

Living in exile when disaster strikes at home

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Abstract

As the number of migrants – forced or voluntary – increases, there is a growing need to understand how negative events in the country of origin influence those residing abroad. This issue has been actualized by the recent earthquakes in Haiti and Chile. Persons in exile have frequently been exposed to severe human rights violations and other stressors prior to emigration. The present study explored possible associations between ongoing and former stressors and mental health problems among persons living in exile as the Tsunami disaster of 2004 struck their country of origin. The contribution of former exposure and exilerelated difficulties in explaining current mental health problems was explored together with Tsunamirelated bereavement and social support. Following the Tsunami disaster of 2004 a questionnaire was administered to individuals of Tamil and Acehnese origin residing in Norway. The results suggest an independent contribution of exilerelated difficulties, former exposure and social support in explaining current mental health problems in this group. The study also disclosed methodological challenges involved both in relation to recruiting participants and in isolating the contribution of a particular stressor in populations with high levels of former exposure as well as ongoing stress.

Key words: exile, trauma, stress, disaster, mental health

Introduction

International migration has doubled over the last 30 years, and the migration movement is mostly in a south to north direction. Whereas one in ten persons living in countries in the north has a migrant background, the number is one in 70 in countries in the south. Today the highest number of migrants, voluntary and forced migrants together, is found in Europe (64 million), Asia (53 million), and North America (43 million),¹ and the countries from where the majority of the migrants come from are low-income countries. At the same time these countries are statistically more exposed to war and political instability as well as to natural catastrophes of different kinds. Catastrophes seem to hit developing countries more often, and more severely, than industrialized countries, with a ratio of 166:1 in casualties.^{2, p. 135} This implies that at any given moment when disaster happens or a political upheaval takes place, a large number of people originating from the affected area, find themselves emotionally affected, but physically remote from the incident.

The recent earthquakes in Chile and Haiti underline the relevance and import-

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ance of understanding how migrant populations are affected by negative events in their countries of origin, especially taking into account the high prevalence of former traumatic exposure, such as war, conflict, losses and severe human rights violations that is frequently found in these groups of migrants.^{e.g. 3, 4-8} It has also been shown, irrespective of what happens in the country of origin, that refugees frequently find themselves in a situation where a number of complex factors influence their current mental health, such as previous traumatic exposure, exilerelated problems and lack of social support.⁹⁻¹⁴ Nevertheless, the possible impact on mental health of disastrous events at home, for those living in exile, has been given very little attention. Seen in relation to previous studies on forced migration and mental health, interest arose as to how different factors normally found to explain variance in mental health problems among refugees operate in exiled populations that have recently experienced a major disaster affecting their families and country of origin.

The Tsunami of 2004 hit both Aceh province in Indonesia and Sri Lanka hard, with Sri Lanka registering 35,000 casualties and 500,000 internally displaced persons.¹⁵ In the Aceh province alone, approximately 170,000 people lost their lives and 600,000 their livelihood. The affected areas suffered extensive economic, infrastructural and human development losses, with close to 90% of the population having lost their sources of livelihood. Beyond this, both the Aceh province in Indonesia, and Sri Lanka have been heavily affected by civil war for a long period of time, resulting in high numbers of persons leaving the territories. A total of 79,100 persons from Sri Lanka were registered as refugees by the end of 2005, and 324,700 as internally displaced persons within the borders of Sri Lanka. Corresponding num-

bers for Indonesia were 44,300 registered refugees and between 342,000 and 600,000 internally displaced persons.¹⁶

Norway has received a substantial number of refugees both from Sri Lanka and from the Aceh province. Following the Tsunami there were two exiled groups in Norway heavily affected by the Tsunami, and at the same time with high probability of traumatic exposure prior to the Tsunami. The Norwegian government focused their interventions on the exiled groups around those who had lost family in the Tsunami. But the question arose as to how different types of Tsunamirelated bereavement (close family, extended bereavement or friends) were associated with mental health in populations where there was a high probability of trauma exposure also prior to the Tsunami. This paper is an attempt to explore this question further. A research project following the 2004 Tsunami was thus initiated, focusing on Acehnese and Sri Lankan Tamils living in exile in Norway who were personally affected by the Tsunami by having family or friends who were either missing or dead in the Tsunami. In Western cultures one would expect a difference in reactions following loss of close family members as opposed to friends and neighbours. We wanted to look further into the situation for persons in exile, who have been exposed to pre-flight trauma, and who experienced losses in the context of a Tsunami, be it loss of family, friends, or both. When the Tsunami hit, the migrants were physically remote from close relatives and friends and received conflictive, confusing or limited information about their loved ones due to limited and often incorrect media coverage and to the chaotic situation following the disaster. They also experienced that they could do little to help family and friends in the disaster areas. The severity of such stressors and their possible psycho-

logical impact is highlighted by the fact that “... unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate” is included as one of the A-criteria for PTSD in DSM-IV.

