.

Several long-term mortality and morbidity studies address the physical effects of imprisonment on Canadian troops in the Far East during World War II. Fisher found spinal degeneration in post-mortem examinations of 11 Canadian POWs performed four to seven years after liberation.³³ Adamson, in a study of 482 Canadian POWs completed over 10 years after their repatriation, reported an excessive amount of gastrointestinal, neurological, and cardiovascular problems in his sample of POWs.³⁴ The post-mortem studies done on those POWs in the sample who died before the completion of the study, showed a significant amount of spinal degeneration and optic atrophy.

Coke studied 391 former Canadian POWs for 12 years after repatriation. Each former prisoner was given a physical examination at least annually.³⁵ Coronary artery disease was the most common cause of death, particularly in the younger age groups. The incidence of cirrhosis of the liver was also found to be excessive.

Richardson, in a 19 year follow-up study of Canadian POWs of the Japanese, matched 100 former prisoners with their brothers, who had wartime service but were not POWs.³⁶ Of the 100 prisoners, 95 had been granted pension entitlement by the Canadian Pension Commission for avitaminosis with residual effects associated with their captivity. It was found that the former prisoners had more peptic ulcers and their dental health was inferior. However, no significant difference was found in the rate of cardiovascular disease between the former prisoners and their controls.

Richardson also compared causes of death of former Canadian POWs with those of Canadian males of roughly the same age. The number of deaths of former POWs over the follow-up period was not significantly greater than the number expected in the Canadian male population. However, there was a significant excess of deaths from heart disease. There was also a significantly higher number of POW deaths from accidents, violence, and poisoning over the entire follow-up period. Mortality from pulmonary tuberculosis was excessive in the early post-war years, but thereafter it was similar to that of other Canadian males.

In another Canadian POW study conducted 28 years after liberation, Hermann compared the morbidity of Canadian POWs held in Europe during World War II with a control group of Canadian non-POW veterans.³⁷ The control group was comprised of a number of Dieppe veterans who returned from the operation of 1942 and went on to serve until the end of World War II. Dieppe veterans who were taken POW were included as part of the group. In the questionnaire survey, it

was found that significantly more former POWs reported premature aging as being responsible for deterioration in their health than did the non-POWs. The former prisoners of war also showed a significantly higher death rate at an earlier age than did their controls. The Dieppe POWs had a mortality rate higher than the non-POWs and the rest of the POW group. The death rate from cardiovascular disease was much higher for the Dieppe POWs than for other POWs or non-POWs.

An Australian study by Freed and Stringer compared the mortality among 14,000 repatriated Australian POWs of the Japanese with that of the general Australian male population of the same age.³⁸ It was found that, during the period 1946-1963, there was no significant difference between the overall mortality of the former POWs and the Australian male population. However, there was a greater than expected mortality in the younger POWs, with excessive deaths from suicides and accidents. The excess of deaths among the former POWs from pulmonary tuberculosis and cirrhosis of the liver was also highly significant.

The National Academy of Sciences-National Research Council (NAS-NRC) has conducted four follow-up studies of American POWs. The first of these studies was by Cohen and Cooper.³⁹ Their analysis of mortality data, covering the first six years after liberation, showed that American POWs of the Japanese, when compared with controls, experienced a marked excess of mortality during the first two years after liberation and a diminished but apparently persistent excess during the following four years. Tuberculosis and accidents were the causes of death principally responsible for the excess mortality. American POWs who were held in European POW camps showed no excess mortality during the six-year follow-up period. The European POWs did not exhibit a great deal more illness than their controls. However, they did show a relative excess of malnutrition residuals, psychoneurosis, and gastrointestinal disorders.

Cohen and Cooper also found that Pacific POWs exhibited a wide variety of diseases which occurred far more frequently than those exhibited by their controls. The conditions which were noticeably more frequent and persistent among the Pacific POWs were tuberculosis, residuals of malnutrition, psychoneurosis, ophthalmological changes, gastrointestinal disorders, and cardiovascular conditions. Nefzger extended Cohen and Cooper's mortality follow-up of World War II POWs through 1965.⁴⁰ He found that the mortality rate among Pacific POWs of World War II, which had been significantly greater than the rate among controls during the immediate post-war years (1946-1949), diminished so that by the mid-1950s, mortality of the Pacific POWs and their controls was virtually indistinguishable. The early excess of mortality among the Pacific POWs was the result of trauma -- suicides, homicides, accidents -- tuberculosis, and cirrhosis of the liver. Nefzger also observed that Pacific POW deaths from chronic and degenerative diseases -- arteriosclerosis, malignancies -- were not significantly different from that of controls.

Nefzger explained how each of these significant causes of Pacific POW death could be due to the POW experience. He noted that the excess of tuberculosis deaths was probably due to malnutrition during imprisonment. He also implied that the excess of trauma could be due to the stress of the Pacific POW experience. Finally, he noted that the excess cirrhosis could be due to malnutrition during imprisonment or post-repatriation alcohol abuse related to stress of internment.

