

# Psychological distress in families of victims of maritime piracy – the Italian experience

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## ABSTRACT

**Background:** This work has investigated the psychological status of family members of kidnapped seafarers, 5 months after their release.

**Aim:** The goal of this study was to assess if relatives of victims of maritime piracy showed signs of psychological distress, to diagnose eventual pathologies and to measure their severity.

**Materials and methods:** Twelve family members (8 females and 4 males) of 4 kidnapped seafarers were examined. They were first interviewed by a semi-structured approach and then examined using the self-report questionnaire State-Trait Anxiety Inventory (STAI-Y), and the Hamilton Depression Rating Scale (HDRS).

**Results:** Five months after the relatives had been released, 42% of the family members of kidnapped seafarers obtained pathological scores in the STAI-Y questionnaire, and 33% showed depression according to the HDRS.

**Conclusions:** Family members of kidnapped seafarers show significant psychopathological symptoms 5 months after relatives have been released. Symptoms may be severe enough to interfere with daily life in about one half of them. Kidnapping is a changing life experience and both victims and relatives require attention and support.

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**Key words:** maritime piracy, victims' relatives, anxiety, depression

## INTRODUCTION

Piracy at sea is an old phenomenon, but kidnapping for ransom of the ship and the seafarers is quite a new, and, unfortunately, growing up situation. From 2008 to 2012 almost 1,900 piracy attacks were counted worldwide and in the first 3 months of 2013, 4 vessels were hijacked, 51 were boarded, 7 were fired upon and 4 reported attempted attacks. Seventy-five crew members were taken hostage, 14 kidnapped and 1 killed [1].

Piracy at sea is widespread, involving not only the area facing Somalia, which has the highest incidence of it, but also Nigeria, Indonesia, Bangladesh, Philippines, Malaysia and Vietnam [2]. Being associated with political instability, this phenomenon may develop rapidly anywhere [3].

A characteristic of this form of criminality is not only the increase in the number of piracy acts, but also of the length of the captivity [2]. Seafarers and their families are therefore exposed to long periods of suffering and pain. The firsts being obliged to stay in the ship, controlled and threatened by their captors, the seconds exposed to anxiety and the absence of a family reference person (the seafarer is usually the father of the family), and kept therefore in a ‘virtual captivity’.

The Italian maritime traffics were amongst the most attacked by pirates. On the whole, 41 Italian ships were attacked in the Indian Ocean from 2005 to 2012 [4] and 4 of them were kidnapped from 2011 to 2012 [5]. The longest captivity has been the kidnapping of Savina Caylyn and its crew, which lasted 316 days [6].



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Previous studies on kidnapping have shown that the consequences of the phenomenon involve not only the victims, but they are extended to their families, which may show psychological disturbances persisting for a long time [7]. These disturbances include the post-traumatic stress disorder (PTSD) syndrome, obsessive compulsive behaviour, paranoid ideation and other symptoms such as generalised anxiety, social phobia and depression [7, 8]. Studies on the psychological consequences of kidnapping were done primarily on victims of political conflicts, war prisoners and terrorism acts [9–15]. In contrast, the effects of maritime piracy acts on psychological aspects of relatives of kidnapping victims were not investigated yet.

A previous study of our group on the effects of piracy acts on kidnapped seafarers has found that victims of these criminal acts at 5 months after the release suffered from PTSD of different severity [16]. Italy as a part of initiatives taken in favour of the victims of maritime piracy has developed a project to limit the psychological damage caused by maritime piracy acts. This specific programme co-ordinated and supported by the Ministry of Infrastructure and Transport has involved the International Radio Medical Centre (CIRM), the Italian Telemedical Maritime Assistance Service, and the Apostleship of the Sea. CIRM, in order to ease the discomfort of families of people held hostage by pirates, has organised a task force called Psychological Emergency Piracy (PEP). This task force, including a medicine doctor, a psychologist and a liaison officer, can reach families of victims of kidnappings of piracy for providing medical, psychological and organisational/social support. PEP has represented the reference point of CIRM for initiatives in favour of victims of piracy and their relatives.

