Brit. J. Psychiat. (1977), **131**, 15–20

Coping Behaviour After Shipwreck

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Summary. A description is given of the coping behaviour of seven men who survived a shipwreck and were not rescued until 13 days later. The principal behaviours shown by the men were attachment ideation, drive to survive, modelling, prayer and hope. Particular attention is paid to the first of these, and consideration given to its likely origins in behavioural evolution. It is proposed as a hitherto inadequately recognized coping behaviour. A follow-up examination 12 to 24 months later showed that five of the seven men available had developed substantial psychiatric disorder, while by contrast one was not only well but claimed to have been enriched by the experience. Exposure to extreme adversity or disaster may have long-term effects on mental health. Further longitudinal studies of disaster victims are necessary for the design of informed after-care.

The study of coping behaviour has deservedly commanded increased interest during the last decade, presumably because a more thorough understanding of normal responses to adversity may be useful in the field of prevention. The majority of studies on coping, to which the present one is no exception, are based on retrospectively-derived self-reported material from survivors of adverse or stressful experiences. These have included responses to bereavement (Lindemann, 1944), to disasters, as in a coal-mine (Beach and Lucas, 1960), to surviving a myocardial infarction (Olin and Hackett, 1964) or poliomyelitis (Visotsky *et al*, 1961), and to the development of leukaemia in one's child (Chodoff *et al*, 1964). More recently, Mechanic (1974) and Moos (1974) have drawn attention to the limitations of such studies, which are based exclusively on interview material. While we would endorse this view, we consider it would be premature to discard the retrospective accounts of survivors as having no place in improving the understanding of coping behaviour, or in generating new ideas about its components.

We have examined the seven survivors of a shipwreck immediately after they had been exposed to a 13-day ordeal at sea and on a beach. A follow-up examination was carried out on each of the seven men one year or more after the sinking. We report here our findings on the coping behaviour described by the men themselves for the period between the sinking and their rescue, and their adjustment during the following year. We are aware that the number of our subjects is small, but the circumstances of their experience provided a rare opportunity to study behavioural responses to extreme adversity.

In October 1973 a small cargo vessel, the *Southern Star*,* with a crew of ten men capsized and sank off the south-west coast of Tasmania, Australia. The men drifted for nine days in an inflatable rubber raft while an unsuccessful air-search was conducted. One man died on the fifth day on the raft. The men were exposed to cold and rough seas with very limited supplies of fresh water and food. Soon after reaching a rocky beach on the ninth day, two further men died while in delirium. Despite profound weakness and seriously swollen survivor's feet, three of the group walked for help through dense bush and were found by a logging contractor on the thirteenth day.

* This pseudonym is used in an attempt to spare the survivors any further distress.

https://doi.org/10.1192/bjp.131.1.15 Published online by Cambridge University Press

Rescue by helicopter followed, and all men were evacuated to the Royal Hobart Hospital.

We jointly interviewed each of the men in hospital within one to five days of their rescue, depending on their medical state. Two of the men had been torpedoed on ships in World War II and had survived a period on a raft or floating in the sea, one in the Atlantic and one in the Far East. None had had a previous psychiatric disorder, though one (Survivor No. 3) drank most excessively when on shore. Each survivor was asked by us to give an account of the days on the raft and on the beach, and to describe his thoughts and emotional state throughout the ordeal. Special attention was paid to descriptions of behaviour considered by the survivor, or inferentially by us, to have been useful in maintaining morale or promoting effectiveness. It should be noted that, without exception, the survivors found this interview helpful, since relatives, marine inquiry officials and hospital staff apparently avoided opportunities for expression of affect by the men. The only exceptions to this were ourselves and some junior nurses on night duty. The behaviours we identified are shown in Table I.

TABLE I

Coping behaviour	Number of survivors reporting each
Attachment ideation ..	7
Drive to survive ..	7
Modelling	7
Prayer	6
Hope	4

Attachment ideation

Throughout the ordeal, the most conspicuous behaviour was the men's preoccupation with principal attachment figures such as wives, mothers, children and girl friends. We have termed this 'attachment ideation' and consider it to be of considerable theoretical importance. Every one of the survivors reported it as the most helpful content of consciousness which they experienced. This is well illustrated by the following comments by different men:

(1) 'I just kept thinking about my wife and family—that was all I had to live for.'

(2) 'Every night I could see my wife's face. Every time I closed my eyes I could see my wife there.'

(3) Referring to his children, 'Even when I paddled, I used to recite their names.... I'd go right through them. I think it helped. It gave me determination.'