The fact that the Norwegian government initiated measures towards individuals from Aceh and Sri Lanka who were directly affected by the Tsunami represented an impetus for a study on how such groups are affected and how the multiple stressors may affect their current mental health. Since those directly affected by the Tsunami represented the beneficiaries for the government assistance programme, the decision was taken to include only this group in our study.

The study has two main research questions. 1) What association can be seen between mental health problems and Tsunami-related bereavement in populations living in exile who originated from the affected areas? 2) What factors are associated with current mental health problems among exiled individuals who have recently experienced such major catastrophes in their country of origin?

The study forms part of a comprehensive research programme at the Norwegian Centre for Violence and Traumatic Stress Studies investigating the relationship between disaster stressors and health problems in different groups affected by the December 26, 2004 Tsunami in South-Asia. This programme also included studies of tourists, both adults and children, who were visiting the sites when the Tsunami struck,¹⁷ their bereaved families at home¹⁸ and emergency personnel who went to work in the affected areas in the aftermath of the disaster, including journalists.¹⁹

Method

Participants and recruitment

The two sub-samples in this study, the Sri

Lankan Tamils and the Acehnese, present quite different characteristics with respect to numbers and geographical location in Norway. While the majority of the Sri Lankan Tamil population in Norway have refugee status, there are also some work migrants among them who arrived in the 1970's.

There are 12,000 Tamils in Norway at the present residing in 126 different municipalities. The Aceh population differs from the Tamils in many ways. The group is small, consisting only of 185 persons, and most of them residing in three neighbouring municipalities. They all arrived as refugees between the years 2000 and 2002.

At the time of the 2004 Tsunami there was no public register of persons with Acehnese and Tamil background, and thus the challenge was to get in touch with the relevant population. Due to the different characteristics of the two sub-samples in the study, two different approaches were chosen to recruit participants. For the Sri Lankan Tamils, an approach of sending a self-administered questionnaire in the Tamil language to a randomised sample was chosen. The random sample was stratified on sex and age and consisted of 1,600 persons whose last country of residence was Sri Lanka. Whereas all 1,600 were asked to return the questionnaire, only those meeting the inclusion criteria of being in some way personally affected by the Tsunami were asked to complete and return the full questionnaire, as the main focus in the study was on the association between Tsunami related bereavement and mental health. This was in concordance with the recommendation by the Norwegian committee of ethics. Prior to the construction of the questionnaire, a qualitative pilot study was carried out, revealing important aspects and factors to include in the questionnaire, as described below.

The questionnaire was sent out in Au-

gust 2005, with one reminder sent out three weeks later. A total of 163 Sri Lankan Tamils returned the questionnaire, and 61 of these met the inclusion criteria. Forty-three of the 61 were women, and 32 had become Norwegian citizens. Implications of the low response rate will be discussed later. For the Acehese subgroup a more direct approach to recruitment was chosen. In co-operation with local representatives of the Aceh community in Norway, meetings were organised where affected persons could participate and complete the questionnaires. This took place towards the end of 2005. The instruments were not translated but interpreters were available throughout the sessions. A total of 81 Acehese persons completed the questionnaire, and all of them met the inclusion criteria of being in some way personally affected by the Tsunami.

Full sample

The full sample thus consisted of 61 individuals with Tamil background from Sri Lanka, and 81 from Aceh, Indonesia, all living in Norway and all related to persons who were missing or who died in the Tsunami. For a more complete description of the demographics of the study group, see Table 1 on page 80.

As presented in Table 1, there were substantial differences between the two groups on several variables. Persons in the Acehese sample were younger, had been in Norway a shorter period of time, were more likely to be men, less likely to be married, less likely to be employed, and more likely to have been granted asylum in Norway. In addition there were significant differences with regard to religious belonging in the two groups. All of the Acehese were Muslims, while most of the Tamils were either Hindus or Catholics. There was, however, no significant difference in educational level between the two groups.

Measurements

In order to measure affectedness by the disaster, questions were formulated to register type of losses and persons missing, as well as how long time people had been missing. As part of this process a qualitative pilot study was carried out, interviewing persons from the population in question. This was considered particularly important as there is little prior knowledge linked to the research questions. Current mental health problems were measured by using the *Post Traumatic Symptom Scale 12*,²¹ *General Health Questionnaire-28*,²² and *Inventory of Complicated Grief (ICP)*.²³ The Inventory of Complicated Grief was administered to the Tamil group in full, as this was done in writing, whereas the Acehese group was only given a selection of eight questions from this inventory. This was done both because of time constraints, and because some of the items proved difficult to answer. The mean score for the questions administered to both groups is applied in the analyses. In order to establish a level that would constitute presence of mental health problems, or “caseness”, on the measures used in the study, recommended cut-off scores were applied. For PTSS-12, that meant that the cut-off score was between 28 and 29,^{24, 25} for GHQ-28, between 5 and 6,²⁶ and for ICG between 24 and 25.^{23, 27, 28}