Nefzger discovered that European Theater POWs had no significant excess mortality through 1965. Nefzger also found that Korea POWs which he had added to the Cohen and Cooper sample, experienced a substantial early excess of deaths relative to their controls, with a disappearance of this excess in later years. Trauma was the most common cause of excess death among the younger Korea POWs.

In the third NAS-NRC follow-up study, Beebe found that in addition to psychiatric residuals, the former Pacific and Korea POWs suffered far more from tuberculosis and other infective and parasitic diseases than did their controls or the European POWs.⁴¹ The former Pacific Theater POWs also sustained a significant excess of morbidity from nutritional disorders in every four-year follow-up interval between 1946 and 1965. Diseases discovered included neuritis, peripheral nerve, eye, and related disorders; diseases of the intestines, liver, and other digestive organs; genito-urinary tract diseases; and bone diseases during most of the intervals. During the last interval (1962-1965), the admission rate for arteriosclerosis was higher among the former Pacific POWs than among their controls. This finding caused Beebe to remark that the extent of arteriosclerosis in former POWs and controls should be carefully monitored by further studies to determine to what extent it can be considered POW-related. Finally, Beebe found no significant difference between POW and control groups as to the amount of organic brain dysfunction.

The most recent NAS-NRC follow-up study by Keehn has extended the previous mortality surveillance by Cohen and Cooper and Nefzger through 1975.⁴² In his yet to be published study, Keehn noted that the increased death rate in Pacific POWs relative to their controls was attributable to trauma, tuberculosis, and cirrhosis, and for Korea POWs, trauma and cirrhosis. Former European POWs did not have a significantly excessive death rate relative to controls. Among Pacific and Korea POWs, the most important cause of excess death appeared to be trauma. Suicide apparently was the cause for two-thirds of the excess trauma among the former Pacific POWs, with accidents and homicide being responsible for the remainder. Among the former Korea POWs, accidents and homicides seem to be responsible for the increased number of deaths due to trauma. Keehn reiterated many of Nefzger's explanations concerning the connection of excess trauma and cirrhosis to the POW experience. Keehn confirmed Nefzger's finding that the

remaining amount of POW deaths, those due mainly to malignancies and other chronic and degenerative diseases, was not significantly different from that of controls.

POW PSYCHOLOGICAL PROBLEMS

Concentration Camp Literature

The bulk of the medical evidence on the psychological effects of the POW experience comes from studies of Nazi concentration camp victims. While the concentration camp was certainly different in degree from the POW camp, as the former was designed for extermination while the latter was intended for incarceration, it is also recognized in the literature that the two experiences can be classed as being of the same kind. As Segal points out: "By common consensus, concentration camp survivors endured an experience unique in the annals of human history. Nevertheless, the behavioral consequences of concentration camp trauma can be seen as reflecting problems of readaptation which all former prisoners share".⁴³ Baker supports this line of reasoning when he notes that "Studies of prisoners held in military prisons or in concentration camps in World War II and onward to the present, have revealed an impact on health and behavior from captivity which is relatively constant across nations, wars, and cultures".⁴⁴

"K-Z Syndrome"

Most of the medical literature in this area is of a long term nature, as the first major articles on concentration camp problems did not appear in the medical literature until about 15 years after the end of World War II, when concentration camp survivors had returned to their own countries or had attempted to find a new life elsewhere.⁴⁵

Scientific studies, based on clinical observations and experimental control group research designs, were conducted in such countries as Israel,⁴⁶ Denmark,⁴⁷ Norway,⁴⁸ Canada,⁴⁹ and the United States.⁵⁰ These studies all suggested an abnormally high incidence of psychiatric disorders among Holocaust survivors. The descriptions of these disorders focused on various aspects of what has come to be known as the "concentration camp (K-Z) syndrome". This condition was first called "repatriation neurosis", but was subsequently replaced by the term "concentration camp syndrome" or "K-Z syndrome". "K-Z" is taken from the German abbreviation for concentration camp (Konzentrationslager).

Chodoff⁵¹ and Eitinger⁵² have provided the most thorough summary of the various symptoms of the K-Z syndrome. It is characterized by general anxiety, accompanied by instability, restlessness, nervousness, and a startle reaction to such ordinary stimuli as the ring of

a telephone. These anxiety symptoms are usually worse at night, and are accompanied by insomnia and nightmares that are "acted out" recollections of traumatic prison camp experiences.

Krystal confirms these symptoms by reporting that concentration camp survivors suffer a marked reduction in general level of functioning and a pronounced tendency to insomnia and nightmares.⁵³ In some cases, the general anxiety is focused on a particular object, resulting in a specific phobia, e.g., fear of crowds or closed-in rooms. The K-Z syndrome is also characterized by psychosomatic complaints, such as headaches, fatigue, and gastro-intestinal or cardiovascular pains. Haas confirms this finding by observing widespread fatigue among concentration camp inmates and military prisoners of World War II.⁵⁴ Frequent lapses of memory and concentration are also characteristic for the K-Z syndrome.

