The Triple Burden of Trauma, Uprooting and Settlement

A non-clinical longitudinal study of health and psychosocial functioning of refugees in Norway.

Author:

Birgit Lie, MD

Psychosocial Centre for Refugees

University of Oslo

Norway

Mail address:

Birgit Lie, Enrum 11, 4616 Kristiansand, Norway

Tlf (47) 38072760 ; Fax (47) 38072766, Mail: birgit_lie@c2i.net

ISBN 82-8080-060-3

Cover:
Inger Sandved Anfinsen

Series of dissertations submitted to the Faculty of Medicine, University of Oslo
No. 125

Printed in Norway:
E-dit AiT AS, Oslo

Publisher:
Unipub AS, Oslo 2003

Unipub AS is a subsidiary company of Akademika AS owned by The University Foundation for Student Life (SiO)

"Human nature will only find itself when it finally realizes that to be human it has to cease to be beastly or brutal."

(Mahatma Gandhi, In Search of the Supreme)

Contents

ACKNOWLEDGEMENTS 3

SUMMARY 5

LIST OF PAPERS 6

1. INTRODUCTION 7

2. BACKGROUND OF THE PROJECT - OWN STORY 8

3. HISTORICAL AND SOCIO-CULTURAL BACKGROUND OF REFUGEE ARRIVALS 10

3.1 LABOUR MIGRATION, ASYLUM SEEKERS AND REFUGEES 10
3.2 HISTORICAL VIEW OF REFUGEE ARRIVALS TO NORWAY 11
3.3 RESEARCH ON MIGRANTS AND REFUGEES 16
3.4. ETHICAL DILEMMAS IN RESEARCH ON REFUGEE-GROUPS 22

4. THEORETICAL CONSIDERATIONS 25

4.1 MENTAL HEALTH CONSEQUENCES OF ORGANIZED VIOLENCE – PTSD AND OTHER DIAGNOSTIC MEASURES 25
4.2 TRAUMA AND TRAUMATIC EVENTS 28
4.3 PROTECTIVE FACTORS IN SURVIVORS OF SEVERE STRESS 29

5. AIM OF STUDY 30

6. MATERIAL AND METHODS 32

6.1 PILOT STUDY 32
6.2 MUNICIPALITIES IN THE STUDY 32
6.3 STUDY PROCEDURES 32
6.4 INTERVIEWS AND PROCEEDINGS 34
6.5 REFUGEES IN THE STUDY 34
6.6 ATTRITION 36
6.6 ATTRITION 37
6.6.3 ATTRITION IN FOLLOW-UP IN BOSNIA - THE REPATRIATED POPULATION 38
6.7 INTERVIEW DESIGN 39
6.8 TRANSLATION OF THE QUESTIONNAIRE 40

7. STATISTICAL METHODS 41

7.1 MAIN ANALYSES 41
7.2 COMBINED PSYCHOLOGICAL DISTRESS MEASURE – 'SYMPTOM' – IN THE STUDY OF REFERRED AND NON-REFERRED REFUGEES DESCRIBED IN ARTICLE 2 41
7.3 THE FOLLOW-UP STUDY 42
7.4 FACTOR ANALYSES OF TRAUMA VARIABLES 42
7.5 BOSNIAN REFUGEES IN PART 2 42
7.6 QUALITATIVE DATA 43

8. RESULTS – SUMMARY OF PAPERS 43

8.1 Paper 1 - Traumatic Events and Psychological Symptoms in a non-clinical Refugee Population: The situation among 462 newly arrived Refugees in Norway. 43
8.2 Paper 2 - Family, activity and stress reactions in exile 43
8.3 Paper 3 - A 3-year follow-up study of psychosocial functioning and general symptoms in settled refugees 44
8.4 Paper 4 - The psychological and social situation of repatriated and exiled refugees - a longitudinal, comparative study 44
8.5 General remarks on the main findings of the study 45
9. DISCUSSION 47
9.1 Strengths and limitations of methodological choices 47
9.2 General discussion of the results 54
9.3 Lessons learned 60
10. CONCLUDING REMARKS – WHERE DO WE WANT TO GO? 63
11. REFERENCES 66
12. APPENDIX 78

Acknowledgements

I wish to give warm thanks to many good helpers, without who's assistance this work would have been more difficult to fulfil.