Exilerelated problems were measured using the *Post-Migration Living Difficulties Questionnaire*.^{7, 14} Some of the questions were slightly altered in order to improve the correspondence to the Norwegian healthcare and immigration systems. Former traumatic exposure was assessed differently in the two sub-samples. The Sri-Lankan Tamils were asked about 21 potentially traumatising experiences (adjusted version of the *Stressful Life Experiences Screening*²⁹), and the Acehese were asked about eight warrelated experiences, based on the Harvard Trauma

Table 1. Demographics for the two groups and the whole sample. Significance levels from Independent Samples T-tests between the two groups are indicated.

| | Full sample (n=142) | | Acehnese (n=81) | | Sri Lankan Tamils (n=61) | |
|---------------------------|---------------------|-------|-----------------|-------|--------------------------|-------|
| | M | SD | M | SD | M | SD |
| Age*** | 35.23 | 11.22 | 32.98 | 8.78 | 42.10 | 12.67 |
| Years in Norway*** | 6.71 | 5.75 | 3.53 | 1.65 | 11.84 | 6.29 |
| Education – years | 10.08 | 3.80 | 10.12 | 3.73 | 10.02 | 3.97 |
| | n | % | n | % | n | % |
| Female*** | 76 | 53.50 | 32 | 39.51 | 43 | 70.50 |
| Male | 66 | 46.50 | 49 | 61.49 | 18 | 29.50 |
| Married*** | 111 | 78.17 | 59 | 72.84 | 53 | 86.89 |
| Employment*** | | | | | | |
| Full time | 36 | 25.35 | 13 | 16.05 | 23 | 37.70 |
| Part time | 31 | 21.83 | 16 | 19.75 | 15 | 24.60 |
| Unemployed | 36 | 25.35 | 26 | 32.10 | 10 | 16.39 |
| Student | 18 | 12.68 | 12 | 14.81 | 6 | 9.84 |
| Social security/Pension | 21 | 14.79 | 14 | 17.28 | 7 | 11.48 |
| Religion*** | | | | | | |
| Hinduism | 40 | 28.17 | 0 | 0 | 40 | 65.57 |
| Islam | 81 | 57.04 | 81 | 100 | 0 | 0 |
| Catholicism | 15 | 10.56 | 0 | 0 | 15 | 24.60 |
| Other religion | 2 | 1.41 | 0 | 0 | 2 | 3.28 |
| No religion | 4 | 2.82 | 0 | 0 | 4 | 6.56 |
| Residency *** | | | | | | |
| Granted asylum | 83 | 58.45 | 73 | 90.12 | 10 | 16.39 |
| Humanitarian | | | | | | |
| Grounds | 24 | 16.90 | 6 | 7.41 | 18 | 29.51 |
| Family reunion | 30 | 21.13 | 2 | 2.47 | 28 | 45.90 |
| Student | 5 | 3.52 | 0 | 0 | 5 | 8.20 |

***) $p < 0.001$

Questionnaire, (experiencing life-threatening events and acts of war, witnessing torture and killing, forceful separation from family, experiencing physical violence, torture and other extreme events³⁰). The reason for this is again related to the different ways in which the data was collected and the

fact that the longer list used in the Tamil questionnaire was too comprehensive for the sessions where the interviews with the Aceh group took place. As there were several overlapping items it was possible, in order to compare the two groups as well as to explore a common variable of traumatic exposure,

to recode the answers from the Sri Lankan group to match the eight categories in the Aceh material.

Other potentially traumatic experiences reported by the Sri Lankan Tamils were consequently not included. Perceived social support was measured by replies to questions related to reported availability of assistance, practical and emotional support from family and a social network. The alteration in the questionnaire administered to the Aceh sample represents an attempt to shorten the length of the questionnaire, with the aim of obtaining a higher response rate. This was done because of the low response rate acquired in the Tamil sample.

Cultural feedback and translation

In order to adapt the questionnaires to the groups in the best possible way, resource persons in the Tamil and Aceh communities in Norway were consulted regarding the cultural appropriateness and sensitivity in the measures chosen, as well as to the study as a whole. We were especially concerned with the questions regarding Tsunamirelated bereavement, and as part of this process a qualitative pilot study was carried out, interviewing Sri Lankan Tamils affected by the Tsunami.³¹ For the translations of the questionnaires, two approaches were chosen. It was translated into Tamil language in writing, and in this process both translation and back-translation were performed, according to the recommendations of Brislin.³² For the Acehnese, interpreters were available during the completion of the questionnaires as this was done in specially organised meetings (see above).