The victim may be obsessed with his past, either through constant recollections of his imprisonment or frequently idealized imaginings of pre-incarceration days. Two very common symptoms are depression and apathy, which usually manifest themselves in loss of initiative. The "K-Z syndrome" also features "moodiness" and emotional instability, which results in swings from apathy and passivity to aggression and hostility and back again. Yet another symptom is a feeling of insufficiency, i.e., an inferiority complex.

Yet, another K-Z symptom is associated with what Chodoff has called "survivor guilt", a feeling of guilt the victim has for having survived when so many others close to him have died.⁵⁵ The 1961 International Conference on the Later Effects of Imprisonment and Deportation, as well as the publication Delayed Disease and Ill Health, document the overall psychological effect of the K-Z syndrome on the former concentration camp inmate in terms of premature aging, which is associated with memory deficits, a decreased capacity for concentration, and increased fatigability.

The onset of the K-Z syndrome is usually shortly after liberation, although in some cases it remains latent, not becoming apparent until years later. Meerloo has described the clinical progression of the condition--an initial, acute attack of anxiety, apathy, depression, aggression and/or psychosomatic complaints followed by an "incubation" period in which these feelings are suppressed.⁵⁶ This phase--which may last years--is called the "bridge period". The psychological defense mechanisms used for emotional suppression during this period eventually disappear, culminating in a reappearance of the original anxiety and related symptoms in chronic form. Baker estimates that as many as 80 percent of former concentration camp inmates still suffer from residuals of the K-Z syndrome.⁵⁷

The K-Z syndrome has manifested itself not only among Scandinavian and Jewish concentration camp inmates, but also among various prisoner of war populations, including Canadian, French and American POWs. A study by Kral of World War II Canadian POWs 20 years after their internment revealed a high incidence of anxiety, depression, nervousness, irritability, and poor memory.⁵⁸ A study by Juillet and Moutin of French POWs from World War II showed them to be suffering from depression and related psychiatric problems.⁵⁹

The studies of the K-Z syndrome and related psychological residuals among American veterans have focused on POWs from the World War II Pacific Theater. Brown, himself a former Pacific Theater POW, describes the severe and chronic post-repatriation anxiety experienced by this group as the "Japanese POW Syndrome".⁶⁰ Brill, in a psychological analysis of World War II Pacific Theater POWs, observes that "overt anxiety was by far the most common single symptom presented".⁶¹ He notes that the anxiety increased, rather than diminished, with the passage of time after liberation. He further describes this "Japanese POW Syndrome" in terms of apathy, listlessness, lack of initiative and spontaneity in the returnees. Strassman and Schein observed many of the same symptoms in repatriated Korea POWs.⁶² They describe an "apathy syndrome" characterized by listlessness, lack of initiative and spontaneity, and slowed reactions. They declared that this "apathy syndrome" (also called "Zombie reaction")⁶³ continues to be apparent in the individual even when he is no longer in the stressful environment of captivity.

Another K-Z syndrome symptom--emotional moodiness--manifested itself in former Korean POWs.⁶⁴ The initial apathy gave way, after a few days of freedom, to feelings of euphoria, which in turn were replaced by chronic anxiety. The course of this behavior conforms to the usual progression of the K-Z syndrome--initial apathy and anxiety, followed by an emotional "bridge period", and then the reappearance of the original anxiety. Emotional instability in Korea POWs was also noted by Lifton in psychiatric interviews conducted during the ocean voyage home.⁶⁵ Lifton presents the initial reaction of the liberated POWs as being surprisingly unenthusiastic immediately following release. This initial apathy was followed by expression of overt hostility towards associates and superiors. This behavior was described by Lifton as an attempt at emotional "muscle flexing", i.e., an attempt by the former POW to regain the full range of his emotions after months of emotional suppression.

Wolf and Ripley noticed the symptoms described by Lifton in repatriated World War II Pacific Theater POWs.⁶⁶ Their study noted that the repatriated POWs were first quite selective and taciturn, and that this attitude eventually turned into resentment and hostility directed toward peers and superiors. The fact that this aggression was directed toward friends rather than the enemy was a sign of emotional displacement, as directed hostility shown to the captor could have resulted in severe disciplinary measures or even death.

Brainwashing

A unique form of stress to which American POWs in Korea were subjected was known as "brainwashing". Called "thought reform" by the Koreans and Chinese, it was an attempt to politically indoctrinate American POWs in Korea through isolation and torture in order to get them to produce confessions and otherwise cooperate with the Communist cause. Chodoff contends that, "Although differing from each other in important respects, brainwashing and Nazi oppression are both unmistakable instances of coercive force pushed to its utmost extent against defenseless individuals confined within tightly controlled environments".⁶⁷ Chodoff's statement demonstrates that victims of this type of treatment - inmates of the Nazi concentration camps, as well as American POWs in the World War II European and Pacific Theaters - shared an experience not unlike that of American POWs in Korea.