It is no new observation that persons separated from their families and exposed to serious danger are commonly so preoccupied. What we propose, though, is that attachment ideation is a coping behaviour and that it is likely to be phylogenetically given. The existence of a strong social bond between the survivor and his kin provides him with affective sustenance on the one hand and acts additionally as a force motivating him towards reunion. In so far as this promotes effective behaviour, attachment ideation can be claimed to be a true coping mechanism activated by the combination of separation and threat to life. In terms of ontogenesis, such adult attachment behaviour clearly has its beginning in the separation anxiety of infants, the survival value of which is indisputable under primeval conditions. Adults as well as children, though, protest at being removed from those with whom they are affectionally bonded. Major components of this protest are preoccupation with those persons, and the vigorous pursuit of reunion. In disaster situations these two components commonly assume absolute primacy, as Killian (1952) has observed in the behaviour of people following a tornado. Bowlby (1973) has emphasized the prominence of attachment behaviour during natural disasters, describing how members of a family will not rest until they have found each other. In terms of phylogenesis, during the primeval period of hunting and gathering where most human social behaviour was acquired (Hamburg, 1968; Lee and DeVore, 1968), to be isolated from the group would have been dangerous both for the individual and his immediate kin, who would then lack his protection. Strong motivation to survive in the presence of danger and to return to the primary group is a behaviour which is likely to have undergone preferential selection in our species.

https://doi.org/10.1192/bjp.131.1.15 Published online by Cambridge University Press

Drive to survive

The will to live, or its absence, is familiar to any physician who has treated the seriously ill. From the accounts of Bettelheim (1960) and Eitinger (1961), this drive was prominent in most persons who survived the Nazi concentration camps, while mortality was very high in those without it. Gibson (1952), one of the four survivors of 135 persons afloat in a lifeboat in the Indian Ocean for 28 days, emphasizes the need to refuse to accept death, to be determined not to die and to hold to the belief that one was not meant to die under such circumstances. Critchley (1964) described the determination not to die in torpedoed seamen, indicating how survivors found thinking about their families helpful in maintaining this determination, and how mortality was high in those who made no effort or who gave up.

In the present study, every one of the men who survived spontaneously reported this drive, usually in quite explicit terms: 'You don't want to die—desperately you don't want to.' By contrast, the man who died on the fifth day at sea was said by some survivors to have 'given up'. We suggest that the simplicity of such statements is deceptive and tends to dull one's appreciation of the intrinsic strength of this behaviour for promoting the chances of survival. It is more than a will to live, in that the individual seems to experience a drive not only to continue living in a passive sense, but to overcome the physical and emotional discomforts of such extreme adversity. This indeed is coping.

Modelling

Although it is likely that a number of behaviours and affects were passed from one survivor to others, we have definite documentation on the influence of only one man, the Chief Officer, upon the other men. Tragically, he became delirious on the beach and died four days before rescue. All the men spontaneously reported his being a major factor in their survival. He became the acknowledged leader within a few hours of the sinking. He displayed admirable leadership in the following ways: he was the principal decision-maker, and demonstrated his technical ability to be so, in relation to winds, currents and the use of survival apparatus; he was largely responsible for schedules of rowing and for rations; he could behave firmly with men who were reluctant to pull their weight or who threatened the group's mood with displays of anger and hopelessness; and he could show gentleness and compassion, particularly to the youngest man. Above all, he provided a model of competence, rationality and hope.

Prayer

Six of the survivors reported praying, though none had previously been religious. Indeed we believe that all but one did. A common approach was that of one man who reported having said to himself on several occasions, 'Oh, God, get me out of this.' He went on, 'I didn't know a prayer—I sort of talked to Him in more or less as many words as I could remember out of a prayer and filled the rest up with my own.' Another said 'Yes, when the pressure was on, I did pray—I said . . . "If You get me out of this lot, I'll play ball." ' We view prayer in this setting as a form of attachment behaviour. It was essentially adaptive in that it reduced anxiety and allowed the retention of hope for some of the men.

Hope

To hope means to entertain ideas that a situation perceived as distressing will ameliorate. These ideas have to be held in the face of contradictory information or perceptions which run counter to them. In the *Southern Star* survivors, hope was reported to be very commonly used on the raft. As one would expect, it was more prominent at the beginning than towards the end of the ordeal. It is notable that much of the men's talk centred round their hopes, thereby achieving a confirmatory function amongst the group. This is in contrast to the ideas of despair which all had at times but which were rarely spoken aloud and, as indicated later, were deliberately suppressed from consciousness. Examples of hope as used by these men are:

(1) 'We'd say, "We'll make it to the Travelodge in about three to five days." The Chief Mate kept boosting me up by saying "We'll be ashore by night—we'll get a bonfire going and dry our-

https://doi.org/10.1192/bjp.131.1.15 Published online by Cambridge University Press

selves off. If we have to, we'll set the scrub on fire and they'll come and get us." He kept saying things like this.'

(2) 'I just couldn't believe we couldn't go on. That was all about it.'