Psychological distress

As the scores on the three measures of mental health problems (*PTSS 12*, *GHQ 28* and *Inventory of complicated Grief*) cor-

related highly (ranging from $r = 0.557$ to $r = 0.751$), an Exploratory Principal Component Analysis with varimax rotation was conducted. Both Kaiser's criterion and Cattell's scree-plot test indicated that a one-factor solution was satisfactory, explaining 48.61% of the total variance, with all questions loading higher than 0.40. The combined measure, here defined as "psychological distress" (PD), thus covers what may be the underlying phenomena in all of the three different measures used. In most of the remaining analyses, this combined measure (PD) is used as an indicator of the mental health problems in the study groups.

Statistical analyses

Two sets of analyses were carried out to shed light upon the possible relationship between Tsunamirelated bereavement and current mental health problems. First, cross-tabulations with type of bereavement (close family, extended family or friends) and level of mental health problems reported on the three measures applied were carried out. Then a GLM Univariate analysis was used, where the combined measure of psychological distress was the dependent variable, while the qualitative variable of Tsunamirelated bereavement was the independent variable. Cross-tabulations were applied to investigate whether significant differences existed between the two groups with regard to Tsunamirelated bereavement. Subsequently both sets of analyses were carried out for the sample as a whole and for the two groups separately.

The relationship between current mental health problems, former exposure to traumatic events, exilerelated problems, and social support, was explored by using a multiple regression analysis and path analysis. Independent Samples T-tests were applied to determine whether or not sys-

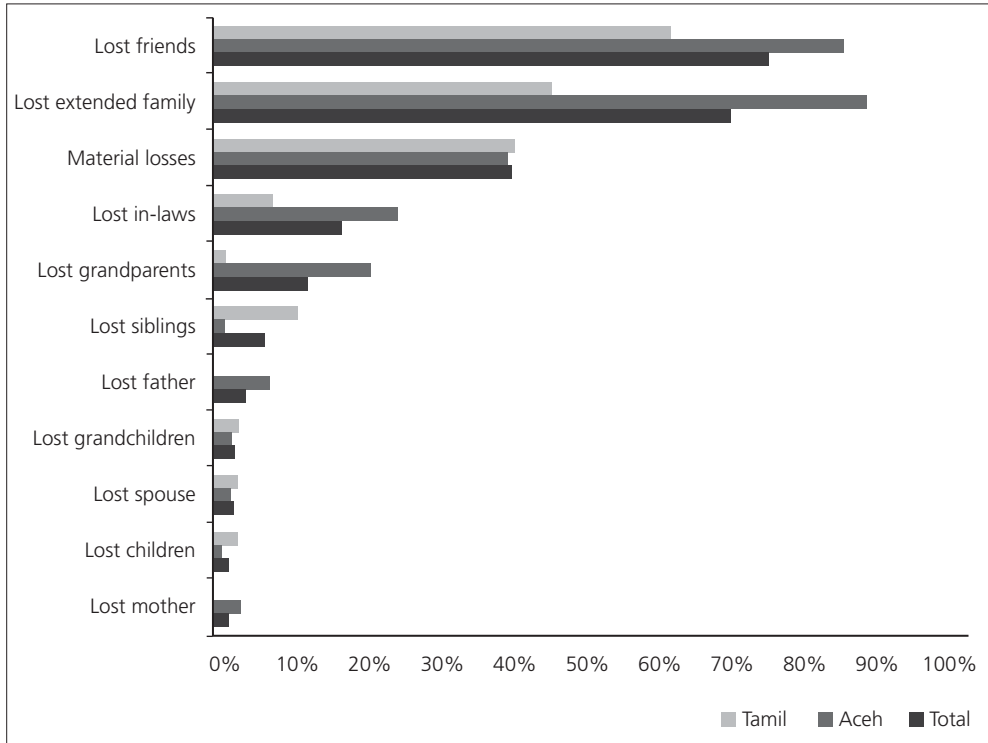


Figure 1. Tsunami-related losses reported in the two groups.

tematic differences existed between the two sub-samples with regard to former exposure and mental health problems. Analyses were carried out both in the full sample and in the two groups. The results from the two sub-samples will only be presented where these diverge from the results based on the full sample.

Handling of incomplete questionnaires

A number of respondents had skipped at least one question in the survey. Attempts to replace or compensate for non-answered or missing items is a complicated process, and no method fully can repair the fact that respondents skip questions. We therefore chose not to replace missing data on item-level. In

calculating the combined measure, a mean score of the completed items was calculated, if that the person had responded to at least 10 items. The reliability of this method was assured by calculating Cronbach's Alpha of several random selections of sets of 10 items included in the combined measure. In all cases the reliability proved satisfactory ($\alpha > 0.70$). In the remaining analyses the responses were left as they were, and consequently, as will be seen in the following, "n" varies slightly from analysis to analysis.