"Brainwashing" in Korea was apparently severe enough that 21 American POWs in Korea were reported to have refused repatriation. Mayer popularized the notion that this was evidence that the mental and moral fiber of the American fighting man had been eroded due to failure of the pre-military environment--home, school, church--to instill patriotic values in the citizenry.⁶⁸ This hypothesis was further publicized by Kinkead in his book In Every War But One.⁶⁹ Kinkead noted that other United Nations forces, such as the Turks, maintained stronger discipline and did not "break". Biderman refuted this Mayer-Kinkead hypothesis in March to Calumny, in which he pointed out that the percentage of American "turncoats" was no larger in Korea than in any other of this country's wars, and that, furthermore, given the extreme psychological stress of the Korean POW "brainwashing" experience, American POWs performed better than could be expected under the circumstances.⁷⁰ Biderman explained the greater steadfastness of Turkish and other U.N. forces by pointing out that they were recruited from elite all-volunteer units in countries with largely homogeneous populations. By contrast, the average American POW was much more apt to be a draftee and was part of a racially and ethnically mixed force which reflected the diverse American population from which it came.

Social and Family Problems

Difficulty in social readjustment is a definite residual of the POW experience. Repatriated American POWs held by Korea were initially stereotyped as "turncoats" by the general population, based on those few who chose not to return. As Biderman points out, Korea POWs experienced difficulty in social readjustment emanating from this stigma.⁷¹ Segal has observed how Vietnam POWs often experienced an initial period after repatriation when adaptation to the existing culture was difficult, as political, moral, and social mores had changed significantly during their period of captivity, which was the longest period of internment of any group of American POWs.⁷²

Such social readjustment problems result in greater demand for psychiatric hospitalization and compensation payments. Eitinger and Strom contend that this is certainly the case with former concentration camp inmates, as they show that in Norway, former inmates suffered an abnormal amount of psychological illness for which they filed a disproportionate amount of disability claims.⁷³ A similar conclusion was reached in studies by Hermann and Richardson of World War II Canadian POWs from Europe and the Pacific. These Canadian studies found higher rates of unemployment among POWs than for their controls, stemming from their psychological inability to readapt to the work environment.

Beebe's follow-up morbidity study of American World War II and Korea POWs cites psychiatric residuals resulting in significantly increased hospitalization rates among POWs as compared to controls. These psychological residuals were also responsible for a higher amount of VA disability compensation being awarded POWs relative to their non-POW veteran controls. Beebe concluded, based upon responses to a questionnaire concerning psychological maladjustment, that former American POWs of the Japanese and Koreans had significantly higher hospital admission rates for psychoneurosis and psychosis (schizophrenia). European Theater POWs did not have as high an admission rate for these conditions, although they did not go "unscathed".⁷⁴ In Nefzger's follow-up morbidity study of American World War II and Korea POWs, it was suggested that the significantly higher amount of POW deaths due to trauma and cirrhosis could well be related to the psychological stress of the POW experience.⁷⁵

Further research is needed to confirm whether the psychosocial residuals of the POW experience include alcoholism and a concomitant likelihood of sudden or violent death, as well as higher unemployment and hospitalization rates.

The former POW relationship with his immediate family, as well as with society as a whole, can also be adversely affected by his internment. Sigal reported that a sample of children of concentration camp survivors had more behavioral problems than controls.⁷⁶ McCubbin, Hunter, and Benson conducted a study of the families of American World War II and Korea POWs.⁷⁷ They discovered that the former POW's heightened irritability, chronic fatigue, and emotional instability made it increasingly difficult for him to assume the traditional role of father as family disciplinarian. Family studies on Vietnam POWs are still underway, and no substantive conclusions have as yet been reached concerning the effects, if any, of the Vietnam POW's internment upon his wife and children.

Psychological Survival Factors

Despite all the personal, social, and family psychological problems that former concentration camp inmates and former POWs have endured, many of them have not only been

able to survive but also adjust satisfactorily to their post-repatriation environment. Matussek points out that those concentration camp inmates who survived were more socially active than their fellow inmates, accommodated themselves better to the guards, and had a pre-internment background characterized by a stable, harmonious family life.⁷⁸ Ford and Spaulding, in a study of U.S.S. Pueblo POWs, discuss those psychological defense mechanisms which helped American POWs to survive such an ordeal.⁷⁹ These defense mechanisms include not only the repression of direct hostility toward the captor but also the emergence of a schizoid tendency towards denial and rationalization, reliance on religious faith, stoicism, and a sense of irony or humor.