First and foremost I wish to thank all the refugees who shared their lives with us telling their stories and giving their time. I also wish to thank all the health workers in the municipalities who worked long hours compiling data in order to contribute to provide a better health care for the refugees. Without their collaboration and contribution the study would not have come through.

Nils Johan Lavik, who has been my main thesis advisor and always present when needed, you encouraged me to broaden the work from a project to a thesis in the very start and have continued to encourage me to go on. By giving me inspiration, in your wise and quiet way, you have been guiding me through the historical, ethical and professional aspects of the themes in the thesis.

Petter Laake, as advisor you gave me substantial support and advice in the first years through your elegant guiding through the jungle of statistics.

Jon Martin Sundet, you took up the position as non-formal advisor out of generosity. Through your inspiring reflections and constructive advice in the handling of statistical problems and designs as well as theoretical and practical analyses, you have given valuable contributions to the process, and you have shown me what a fascinating and important field statistics may be.

Nora Sveaass, my dear friend and colleague, you have been constructive, supportive and inspiring through in all these years. The close contact in our common project made the good relation closer, and it has been and will continue be of great value in more than just the professional sphere.

Nezla Sehovic Duric, I want to give warm thanks to you as a dear friend and colleague. I could discuss the "inner life" of the project with you from the beginning. You supported me through many obstacles and we went together to Bosnia and make the interviews with the repatriated refugees there. Our journey was an intense professional and personal experience.

Gwyn Øverland, I wish to direct special thanks to your patient and meticulous review of my English language throughout the thesis. Your thorough reading and correcting has elevated the language to a more elegant and readable state.

Thanks also to good colleagues in the first period of the steering committee of project: Jon Hilmar Iversen, Øyvind Solberg, Edvard Hauff and Karin Rønning. Karin, you listened to

my little sigh as a clinician in 1993 when I started to search for means to prevent a burn-out after several years of heavy clinical work concerning torture and trauma rehabilitation. I am grateful to your proposition in the autumn of 1993, when you suggested the research project to me. It has effectively prevented me from burn out as well as from leaving the refugee field.

Dag Erik Eilertsen who through your patience and quiet advice contributed to making the statistical analysis understandable and clearer.

Hilde Eilassen Weidemann and Henriette Schanke, thank you for the meticulous punching of the data.

My friends and colleagues at Psychosocial Centre for refugees, University of Oslo are gratefully acknowledged for the support and warmth I have felt. It has been wonderful to come to Oslo from Kristiansand and meet inspiring and including colleagues. I only regret not having been able to spend more time there.

Kristiansand municipality, with my former work place Flyktninghelsetjenesten should be thanked for making it possible by giving me leave to start the project. This flexibility was inspiring and allowed me to combine the clinical work with the research.

Thanks also to my colleagues at Psychosocial Team for Refugees at Sørlandets Sykehus, Mette Marit Laading, Gwyn Øverland, Rune Bjørgo, Hildegunn Selle and Daniel Glaser, for their supportiveness and patience.

The financial support of the Norwegian Research Council for Science and the Ministry of Health and Social Affairs in funding the research is gratefully acknowledged. The Norwegian National Ethical Research Committee has approved the survey.

The Norwegian Directorate of Immigration (UDI) is gratefully acknowledged for financial support to the journey to Bosnia.

Thanks to Sørlandets Sykehus for supporting me financially in the last half year of the project.

I am grateful to my two children Maria and Thomas - and to Ole, and wish to give you all warm thanks. You have patiently put up with me showing me great solidarity and support for all these years.

A heartfelt thanks to all of you!

Summary

Refugees suffer the consequences of the triple burden of trauma, uprooting, and resettlement. This study aimed towards gaining a broader and more differentiated overview of the health status of a refugee population at the time of resettlement in Norway. Interviews of a non-clinical and a clinical population were performed, and a longitudinal perspective was added with a three-year follow up in Norway of the non-clinical group. These findings were compared with the interviews of a repatriated group in Bosnia.

The study explored the relationship between psychosocial problems and pre-flight traumatic exposure. Protective effect of family network and employment/training on posttraumatic reactions in a traumatized refugee-population in exile was investigated as well as changes in symptom load over time.