Reliability of the measures

All measures obtained satisfactory reliability, indicated by Cronbach's Alpha > 0.70 (Psychological distress, $\alpha = 0.98$; Former

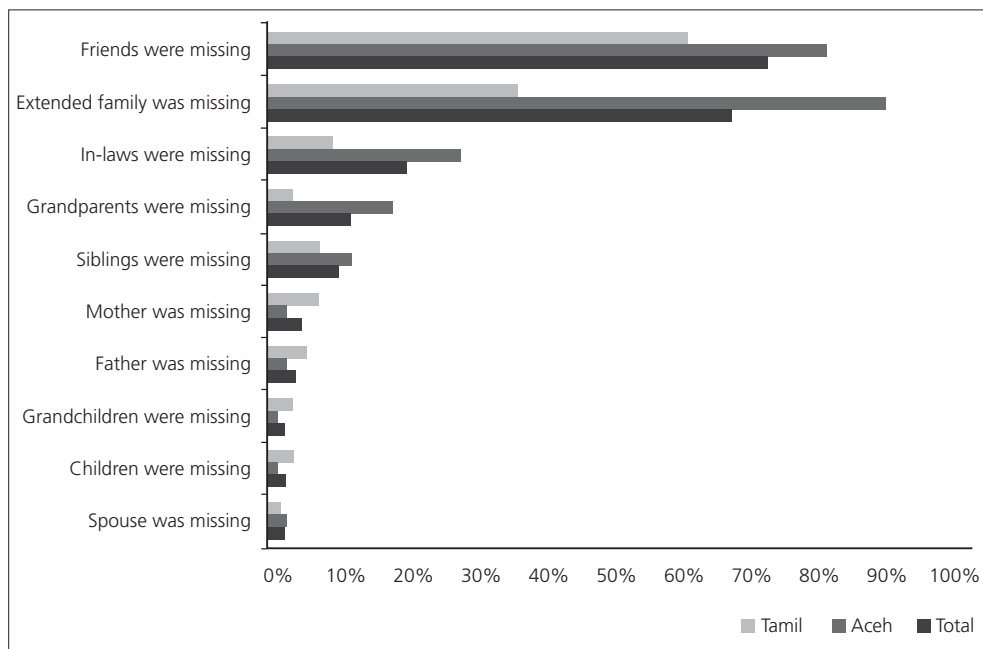


Figure 2. Tsunami-related uncertainty reported in the two groups.

exposure, $\alpha = 0.72$; Exile-related difficulties, $\alpha = 0.82$).

Results

A presentation of the degree to which the study population was affected by the Tsunami, and the level of mental health problems in the group as assessed in this study, will be presented before moving to the results in relation to the two research questions.

The majority in both groups had experienced loss of friends and extended family, while relatively few had experienced loss of close family, here defined as parents, spouse, children, siblings, grandparents and grandchildren, as shown in Figures 1 and 2. Cross-tabulation with Tsunami-related bereavement and nationality further showed that 32.1% of the Acehnese sample had lost

“close” family, whereas 8.8% of the Tamil sample reported losing “close” family in the Tsunami ($p < 0.001$).

A high level of mental health problems on the three included measures was reported with 82.4% of the participants scoring above cut-off level on GHQ-28, and 75.4% and 67.6 % respectively on PTSS-12 and ICG.

Research variables in the two groups

An Independent Samples T-test was used to determine whether there were significant differences between the two groups on any of the research variables, namely mental health problems, exile related problems, former exposure, Tsunami-related bereavement and social support. The results of the analyses are presented in Table 2, and as shown, there are some significant differences between the two groups. The Acehnese group reported more

Table 2. Mean scores and standard deviation on the main research variables in the two groups. Significance levels from Independent Samples T-tests between the two groups are indicated.

| | Aceh | | Tamil | |
|-------------------------------------|------|------|-------|------|
| | M | SD | M | SD |
| Psychological distress – G-factor * | 2.18 | 0.84 | 1.78 | 0.87 |
| Former exposure | 5.02 | 1.96 | 5.32 | 2.22 |
| Exilerelated difficulties ** | 2.49 | 0.40 | 2.19 | 0.62 |
| General social support | 4.53 | 2.55 | 5.28 | 2.73 |

*) p<0.05 **) p<0.01

mental health problems, as measured by the G-factor, as well as more exilerelated difficulties than the Sri Lankan Tamils. As for percentage scoring above cut-off level on the different measures on mental health in the two sub-samples, Cross-Tabulation showed no significant differences between the two groups. Although the total former exposure was high in both groups (on average five of the eight trauma events prior to the Tsunami is reported (SD = 2)), independent samples T-test showed that no significant difference existed between the two groups on total exposure. Due to these significant differences between the two sub-groups on several of our research variables, “nationality” will be included in the multiple regression analysis to ensure that the differences between the two groups are not systematically influencing the results.

Tsunami related bereavement and current mental health problems

Neither GLM-Univariate Analysis nor cross-tabulation showed any significant relationship between type of Tsunamirelated bereavement and current mental health problems. In other words, type of Tsunamirelated bereavement experienced (e.g. close family vs. friends only) appeared not to have an independent contribution in explaining psychological distress. This was

true both in the full sample and in the two groups.