Nardini, himself a former Pacific Theater POW, notes that among his fellow prisoners it was the inability to take the "emotional shock"⁸⁰ of suddenly finding oneself a prisoner (Stenger calls this phenomenon "Life-style shock",)⁸¹ coupled with the reactive depression that sets in once the impact of one's changed status became apparent, that caused a POW to lose the "will to live". Former Korea POW physician Anderson noted that the Korea POWs called this "give-up-itis".⁸² The loss of this will to live led to apathy, withdrawal and a general inability to care for oneself, with death as the result. Strassman and Schein contend that, while a certain amount of withdrawal is a necessary defense mechanism to maintain personality integration in the face of the psychological stress of the POW experience, the manifestation of an extreme degree of apathy will probably lead to the loss of the will to live and eventually death.⁸³

Eitinger has discussed those personality factors which enable former concentration camp inmates and other prisoners to adjust beyond the period of captivity.⁸⁴ He notes that it is devotion to a cause which enabled concentration camp survivors like himself to bear their psychological burden and to work productively in the years following captivity. Whether it was art, music, or religious faith that they used as their "escape valve", those captives who saw beyond the immediate pain to a better day managed to ward off psychological collapse and rebuild their lives.

Antonovsky further elaborates on this point by stating that concentration camp survivors who made successful adaptations to post-war life had either an initial underlying strength, a subsequent environment which provided opportunities to reestablish a satisfying existence or had undergone a "hardening" process which allowed the survivor to view current stress with equanimity.⁸⁵ Kushner, the sole Vietnam POW physician, notes that one view of the POW experience is that it serves to strengthen character and put life in perspective.⁸⁶ Despite such testimonials of mental resiliency, the bulk of the medical evidence emphasizes the harsh effects of the concentration camp/POW experience on the average inmate or POW, who usually does not have such uniquely strong psychic resources.

Even when the former concentration camp inmate or POW manages to successfully adapt to his post-repatriation environment, he still bears what Segal has termed the "psychic scars" of his experience.⁸⁷

SUMMARY

This literature review of the health problems of former POWs includes eyewitness accounts of disabilities during captivity as well as epidemiological follow-up studies, analyses of concentration camp as well as POW populations, and discussions of former POW family and social problems. All of these references point out that residuals of physical and psychological disabilities suffered during captivity still affect the current health status of these former POWs.

This literature on former POW physical problems shows that they manifested a significantly higher amount of particular types of diseases - e.g., beriberi, optic atrophy, malaria, parasitic infection - upon repatriation which were related to the malnutrition, torture, climatic exposure, and other deprivations of internment. Epidemiological follow-up studies of former POWs indicate that residuals of these and other disabilities have persisted until the present time, accounting for significantly higher post-repatriation mortality and morbidity rates among former POWs relative to other veterans and control groups.

The literature on the psychological problems of former POWs, especially those of World War II, demonstrates that their mental state closely resembles that of another type of World War II victim - concentration camp survivors. The international studies in this area indicate that former POWs have many of the following symptoms of the concentration camp survivor "K-Z syndrome": general anxiety and nervousness, "startle" reaction, insomnia and nightmares, phobias, psychosomatic complaints, memory lapses, moodiness, inferiority complex, obsession with the past, depression, apathy, and "survivor guilt." The psychological literature also indicates that the "K-Z syndrome," "brainwashing," and other forms of psychic stress during internment has resulted in a significantly higher amount of family and social maladjustment as evidenced by inadequate functioning in father/parent roles, and higher rates of unemployment and disability compensation.

While the literature on former POW health problems is helpful in pointing out the relationship between their current physical and psychological problems and the malnutrition and stress of their internment, it still leaves unanswered many important questions - e.g., Is the excess number of deaths due to trauma and cirrhosis directly related to the POW experience? Is arteriosclerosis in former POWs directly related to the stress of internment? Questions such as these can be definitively answered only by further scientific study.

The nature of former POW physical and psychological problems - and the interdependence of both in affecting the overall health status of former POWs is best summarized in the following observation by Segal:

"The environment of POW captivity typically combines a potent blend of physical hardship and deprivation, on the one hand, and enormous psychological stress and trauma on the other. It would be foolhardy indeed to distinguish the relative impact of each of those factors on the post-captivity health status of repatriates, but it is clear in any case that survivors of the POW experience, are at risk for a staggering range of physical disabilities and (psychological) symptoms that can be ascribed to the overall captivity episode."⁸⁸

FOOTNOTES

¹ F. Hocking, "Starvation: Social and Psychological Aspects of a Basic Biological Stress," Australian Medical Association, Archdall Medical Monograph No. 6, 1969, pp. 1-20.

² Paul Thygesen, Knud Hermann, and Rolf Willanger, "Concentration Camp Survivors in Denmark: Persecution, Disease, Disability, Compensation," Danish Medical Bulletin, Vol. 17, Nos. 3-4, (March - April, 1970), pp. 65-106.