The results demonstrated the high impact of forced relocation and war, on psychological functioning and well-being in a refugee population, in line with other studies. The degree of traumatic experiences was substantial in the study population mainly consisting of war refugees. The traumatic experiences had a significant relationship to the psychological symptom variables. They suffered from a considerable amount of psychological symptoms such as anxiety, depression, exaggerated startling and re-experience symptoms. Presence of family and activity outside home (employment/training) had positive effects on posttraumatic symptoms regardless of degree of traumatic exposure. The level of symptoms over time had a relation to the load of pre-flight traumatic exposures as well as being influenced by the level of social support and activity outside home. The study conclude that the decision to return home may be closely connected to pre-flight traumatic experiences as well as being influenced by psychological symptom load and post-flight conditions.

In the light of recent research on repatriation, the study underlines the necessity of providing proper health services, support, and coping strategies to traumatized refugees at an early stage. Results relevant for clinical work as well for national guidelines during the time of the study were achieved, thus fulfilling the aims of the practical implication of the acquired knowledge. Further studies of the course of the chronicity of psychological symptoms are needed. Longitudinal community intervention studies need to be carefully designed and have a strong focus on coping. The individuals' ability to face the acute and long-term challenges of mass violence and its importance for future rehabilitation and integration as well as its impact on repatriation, are central issues in the research. Different interventions, support strategies, and methods of therapy need further investigation.

List of papers

1. Lie B, Lavik NJ & Laake P. Traumatic Events and Psychological Symptoms in a non-clinical Refugee Population: The situation among 462 newly arrived Refugees in Norway. Journal of Refugee Studies 2001; 14 (3): 276-294

2. Lie B, Sveaass N & Eilertsen DE. Family, activity and stress reactions in exile Comm Work & Fam (Accepted for publication, Jan 2003)

3. Lie B. A 3-year follow-up study of psychosocial functioning and general symptoms in settled refugees. Acta Psych Scand 2002,106:6; 415-425.

4. Lie B. The psychological and social situation of repatriated and exiled refugees - a longitudinal, comparative study. Scand J Publ Health (Accepted for publication, April 2003)

1. Introduction

Until the last three decades, the number of refugees coming to Norway has been insignificant. The past 10 years however, we have experienced a steadily increasing numbers of immigrants. The consequences of increased forced migration have become part of daily life worldwide. This has confronted us with the moral, ethical and professional challenge of delivering well-planned and targeted health care to patients arriving in the country as refugees. There is a general need among health professionals for more knowledge and clinical skills in the treatment of consequences of organized violence and large emergencies. (Weine et al, 2001).

Previous studies about post-migration stress have shown us the detrimental effects of severe traumas. The intension of this project was to give a sociomedical contribution to the severe problems our refugees face by studying the longitudinal course of psychological symptoms in a traumatised population in exile and exploring factors influencing the wish to repatriate. We expected to find a high level of trauma related symptoms, which lasted over time but we did not know to what degree and extent. Post-migration stress was expected to influence the health situation but we did not know exactly how the wish to repatriate might be influenced by these factors. This study was designed to shed light on the untold story of sufferings in a non-referred population of refugees.

Refugee research should be conducted with a general and specific perspective as well as a comparative approach, looking for consistencies, similarities, differences and patterns in the refugee experience. Conducted this way it may assist in relieving the sufferings of the refugees and assist those who try to help them (Stein, 1986). Generalisation of the results from epidemiological studies is made difficult by differing contexts. Research on refugee populations will vary in time as well as in place. The reasons for flights are numerous and the arrival in reception countries differs dramatically - e.g.: Boat refugees in South East Asia from Vietnam, Cambodians passing minefields on their way to Thailand, Afghan refugees crossing mountains before getting to Pakistan, refugees from the Balkans and Middle East travelling with “smugglers” or on their own. Populations studied reflect the situation at a certain time. Comparison with other studies using similar methods may increase the general understanding of the amount and content of the problems. Results from epidemiological research may be used to stipulate tendencies and is a basic prerequisite for a well-founded government policy (Jenkins, 2001).