An analysis was carried out to see if interaction effects were present, masking the possible relationship between Tsunamirelated bereavement and psychological distress. No interaction effects between Tsunamirelated bereavement, former trauma events, exilerelated difficulties and social support were found.

The association between current mental health problems and former exposure, exilerelated difficulties, and social support

As neither GLM-Univariate nor Cross-tabulation showed any significant relationship between type of Tsunamirelated bereavement and current mental health problems, Tsunamirelated bereavement was excluded from the remaining analyses. The results from Multiple Regression Analysis with three research variables and control variables are displayed in Table 3.

Neither the control variables nor nationality seem to contribute to explain the scores of mental health problems in this sample (see Table 3). The three research variables all have an independent contribution in explaining psychological distress. While there is a positive association between former exposure to traumatic events, exilerelated difficulties and psychological

Table 3. Multiple regression analysis for the full sample. The G-factor of psychological distress operates as the dependent variable, while the research variables and control variables are the independent variables. Significance levels are indicated.

| | G-factor, Adj. R ² = 0.364 | |
|---------------------------|---------------------------------------|-------|
| | β | T |
| Former exposure | 0.21* | 2.28 |
| Exilerelated difficulties | 0.26** | 2.75 |
| General social support | -0.36*** | -3.97 |
| Gender | 0.11 | 1.23 |
| Nationality | 0.09 | 0.75 |
| Years in Norway | -0.08 | -0.60 |
| Education | 0.15 | 1.74 |
| Age | 0.06 | 0.60 |

*) p<0.05 **) p<0.01 ***) p<0.001

distress, we see that perceived social support shows a negative association with psychological distress.

To investigate further how psychological distress in the current sample is influenced by different parameters, Path Analyses were carried out, applying the programme AMOS-7. Path Analysis represents an advantage over multiple regression analysis in offering an opportunity to consider the fit of a whole model without having to assume correlations between all variables included, and at the same time assumes the direction of the relationship. The results from the path analyses are presented in Table 4 and Figure 3. As shown in Table 4 the model appears to have a good fit and all associations in the model are significant at $p < 0.05$.

The model also shows that nationality, time in host country and activity in work or studies are variables that, in addition to our research variables, are associated with the mental health condition. Nationality is related to time spent in Norway, and this

seems to have a negative association with the degree of exile related problems and a positive association with the probability for work or studies. Being employed/studying has in turn a direct negative association with the level of mental health problems. There is also association between our research variables, where a higher level of former exposure leads to an increased probability of exile-related problems and decreased probability of perceived social support. Lower levels of perceived social support are in turn associated with a higher level of psychological distress. The model thus shows that there is a complex interplay between different variables influencing the level of mental health problems in exiled populations that have recently experienced disasterrelated bereavement in their country of origin.

Discussion

Discussion of findings

This study was an attempt to shed some light upon the possible consequences of new stressful events in the lives of people formerly exposed to violence and hardships. When the Tsunami disaster of 2004 struck areas from where large groups of refugees originate, it became evident that little attention had been given to this particular kind of situation, namely that refugees, after having left their countries of origin for reasons of persecution, threat, conflict and risk of severe human rights violations, from the position of exile are confronted with new disasters at home.

Internationally, the major focus of assistance was on those residing in the affected areas. But the disaster in 2004 actualized the need to explore the possibilities and needs for assistance to those who originate from affected areas but live elsewhere when disasters happen. It provided a chance to study also the possible contribu-

Table 4. Descriptives of the variables and relationships included in the path analysis in Figure 5.
 NB: Nationality is scored as a dichotomy where Sri Lanka equals "0" and Aceh "1".

| | M (SD) | R ² | r | p |
|---|-------------|----------------|--------|---------|
| RMSEA = 0.036 | | | | |
| Chi-square = 12.99 | | | | |
| Psychological distress | 2.02 (0.87) | 41.3% | – | – |
| Exilerelated difficulties | 2.38 (0.51) | 14.1% | – | – |
| Exilerelated difficulties → Social support | – | – | -0.347 | < 0.001 |
| Exilerelated difficulties → Health Problems | – | – | 0.300 | < 0.001 |
| Social Support | 4.82 (2.63) | 20.9% | – | – |
| Social support → Health Problems | – | – | -0.325 | < 0.001 |
| Reported Traumatic Exposure | 5.13 (2.05) | – | – | – |
| Trauma → Exilerelated difficulties | – | – | 0.221 | 0.008 |
| Trauma → Health Problems | – | – | 0.206 | 0.005 |
| Trauma → Social Support | – | – | -0.231 | 0.004 |
| Years in Norway | 6.71 (5.75) | 50.9% | – | – |
| Years in Norway → Exilerelated difficulties | – | – | -0.303 | <0.001 |
| Years in Norway → Active in work or studies | – | – | 0.235 | 0.008 |
| Active in work or studies | 59,5% | 5.5% | – | – |
| Active in work or studies → Health Problems | – | – | -0.142 | 0.044 |
| Nationality → Years in Norway | – | – | -0.713 | <0.001 |