³ R. Hibbs, "Beriberi In Japanese Prison Camp," Annals of Internal Medicine, Vol. 25, No. 2, (August, 1946) pp. 270-282.

⁴ John Nardini, "Vitamin Deficiency Diseases in Allied Prisoners of the Japanese," Naval Medical Bulletin, Vol. 47, No. 2, 1947, pp. 273-8.

⁵ C. J. Katz, "Neuropathologic Manifestations Found in a Japanese Prison Camp," Journal of Nervous and Mental Diseases, Vol. 103, No. 5, (May, 1946), pp. 456-465.

⁶ M. Fisher, "Residual Neuropathological Changes in Canadians Held Prisoners of War by the Japanese," Canadian Services Medical Journal, Vol. 11, (March, 1955), pp. 157-199.

⁷ Russell Alleman and Gene Stollerman, "The Course of Beriberi Heart Disease in American Prisoners of War in Japan," Annals of Internal Medicine, Vol. 28, 1948, pp 948-961.

⁸ Robert Lewis, "Painful Feet in American Prisoners of War," U.S. Armed Forces Medical Journal, 1950, pp. 146-157.

⁹ William Fischbach, "Cardiac and EKG Observations on American POWs Repatriated From Japan," Naval Medical Bulletin, Vol. 48, No. 1, (January- February, 1948), pp. 69-74.

¹⁰ Samuel Bloom, Earl Mertz, and William Taylor, "Nutritional Amblyopia in American Prisoners of War Liberated From the Japanese," American Journal of Ophthalmology, Vol. 29, No. 12, 1946, pp. 48-57.

¹¹ P. G. Bell and J. C. O'Neill, "Optic Atrophy in Hong Kong Prisoners of War," Treatment Services Bulletin, Canadian Department of Veterans Affairs, September, 1947, pp. 43-47.

¹² J. Baird and D. Macdonald, "Survey of Optic Atrophy in Hong Kong POWs After Ten Years," Canadian Services Medical Journal, Vol. 12, 1956, pp.485-493.

¹³ M. Musselman, "Nutritional Diseases in Cabanatuan," War Medicine, Vol. 8, 1945, pp. 325-332.

¹⁴ Katz, Neuropathological Manifestations, pp.456-465.

¹⁵ Ibid., pp. 456-465.

¹⁶ M. L. Gottlieb, "Impressions of a POW Medical Officer in Japanese Concentration Camps," Naval Medical Bulletin, Vol. 46, No. 5, (May, 1946), pp. 663-673.

- 17 E. C. Jacobs, "Gynecomastia Following Severe Starvation," Annals of Internal Medicine, Vol. 28, 1948, pp. 792-796.
- 18 E. C. Jacobs, "Oculo-Oro-Genital Syndrome: A Deficiency Disease," Annals of Internal Medicine, Vol. 35, 1951, pp. 1049-1054.
- 19 R. Simons, "Nutritional Disorders of the Skin Among Prisoners of War in the Far East," British Journal of Dermatology, Vol. 61, 1949, pp. 210-215.
- 20 E. C. Jacobs, "Effects of Starvation on Sex Hormones in the Male," Journal of Clinical Endocrinology, Vol. 8, 1948, pp. 227-232.
- 21 H Starkey and J. Poole, "Survey of Intestinal Parasites in Repatriated POWs from Hong Kong," Treatment Services Bulletin, Canadian Department of Veterans Affairs, Vol. 11, No. 8, 1947. pp. 1-15.
- 22 T. Williams "Intestinal Parasites - A Survey of Repatriated Hong Kong POWs," Treatment Services Bulletin, Canadian Department of Veterans Affairs, April, 1947, pp. 24-25.
- 23 Nardini, Vitamin Deficiency Diseases in Allied Prisoners, pp. 273-278.
- 24 H. Morgan, I. Wright and A. van Ravenswaay, "Health of Repatriated Prisoners of War From the Far East," Journal of the American Medical Association, April 13, 1946, pp. 995-999.
- 25 F. McDaniel, B. White, and C. Thompson, "Malnutrition in Repatriated Prisoners of War," Naval Medical Bulletin, Vol. 46, (June, 1946), pp. 793-810.
- 26 Dean Smith and Michael Woodruff, Deficiency Diseases in Japanese Prison Camps, Medical Research Council: Special Report Series No. 274, (London: His Majesty's Stationery Office, 1951), pp, 168-172.
- 27 R. C. Burgess, "Deficiency Diseases in Prisoners of War at Changi, Singapore," Lancet, September 1946, pp. 411-418.
- 28 William Berg and Milton Richlin, "Injuries and Illnesses of Vietnam War POWs I. Navy POWs," Military Medicine, July, 1977, pp. 514-518.
- 29 World Veterans Association, "Proceedings of the International Conference on the Later Effects of Imprisonment and Deportation," The Hague, November 20-25, 1961, pp. 10-11.
- 30 Arve Lonnum, Delayed Disease and Ill Health, Norwegian Association of Disabled Veterans, 1969, pp. 9-107.
- 31 Leo Eitinger and Axel Strom, Mortality and Morbidity After Excessive Stress, New York: Humanities Press, 1973, pp. 9-150.
- 32 Thygesen, Hermann, and Willanger, Concentration Camp Survivors in Denmark, pp. 65-106.
- 33 Fisher, Residual Neuropathological Changes in Canadians, pp. 157-199.
- 34 J. D. Adamson and D. Brereton, "Ultimate Disabilities in Hong Kong Repatriates," Treatment Services Bulletin, Canadian Department of Veterans Affairs, April, 1948, pp. 5-10.
- 35 L. Coke, "Late Effects of Starvation," Canadian Medical Services Journal, Vol. 17, May 1961, pp. 313-324.
- 36 H. J. Richardson, Report of a Study of Disabilities and Problems of Hong Kong Veterans, 1964-65, Canadian Pension Commission, 1965, pp. 3-82.
- 37 J. Hermann, Report to the Minister of Veterans Affairs of a Study on Canadians Who Were Prisoners of War in Europe During World War II, Ottawa, 1974, pp. 4-56.
- 38 George Freed and Peter Stringer, "Comparative Mortality Experience 1946-63 Among Former Australian Prisoners of War of the Japanese," Medical Research Bulletin, December. 1968, pp. 4-28.