This paper summarises the results of analysis of the psychological status of family members of kidnapped seafarers 5 months after their release. The purpose of our work was to assess if they showed signs of psychological

distress, to diagnose possible pathologies and measure their severity, and to define similarities and dissimilarities with psychological reactions reported in family members of victims of other kind of kidnappings [10–13].

## MATERIALS AND METHODS

Twelve family members (8 females and 4 males) of 4 kidnapped seafarers were examined at the 20<sup>th</sup> week subsequent to victims release. The victims of piracy acts were Italian seafarers kidnapped on board of 2 Italian ships kept in captivity by Somalian pirates for more than 6 months. The mean of days of captivity was  $265 \pm 72.12$  days. All the victims developed psychological consequences detailed elsewhere [16]. For protecting privacy of families of kidnapped seafarers, no specific indication of the names of ships where they were on board is provided in this paper.

Inclusion criteria in this study involving family members were: being a relative of the victim, living in the household and providing informed consent. Characteristics of individuals taking part in this study are detailed in Table 1.

Some months after the seafarers release, the families were contacted by the PEP of CIRM to participate in the present study. Those, who accepted, were met home or in another location they chose, 5 months after the release of their relatives.

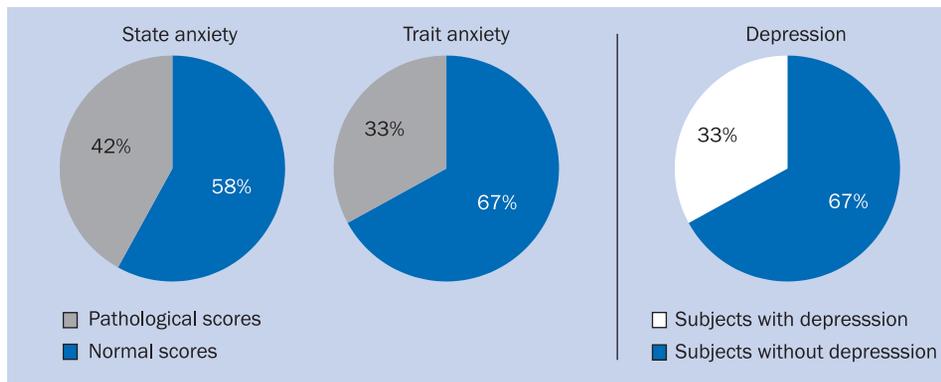
Each family member was interviewed first by a semi-structured approach and then examined using the self-report questionnaire State-Trait Anxiety Inventory (STAI-Y) [17], and the Hamilton Depression Rating Scale (HDRS) [18]. The STAI is a validated tool to evaluate anxiety, and its Y revision discriminates subjects with anxiety disorders from those with depression. It includes 2 dimensions:

- State Anxiety (Form Y-1), which evaluates the emotional state of an individual in a particular situation;
- Trait Anxiety (Form Y-2), a relatively stable characteristic of personality.

**Table 1.** Description of families of piracy victims

	Family 1	Family 2	Family 3	Family 4
Diagnosis of victim [16]	Severe PTSD	Moderate PTSD	Moderate PTSD	AD
Number of family members investigated	1	4	2	5
Family relationship and age	Wife (58 y)	Wife (54 y) Daughter (36 y) Son (34 y) Sister (54 y)	Wife (42 y) Daughter (19 y)	Partner (23 y) Father (56 y) Mother (50 y) Sister (26 y) Uncle (54 y)
Education	5 y	8 y 13 y 18 y 8 y	13 y 13 y	8 y 13 y 8 y 13 y 8 y
Education mean [y]				
			10.66 ± 3.67	

PTSD – Post-Traumatic Stress Disorder; AD – Adjustment Disorder; y – years



**Figure 1.** Psychological problems in family members are expressed in percentage. Subjects ( $n = 12$ ) were examined by the State-Trait Anxiety Inventory (STAI-Y) and Hamilton Depression Rating Scale (HDRS)

Forty items of this inventory are grouped in 2 scales: the Y-1 scale assesses the current psychological condition of each subject, whereas the Y-2 scale investigates the subject's usual state of mind.