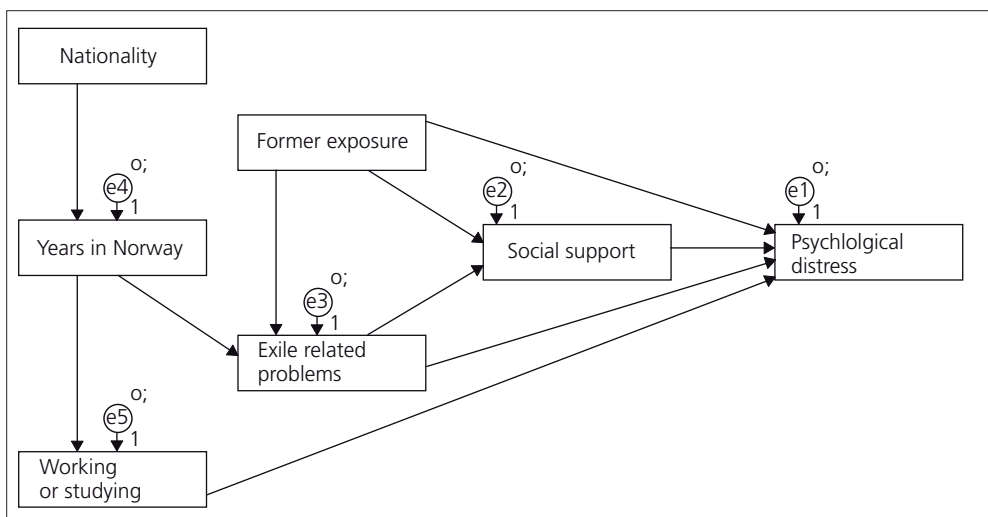


Figure 3. A model demonstrating parameters influencing psychological distress in the current sample and the relationship between those parameters.

tion of such new stressors and losses in explaining mental health problems of persons in exile, who prior to migration have been exposed to violence and different kinds of traumatic stress.

The study is in concordance with other studies on refugee populations, finding high level of exposure to traumatic events prior to migration, e.g. 3, 4-7 ongoing exile related problems,^{14, 33} as well as high levels of mental health problems.^{5, 6, 8, 10-12, 34, 35} The importance of perceived social support in exile, as studied by Gorst-Unsworth & Goldenberg is also referred to in the present study.³⁶

Looking into the relationship between these different factors and present psychological distress yielded some expected, and some less expected, results. In concordance with studies on exiled populations without recent disasterrelated bereavement, the present study showed the importance of former traumatic exposure, social support and ongoing exile related problems in explaining levels of current mental health problems. However, from a statistical point of view, no clear independent contribution of type of Tsunamirelated bereavement on current mental health problems could be detected. This comes out as a strong contrast to the results from the qualitative pilot study, which indicated that the subjective experience of the Tsunami was termed the worst they had experienced. As one informant said: "The Tsunami is the worst thing that has ever happened. War we know. We know where it is and how to avoid it. The Tsunami just came – so unexpectedly!"

There are several ways to interpret this lack of association. In designing the study, we considered the contrast between losing friends and losing close family members as strong enough to be statistically detected and thus capable of contributing to the research question. Nevertheless the lack of

significant associations between these factors may point to weaknesses in the design, where a non-affected control group would have enhanced the contrast in affectedness. The lack of association may also be interpreted differently, stressing the importance of the whole network to those affected. That is, to the studied groups, the loss of friends was experienced as emotionally difficult as the loss of family members. Alternatively, the lack of association can be seen in relation to a dose-response understanding of trauma,^{5, 7} where the total number of experienced trauma is more decisive to current mental health problems, than the resent Tsunamirelated bereavement. As such it may seem difficult to isolate the influence of one stressor in a population that has such a high level of former exposure.

It is also possible to interpret the lack of association between Tsunamirelated bereavement and mental health problems as a result of faulty operationalisation. It may well be that the final confirmation of bereavement, be it friends or family, is not what constitutes the main Tsunamirelated trauma. The Tsunami struck an area where earthquakes and tsunamis are not common. There was a lack of preparedness, both in the government and the general population. Learning about the Tsunami might therefore have constituted the biggest trauma related to the Tsunami, rather than the type of traumarelated bereavement experienced. The shock of learning that your country has been struck by a major disaster was compounded by direct media coverage of the destruction, and breakdown in infrastructure and communication, thus leaving people in the dark for a long period before learning who was affected by the Tsunami. Similar to survivors of other types of trauma, for example survivors of assault, they continue to be affected even

though they know they survived, or in this case, know who died in the Tsunami. It is the shock, the uncertainty and the threat to your integrity or the integrity of your loved ones in that particular moment that constitutes the trauma. If this is the case, the inclusion of a control group would still not have resulted in greater contrast; they would still all have been affected by originating from a country struck by a major disaster.