- ³⁹ Bernard Cohen and Maurice Cooper, A Follow-Up Study of World War II Prisoners of War, Washington D. C.: Veterans Administration Medical Monograph. September, 1954, pp. 1-81.
- ⁴⁰ Dean Nefzger, "Follow-Up Studies of World War II and Korean War Prisoners, I. Study Plan and Mortality Findings," American Journal of Epidemiology, Vol. 91, No. 2, 1970, pp. 123-138.
- ⁴¹ Gilbert Beebe, "Follow-Up Studies of World War II and Korean War Prisoners, II: Morbidity, Disability, and Maladjustments," American Journal of Epidemiology, Vol. 101, No. 5, 1975, pp. 400-422.
- ⁴² Robert Keehn, "Follow-Up Studies of World War II and Korean War Prisoners, III: Mortality to 1 January 1976," accepted for publication in American Journal of Epidemiology, 1980.
- ⁴³ Julius Segal, Edna Hunter, and Zelda Segal, "Universal Consequences of Captivity: Stress Reactions Among Divergent Populations of Prisoners of War and Their Families," International Social Journal, Vol. 28, No. 3, 1976, p. 599.
- ⁴⁴ Stewart Baker, "Traumatic War Disorder," in Comprehensive textbook of Psychiatry, Baltimore, 1980, pp. 57-8.
- ⁴⁵ Julius Segal, Long-Term Psychological and Physical Effects of the POW Experience: A Review of the Literature, Report No. 74-2, San Diego, Ca: Naval Health Research Center, 1974, p. 7.
- ⁴⁶ H. Klein, J. Zellermyer, J. Shanon, "Former Concentration Camp Inmates in a Psychiatric Ward," Archives of General Psychiatry, Vol. 8, 1963, pp. 334-42.
- ⁴⁷ Thygesen, Hermann, Willanger, Concentration Camp Survivors in Denmark, pp. 65-106.
- ⁴⁸ Axel Strom, "Examination of Norwegian Ex-Concentration Camp Prisoners," Journal of Neuropsychiatry, Vol. 4, 1962.
- ⁴⁹ V. A. Kral, "Psychiatric Observations Under Severe Chronic Stress," Canadian Services Medical Journal, September 1951, pp. 185-192.
- ⁵⁰ E. C. Trautman, "Fear and Panic in Nazi Concentration Camps: A Biosocial Evaluation of the Chronic Anxiety Syndrome," International Journal of Social Psychiatry, Vol. 10, pp. 134-41.
- ⁵¹ Paul Chodoff, "Late Effects of the Concentration Camps as a Psychological Stress," Archives of General Psychiatry, Vol. 8, 1963, pp. 323-333.
- ⁵² Leo Eitinger, "Pathology of the Concentration Camp Syndrome." Archives of General Psychiatry, Vol. 5, pp. 371-9.
- ⁵³ "Prisoner-Camp Syndrome Found Widespread," Medical World News, April 2, 1965, p.53.
- ⁵⁴ Ibid, p. 52.
- ⁵⁵ Chodoff, Late Effects of the Concentration Camps as a Psychological Stress, pp. 323-333.
- ⁵⁶ J. Meerloo, "Persecution Trauma and the Reconditioning of Emotional Life: A Brief Survey," American Journal of Psychiatry, Vol. 125, 1969, pp. 1187-1191.
- ⁵⁷ Baker, Traumatic War Disorder, p. 68.
- ⁵⁸ V. A. Kral, L. H. Pazde, B. Wigdor, "Long-Term Effects of a Prolonged Stress Experience," Canadian Psychiatric Association Journal, Vol. 12, pp. 175-181.
- ⁵⁹ P. Juillet and P. Moutin, Psychiatrie Militaire, Paris: Masson, 1969, p. 209-13.
- ⁶⁰ Charles Brown, "The Japanese POW Syndrome," Diseases of the Nervous System, Vol. 10, No. 11, (November, 1949), p. 1.
- ⁶¹ N. Q. Brill, "Neuropsychiatric Examinations of Military Personnel Recovered from Japanese Prison Camps," Bulletin U.S. Army Medical Department, Vol. 5, 1946, pp. 429-38.