The HDRS (also known as Ham-D) is the most widely used clinician-administered depression assessment scale. It investigates the presence and severity of depression by probing mood, feelings of guilt, suicide ideation, insomnia, agitation, anxiety, weight loss and somatic symptoms. The original version included 17 items (HDRS 17). The version we have used included 21 items. Seventeen items are scored and the remaining items, which intended to subtype the depression, are sometimes, incorrectly, used to rate severity [19]. Scores indicate: normality 0–7; mild depression 8–13; moderate depression 14–18; severe depression 19–22; very severe depression  $\geq 23$ .

## RESULTS

As outlined in Table 1, the sample of 12 family members examined included 3 wives, 3 children (2 females and 1 male) and 6 persons having other family ties (1 father, 1 mother, 2 sisters, a partner and an uncle). None of these subjects reported in the interviews to have been suffering from significant psychological disturbances, an aspect that was confirmed by their family physicians, with the only exception of 1 subject with a previous history of severe depression. Figure 1 summarises the percentage of anxiety and depression suffered by relatives of victims of piracy. As shown, 42% of interviewed people presented scores beyond the cut-off in the STAI Y-1, and 33% in the STAI Y-2. Four out of 12 subjects investigated (33%) showed depression according to the HDRS (Fig. 1).

The nature of the scales and the small number of individuals do not allow the stratification of the sample for gender and age. Scores obtained by single individuals of different family groups in STAI Y-1, STAI Y-2 and HDRS are summarised in Table 2.

The majority of subjects examined had pathological scores in anxiety or depression and 17% of them presented both disorders. One third of the relatives were in a normal psychological condition (33%) (Fig. 2).

## DISCUSSION AND CONCLUSIONS

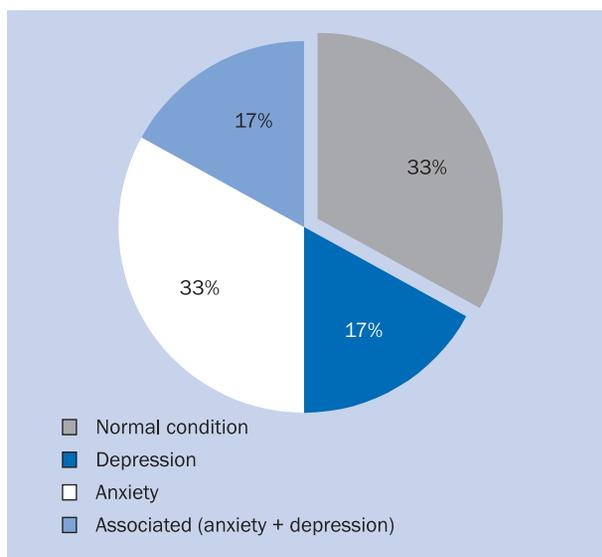
The present study has shown that family members of kidnapped seafarers present psychopathological problems after the release of their relatives. Symptoms include anxiety, depression and their association. These symptoms were evident in the majority of subjects examined. One third of the sample investigated did not report distress. Moreover, we have found that these symptoms were present 5 months after the releasing of the victim. This highlights that kidnapping may entail psychological disturbances also in the long term, and that the process of recovery, if happens, requires time [20].

Anxiety was found in 6 subjects and 4 subjects showed depression. The association of both problems was found in 2 relatives. For being sure that these symptoms are attributable to the specific event of kidnapping, previous psychological evaluation of people examined should be available. A control group might also help. Unfortunately, as in most studies on post trauma disorders, these data were unavailable in our study too. However, as none of the subjects of the sample reported to have suffered from psychological symptoms previously, and as all individuals attributed their appearance to kidnapping and the long subsequent period of fear and uncertainty, we may reasonably argue that kidnapping was the triggering cause of problems observed. An informal interview of family physicians confirmed this aspect.