Before describing the study I will start with a description of the historical and socio-cultural background of refugee arrivals in Europe and Norway, leading on to the lines and traditions in refugee research. Then follows a description of main theoretical themes touched upon in the papers and a review of literature on these thematic entities. Hereafter comes a description of the sample and the different parts of the project, the methods and methodological challenges in this kind of research, statistics and summary of the papers with the main results. Finally comes a discussion of the results of the study and conclusive remarks before the appendix that includes the questionnaires used, letters sent out, and a list of seminars and meetings held.

The thesis falls within the subject of psychiatry and general medicine with epidemiology and social medicine as central fields, but touches upon and finds inspiration in other disciplines such as sociology and medical anthropology.

2. Background of the project - Own Story

The past decades have seen an increase in the number of refugees from Europe as well as from more distant areas. A rising awareness of health-status among refugees with traumatic exposures settled in Norway accompanied increase in the refugee population. In 1986 the Ministry of Social Affairs established Psychosocial Team for Refugees in order to meet the new challenges. The team was intended as a project to be finished in 1989, but before the project ended, the Ministry saw the necessity of continuing the work. As a consequence of this Psychosocial Centre for refugees was established at the University of Oslo in 1990 with the combined commitment to promote respect for the principles of human rights and at the same time fulfil the scientific demands of objectivity and independence. Reception of high numbers of refugees and the policy of a dispersed settling of refugees led to resettlement in all parts of Norway. As the need for services grew in the whole country three regional psychosocial teams were established in 1990. The main objectives for the teams were teaching, training and counselling health professionals in the primary health care section as well as hospital/outpatient clinics. In addition to this a proportion of the time was to be used for clinical programmes with priority given to severely traumatised refugees as well as clinical investigations and theoretical studies in this field.

The degree of pre-flight trauma exposure as well as the extent of psychological symptoms and signs in the refugee groups at the time of arrival to Norway was unclear. A need for a broader knowledge of this led to the present project. Hauff's study on Vietnamese refugees (Hauff, 1998) was the only major community study on refugee health conducted in

Norway before the present study. At the time the present project started there were no uniform routine procedures of health care services for obtaining information about background, risk factors and general health condition at the reception centres and in the municipalities.

The reception of several severely traumatized refugees and the lack of satisfactory reception and treatment routines were exposed after several incidents involving casualties in autumn 1992 and winter 1993. This concurred with a tendency to growing prejudice towards asylum seekers in certain political groups. Director Arild Kjerschow at UDI confirmed in 1993 that there were no plans for a routine mental health programme for refugees arriving in Norway (NTB, 1993). As a consequence of these incidences and the following publicity the Ministry of Labour and Local Government set up a working group in April 1993.[1] The mandate was to investigate the extent of and the need for mental health services for refugees, how to obtain better information about the health of arriving refugees and how to provide a better education for health professionals in handling traumatised refugees coming to Norway. The working group gave among others, the following recommendations in their report delivered in June 1993:

- To investigate the amount and extent of psychological and physical problems among refugees, adults and children.
- To look into available routines in the health care system.
- To investigate the educational needs of health professionals in regard to refugee healthcare.
- To establish a day-care centre/ward for refugee psychiatric patients and introduce the case-management model for this group outside the institutions.
- To work for a better cooperation with UNHCR (United Nation High Commissioner for Refugees) to obtain better information about the health conditions among arriving refugees (KAD, 1993).

Based upon this report Psychosocial Centre for Refugees at University of Oslo initiated a pilot study, which preceded the present main study.

I had worked as Family Physician at the Refugee Health Care Clinic, in Kristiansand municipality for 5 ½ years when I was assigned the pilot-project. Later the follow-up-study as well as the comparative study of repatriated refugees in Bosnia and those remaining in Norway, was carried out. A longstanding interest and experience from work with refugees and

[1] Consisting of Barbro Bakken and Bente Holthe from Ministry of Labour and Local Government, Tore Skaug from Ministry of Social Affairs, Heidi Drange and Karin Rønning from Directorate of Health, Edvard Hauff from Psychososial Centre for refugees, UiO and Paula Tolonen and Eivind Holen from the Directorate of Immigration.

human rights issues preceded this, included contact and collaboration with the Eritrean Relief Association in provision of medical equipment and medicines to their work in Eritrea as well as a field project in 1983. I worked part time as researcher and part time in clinical work as a physician at the Refugee Health Clinic. From 1998 I was leader of the newly established Psychosocial Team for Refugees in Southern Norway at Vest Agder Hospital, alongside with the part time research at Psychosocial Centre for Refugees.