- 62 Harvey Strassman, Margaret Thaler, and Edgar Schein, "A Prisoner of War Syndrome: Apathy as a Reaction to Severe Stress," American Journal of Psychiatry, Vol. 112, 1955, pp. 998-1003.
- 63 H. A. Segal. "Initial Psychiatric Findings of Recently Repatriated Prisoners of War," American Journal of Psychiatry, Vol, 111, 1954, pp. 358-363.
- 64 *Ibid.*, pp. 358-363.
- 65 R. J. Lifton, "Home By Ship: Reaction Patterns of American Prisoners of War Repatriated From North Korea," American Journal of Psychiatry, Vol. 110, 1954, pp. 732-9.
- 66 S. Wolf and H. S. Ripley, "Reactions Among Allied Prisoners of War Subjected to Three Years of Imprisonment and Torture By the Japanese," American Journal of Psychiatry, Vol. 104, 1947, pp. 180-193.
- 67 Paul Chodoff, "The German Concentration Camps As a Psychological Stress," Archives of General Psychiatry, Vol. 22, 1970, pp. 78-87.
- 68 W. Mayer, "Why Did So Many GI Captives Give In?" U.S. News and World Report, February 24, 1956, pp. 56-72.
- 69 Eugene Kinkead, In Every War But One, New York: W. W. Norton 1959, p. 1-5.
- 70 Albert Biderman, March to Calumny, New York: MacMillan, 1963, pp. 1-13.
- 71 *Ibid.*, p. 13.
- 72 Segal, Hunter, and Segal, Universal Consequences of Captivity, pp. 601-606.
- 73 Eitinger, and Strom, Mortality and Morbidity after Excessive Stress, pp. 112-118.
- 74 Beebe, Follow-up Studies of World War II and Korean War Prisoners, II, pp. 400-422.
- 75 Nefzger, Follow-up Studies of World War II and Korean War Prisoners, I, pp. 123-138.
- 76 J. Sigal, D. Silver, V. Rakoff, and B. Ellin, "Some Second-Generation Effects of Survival of the Nazi Persecution," Journal of Orthopsychiatry, Vol. 43, (April, 1973), pp. 320-327.
- 77 E. J. Hunter, H. I. McCubbin, Benson, The Former POW as the Family Patient, 1976.
- 78 P. Matussek, "Concentration Camp Survivors," Nervenarzt, Vol. 32, 1961, pp. 538-47.
- 79 C. Ford and R. Spaulding, "The Pueblo Incident: A Comparison of Factors Related to Coping With Extreme Stress," Archives of General Psychiatry, Vol. 29, 1973, pp. 340-343.
- 80 John Nardini, "Readjustment Problems of Returned Prisoners of War," Medical Service Digest, Vol. 24, 1973, pp. 17-19.
- 81 Charles Stenger, "Life-Style Shock," Washington, D. C.: Veterans Administration Central Office, December, 1972.
- 82 Clarence Anderson, Alexander Boysen, Sidney Esenstein, Gene Lam, William Shadish "Medical Experience in Communist POW Camps in Korea," Journal of the American Medical Association, September 11, 1954, pp. 120-21.
- 83 Harvey Strassman. M. B. Thaler, Edgar Schein, "A Prisoner of War Syndrome: Apathy as a Reaction to Severe Stress," American Journal of Psychiatry, Vol. 112, June, 1956, pp. 998-1003
- 84 Leo Eitinger, "Concentration Camp Survivors in the Post War World," American Journal of Orthopsychiatry, Vol. 32, 1962, pp. 367-75.
- 85 A. Antonovsky, B. Maoz, N. Douty, H. Wirsenebeck, "Twenty-Five Years Later: Limited Study of the Sequelae of the Concentration Camp Experience," Social Psychiatry, Vol. 1971, pp. 186-193.

86 F. Kushner, "To Live or to Die," AMEDD Spectrum; U.S. Army Medical Department, Vol. 1, 1974, pp. 16-21.

87 Segal, Hunter, and Segal, Universal Consequences of Captivity, p. 598.

88 *Ibid.*, pp. 594-595.