Amongst symptoms observed, anxiety, and particularly trait anxiety, was the most frequent, indicating that most subjects suffered from a stable condition characterised by hyper-vigilance and exaggerated startle response [17].

**Table 2.** Results of State-Trait Anxiety Inventory (STAI-Y) and Hamilton Depression Rating Scale (HDRS) in different family members examined

	STAI Y-1	Scores beyond cut-off	STAI Y-2	Scores beyond cut-off	HRDS	Scores beyond cut-off
Female	61	X	59	X	6	-
Female	60	X	68	X	7	-
Male	49	-	41	-	7	-
Female	38	-	42	-	9	Mild
Female	62	X	66	X	7	-
Female	62	X	58	X	7	-
Female	39	-	52	X	18	Moderate
Male	59	X	56	-	21	Severe
Female	31	-	26	-	4	-
Female	32	-	34	-	8	Mild
Male	39	-	45	-	7	-
Male	33	-	36	-	6	-



**Figure 2.** The prevalence of psychological problems in the examined relatives of victims of piracy

Depression was also found, characterised by low mood, decreased self-esteem and loss of interest. In 1 case only, the depressive symptoms were accompanied by feelings of guilt and agitation. This subject, however, suffered from similar episodes also in the past, and the event probably increased only the severity of the pre-existent condition. In most cases, the symptoms were interfering with daily life. A young subject, the daughter of a victim, for example, developed a typical Obsessive-Compulsive Disorder, consisting in checking repetitively the doors and windows of the house to verify if they had been locked. This subject did not show such

behaviour in the past, spent much time in the activity, and was disturbed by it.

In spite of the frequency of kidnapping episodes, studies dedicated to this topic are not numerous, probably because of the risk of re-traumatising the victims by asking them to rehearse troubling experiences. However, what emerges from previous studies, is that kidnapping can entail chronic psychological disturbances of various type, including hyper-vigilance and hyperarousal, fear and anxiety, helplessness and hopelessness, anhedonia and depression [14], that is the pattern we have found in our sample. We have also observed, what is consistent with literature data, that subjects with lower education showed higher distress [21].

A longitudinal study performed on 55 victims of economical extortive kidnapping and on their 158 relatives in Colombia has found that, during the captivity, the families of the kidnapped and the victims were traumatised in a similar way, so that no significant differences were found amongst these subjects regarding their psychological after-effects [7]. Although a comparison between this and our study on victims of piracy cannot be done given their different nature, we have found that similar qualitative aspects emerge. In fact, the family members of our sample described clearly in their interviews to have been kept in a ‘virtual captivity’. This, according to what was found in the victims, would comprehend 3 stages: an Impact stage, a Recoil stage and a Reorganisation stage [7]. The Impact stage is characterised by the emotional shock and the feelings of numbness and helplessness [22, 23]. The Recoil stage is described as a state of fluctuating tension with anger and blame towards themselves and/or the others [24]. The Reorganisation stage is the ultimate stage, where the traumatic experi-

ence is adapted and integrated into future behaviours and lifestyles [24, 25], and would represent the most critical phase [26, 27]. During all these stages, a psychological support might be useful to improve the family coping with the situation, to help to prevent future consequences, and to facilitate the reorganisation process. Most of the interviewed individuals of our sample referred that such a help was strongly needed, particularly during the long period of negotiations, where conflicting information were delivered and the interaction between the pirates and other external agencies, as authorities and media, create an overwhelming disorientation. As far as we know, this is the first study done on family members of the victims of maritime piracy, an issue that should be considered with attention, and on which, in spite of the small sample examined, we hope to contribute.

## CONCLUSIONS

Family members of kidnapped seafarers show significant psychopathological symptoms 5 months after relatives have been released. Symptoms may be severe enough to interfere with daily life in about one half of them. Kidnapping is a changing life experience for the victims and their relatives and both deserve attention and support.

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