The possibility for interaction between research and clinical work was fruitful and gave an opportunity to make use of the results and transfer them into practical implications for the daily work in the region as well as putting them forth as suggestions to policymakers throughout these years. In 1999 at the reception of the Kosovo refugees this experience gave a clear advantage in the emergency situation that arose within few days (Haarr, 2002).

3. Historical and socio-cultural background of refugee arrivals

3.1 Labour migration, asylum seekers and refugees

The socio-political history of refugees goes back to early historical times but it was not until the 20th century, in 1951, that being a refugee became an issue covered by international law. The majority of refugees in the world have been and still are so-called displaced persons or refugees in countries close to home (See table 1).

Table 1. A review of migrant categories and number of people on the move (UNHCR, 2002 ; Flynn, 2002) ([2])

• International migrants	168 mill.
• Refugees including Palestinians	16 mill.
• Internally displaced due to:	
o Conflict or persecution	25 mill.
o Natural disasters, other causes	30 mill.
• Asylum seekers	940.000
Total number of uprooted people	**240 mill.**

Refugees are subject to forced migration due to political, ethnical or religious persecution, conflicts, wars and natural disasters. They have certain similarities to with migrants but differ from this group, as the migration is not due to economic push or pull factors. In the reception

[2] According to the UN population division there are 180 mill international migrants, including refugees, but 3.9 mill Palestinians are not included in UN High Commissioner of Refugees (UNHCR)

of asylum seekers of today the ethical and practical challenge for the authorities is to maintain alert to people in need of protection.

The research on refugees leans on the migration research. People from poor countries in Southern Europe, Scandinavia, Ireland and East Europe migrated mostly to the United States in the end of the 18th century. Later migration changed to a south-north migration, from poorer areas in Southern European countries such as Yugoslavia, third world countries, and especially former colonies, to Western European countries. After the breakdown of the "iron curtain" and disintegration of the Soviet Union in 1989, migration increased from east to west.

Labour migration was accepted due to a shortage of workers and was allowed in the different European countries until the mid 70 's. The decrease in need for foreign labour forces due to economic recession resulted in restrictions in migration policy an and increase in illegal immigration as well as a tendency for some to try to be included in the refugee group.

Increase in conflicts with the result of forcing people to flee as in Latin America, the Middle East and the Horn of Africa contributed to a rise in the number of asylum seekers as well as a number of boat refugees from South East Asia. The number of asylum seekers in Western Europe rose in the 1980's and policy makers worked hard to reduce the influx. Situated at the outer borders of Europe far away from the centre of events Norway, has not been the first country of choice for those who were on the run; but now receives refugees from all parts of the world.

3.2 Historical view of refugee arrivals to Norway

The following review will deal with the major lines of refugee influx to Norway in a historical context. The changes in numbers of arrivals and national origin over time are seen in table 2.

3.2.1. From WWI to WWII

With the economic and industrial revolution several powerful nations emerged within Europe and mutual competition and tension arose until the outbreak of World War I (WW-I) in 1914. The Russian revolution and civil war in 1917 resulted in one-and a half millions refugees and hundreds of thousands became refugees after the uprising in 1915 in Turkey where 1.5 million Armenians were killed (Fact sheet, 1996). Fridtjof Nansen (1861-1930) was member of the Norwegian delegation to the League of the Nations in 1920 and was High Commissioner of refugees from 1921 with the main responsibility to provide help for the Russian refugees.

numbers. Of the 20-25 million internally displaced due to conflict or persecution, only 5.3 million receive UNHCR aid. The 30 million figure is from the World Food Program.