Whatever the reason for the lack of association found, the results from the pilot study illustrate the importance of conducting more studies investigating how recent traumatic bereavement is associated with mental health problems in populations with a history of prior traumatic exposure. Further research is therefore needed, where one includes a control group from the same country that was not personally affected by the disaster, as well as a control group from a different country not recently affected by any major disasters. This would provide better control for the variables former exposure, exile-related stress and possible faulty operationalisation when doing the analysis, hence increasing the probability of isolating the variance in mental health problems possibly explained by Tsunami-related bereavement.

The overall results also point at the complexity associated with current mental health problems in populations with high levels of former trauma exposure, and ongoing exile related stress. The path analysis (see Figure 3) reveals the complex interplay between these parameters and the necessity of considering the broad picture and the interconnectedness between these variables when trying to understand the present situation of individuals with the kind of experiences described in this study. The path analysis also implies what interventions may prevent ag-

gravation of mental health problems among groups in exile, namely reducing unemployment, facilitating development of social networks, and minimising other system-related difficulties in exile.

Discussion of the methodological issues involved in the study

One obvious methodological weakness in the current study is the low response rate obtained in the Tamil sample (only 10%). At the same time, no obvious selecting variable identifying the responding Tamil sample could be found. There was no significant difference in age distribution or sex distribution between responders and non-responders, 60% of the people returning the questionnaires did not meet the inclusion criteria of being in some way personally affected by the Tsunami (and had hence not completed the full questionnaire), and the distribution in educational level in the responding sample was identical to the national distribution for this minority group. There was also variance in the degree of Tsunami-related bereavement, former exposure, number of years in Norway, current mental health problems etc.³⁷ In addition, the results from the Sri Lankan sample seem to be supported, firstly by the fact that the results in the more stable Acehnese group point in the same direction and secondly it can be argued that the main findings are supported by pre-existing empirical findings. That is, high levels of mental health problems in refugee populations, high degree of former exposure, and an independent contribution of social support, and exile-related difficulties in explaining current mental health problems.

The low response rate obtained when sending questionnaires by mail to the Tamil sample also illuminates a more general methodological challenge when doing research in refugee populations. Even though

all recommendations were followed, very few persons returned the questionnaire and there was no obvious selecting factor helping us understand who actually responded to the study. The questionnaire was translated and culturally adapted (for more information, see under “methods”), and a reminder was sent after three weeks. Still, a response rate of 10% is poor at best, and makes it difficult to generalise from the results from the Tamil sample. In this case the concordance between the results found in the Aceh sample and the Tamil sample, as well as concordance with existing literature strengthens the tendency found in the obtained results.

Nevertheless, further studies are needed to shed light on the research questions and to eliminate some of the weaknesses of the present study, like low response rate, lack of control group, and different sampling methods in the two sub groups. In addition, studying groups with a high degree of former exposure to trauma,^{e.g. 3-5, 7} and the high levels of mental health problems^{e.g. 5, 11, 12} raises a number of important methodological as well as ethical challenges. First of all, the challenge of finding good measurements that may capture new trauma and stress experiences, and secondly, developing measurements that may register changes in mental health problems related to new events in populations where the level of mental health problems is already quite high. That is, how can we find measures that manage to isolate the impact of one new stressor in populations that have experienced dozens of former stressors, and also detect changes in mental health problems? A design with mixed methods to study the impact of new stressors in such populations may seem to be the best path to chose. A qualitative approach will provide an opportunity to explore and grasp the lived and subjective experience both of the complex here and now situation and

that of the added strain, while a quantitative approach can point to associations between the sum of strains and current mental health problems. A combined methods approach will strengthen the possibility for a more holistic picture, and may as such be more commendable also from an ethical point of view, permitting more complex and nuanced voices to be heard. By adding a control group that has not experienced new stressors, such as those related to sudden dramatic incidences in the homecountry, the quantitative part of a mixed design will be substantially strengthened and the thus possibly yielding new information.

Concluding comments

The present study demonstrates the importance of former exposure and exilerelated difficulties in explaining current mental health problems, as well as the protective influence of perceived social support. At the same time it points to important methodological challenges, both related to capturing the influence of additional exposure in groups with high former exposure, as well as challenges related to obtaining satisfying response rates. More studies will be needed in order to deepen our insight into this complex field. And as has been argued above, alternative methodological approaches will be needed, where one relies both on qualitative and quantitative data. Despite shortcomings and serious limitations in this specific study, it points towards an area where little research has been done, and where the need for more knowledge is great. The number of migrants increases steadily, where forced migrants constitute an especially vulnerable group. It is thus important to understand how disasters in their country of origin, like the Tsunami, affect mental health in refugee populations, and how one can assist to reduce the negative impact of such events.

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