(3) 'We'd just carry on the conversation like, "Oh, we'll see a ship shortly. Something must come up."'

Occasionally a survivor countered hopeful talk with pessimism, such as the following response to talk of hoping soon to reach the shore. 'No you won't,' one man said, 'currents will get you and throw you back out again.' The response to this was usually one of anger. The Chief Officer would forcefully tell the man to keep silent. One survivor acknowledged having murderous ideas towards the pessimist, saying 'I know it's a shocking thing to say but I think I would have killed him.'

The use of hope by these men leads us to conclude that as a coping behaviour, it has the following characteristics:

(1) It consists of anticipating relief from distress either by one's own action or through intervention by others.

(2) Within a group, hope is likely to be more powerful if it is verbalized, since this increases its potency through suggestion and confirmation.

(3) A leader may use hopeful statements to sustain morale while not necessarily himself believing in what he says.

(4) The principal function of hope is to control mood, which in turn determines what other behaviours a survivor will undertake to increase his chances of rescue.

As is known from studies on concentration camps such as that by Bruno Bettelheim (1960), when hope wanes the drive to survive becomes extinguished and mortality increases rapidly.

Other coping behaviours

A number of other coping behaviours were described by one or two of the men. These were denial, humour, deliberate suppression of distressing thoughts, altruism towards the others, redirected activity for the reduction of anxiety and lastly, deliberate fantasy about rescue and the enjoyment they would then have with food and warmth. Sexual themes appear to have been entirely absent, in sharp contrast to the behaviour of most of them under normal conditions.

Follow-up Findings

Despite their marked geographical mobility, we have been able to interview all of the seven men on at least one occasion 12 to 24 months after their ordeal. During the period between our first and subsequent examination, five had consulted their general practitioners and one of these had been referred to a psychiatrist. Although the series is very small, we cannot but be impressed by the amount of morbidity reported at the follow-up examination. The health status of each is set out in Table II.

Of the seven men, five have developed formal psychiatric disorders for the first time in their lives. It is equally important to note that one man claims to have benefited from the experience, seeing himself as more resourceful and having more enjoyment from his marriage and family, while the seventh is coping well with increased responsibility.

These findings on outcome suggest that an adverse experience of this duration and severity is followed by substantial morbidity. A similar finding was made by Margolin *et al* (1943) on 40 torpedoed seamen. An important issue is whether more concentrated psychiatric intervention in the immediate phase after rescue would have prevented this deterioration in health, while in no way being meddlesome with the two who remained healthy. We regret not having attempted to make predictions about individual outcome at the time of our first interviews. We did not undertake abreactive or other procedures at this stage because each of the men appeared to be in no more distress than was understandable. Furthermore, we had no wish to endorse sick-role behaviour. The question of compensation for their disability has not been raised by any of the survivors with us or with marine shipping authorities at any stage.

Our conclusion is that the experience of a disaster or short-lived extreme experience may

https://doi.org/10.1192/bjp.131.1.15 Published online by Cambridge University Press

carry a price in terms of subsequent health. It remains to be determined how this is mediated and how it can be prevented. The longitudinal study of disaster victims is a priority for the development of strategies for informed aftercare.

TABLE II

Survivor number*	Follow-up findings
1	Recovered from a depressive illness starting three months after the shipwreck. Responded to amitriptyline prescribed by his family doctor.
2	Insomnia continuing since shipwreck. Was prescribed nitrazepam and diazepam for 3 months by family doctor. Drinks heavily on shore, as before. Much more irritable and more violent with his wife. Very anxious in bad weather at sea.
3	Marked anxiety. Poor concentration. Very irritable. Insomnia. Still has nightmares relating to time on raft. Loss of libido. Coitus only once in 3 months. Had to retire from the sea because of anxiety symptoms. Earnings fallen from $10,000 to $5,000 p.a. as a truck-driver. Continuously on diazepam. The worst afflicted.
4	Well for the first 9 months. Now tearful, marked initial insomnia, loss of libido, feelings of worthlessness and guilt. In psychiatric treatment for this depressive illness.
5	General impairment of health. Frequent colds and bronchitis. Severe insomnia and nightmares. Impotent.
6	Claims to have *more* confidence in facing crises. Increased enjoyment of marriage and parenthood. Likely to have benefited from the experience. Mentally healthy.
7	Coping well with increased responsibilities. Mentally healthy.

* Ages and rank not stated for reasons of confidentiality.

ACKNOWLEDGEMENTS

We wish to express our thanks to the *Southern Star* survivors for their co-operation; to Dr John Freeman under whose care the men were while in the Royal Hobart Hospital; and to Mrs Betty Teltscher for her assistance in our follow-up of two of them.

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(*Received 27 August 1976*)

https://doi.org/10.1192/bjp.131.1.15 Published online by Cambridge University Press