Later on he also worked for Greek, Turkish and Armenian refugees. In the thirties refugees from the Spanish civil war fled to different European countries or North Africa, but due to the outbreak of the second world war many of these people soon travelled on, trying to get to Great Britain or the United States. In Norway only a small number of refugees came in the beginning of the 19th century, mostly from Russia. During the thirties there was a controlled immigration from the Nazi oppression as well as the civil war in Spain up to World War II. In January 1939 the Norwegian authorities wanted to grant asylum to a small group of medical doctors who were political refugees from other European countries. Several doctors and medical students among others did not welcome this. Fear of losing jobs and positions if the foreign doctors were granted equal rights intermingled with xenophobia and racism. An agreement to receive 10 doctors with restricted rights to work came after heavy debate with the arguments that humanism and international solidarity always have a price and that we had a moral obligation to pay back hospitality (Lavik 1991) .

3.2.2. After WWII

After World War II (WW-II) more than 18 millions were refugees in Europe. The challenges of resettling these large groups lead to the Geneva Convention of 1951 and 'The 1951-Convention Relating to the status of Refugees' defines a refugee as any person who:

> *Owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country.* (UN-convention, 1951)

A historical overview of refugee arrivals after WWII to Norway is illustrated in table 2 where the shift from European refugees to transcontinental refugees is seen by the end of the 1960'.

A number of former prisoners of war from the forced labour camps chose to remain in Norway after the WW II, as their homes were destroyed and families dead. Norway accepted 500 Jews from the concentration camps – ' as a compensation for the 700 Norwegian Jews who died in the camps' (Eitinger, 1959). In 1948 another 150 Jewish refugees were accepted and Norway, like the other resettlement countries, consequently selected on the basis of working ability, skills and the demand for their trades on the labour market. The refugees remaining in the camps throughout in Europe had been rejected by several countries a 'screening commissions' and were in great need.

1950 – 1970

In the beginning of the 50's Norway decided to let some of the so-called 'minus' refugees come. The 'screening commission-system' has been kept up to now and the quota of 'minus' refugees has varied substantially from one country to another. During the year 1953-1955 Jewish refugees with tuberculosis were transferred to Norway, paid for by the Jewish American Joint Distribution Committee.

In the last part of the fifties and in the sixties refugees from the consequences of the cold war arrived to Europe, from East Germany and from the uprising in Hungary. In the beginning of the sixties some Tibetan youngsters were accepted after the Chinese invasion and later, American conscientious objectors and South African antiapartheid refugees arrived. The liberation process of former colonies in Africa, Asia and South America, gave rise to refugees because of internal conflicts and migration due to difficult economic status in these countries. They came to Europe, mostly to the former colonial powers but also to the other European countries.

1970 - 1990

In the seventies transcontinental refugees from countries like Chile arrived after the military coup in Chile as well as a result of other repressive regimes in South America such as Colombia and Argentina. Boat refugees from South East Asia came directly after having been picked up by Norwegian vessels, as well as UN registered refugees from the camps in Thailand and the Philippines. In the eighties increasing number of asylum-seekers as well as UN-refugees from conflicts in the Middle East, the war between Iran and Iraq, the civil war in Lebanon and the Horn of Africa arrived. With the breakdown of former Soviet Union and the opening up in Eastern Europe, asylum-seekers started to come to the Western European countries in increasing numbers.

During the 1980's it became increasingly difficult to obtain asylum in the Western European countries and Sweden followed the rest of Europe after the Aliens act in 1989. From that time Sweden treated asylum applicants from Kosovo with suspicion and denied asylum to the majority (Abiri, 2000). A number of refugees from Kosovo travelled on from Sweden to Norway, in order not to be sent back to Yugoslavia and some of these were granted residence on humanitarian grounds.

1990's to today

The Dublin convention made "the country of first asylum" responsible for any given application and this country would have to take back asylum seekers who had passed through

and applied for asylum in another member states. The Dublin convention was signed in 1990 and came into force in 1997. There was a peak in asylum-applications in 1992 in the European Union (570.000 in 1992) then there was a decline (213.000 in 1996) until 1999 when numbers rose again. In the EFTA countries (Austria, Finland, Liechtenstein and Switzerland) a similar tendency was noted (127.000 in 1992 to 34.000 in 1995). Canada saw a drop in number from 1993 and the United States from 1995 (Böcker & Havinga 1998). In 2001 Denmark had 12.400 applications from Afghanistan, Iraq, Bosnia-Herzegovina, Yugoslavia and Somalia as the main countries; Sweden received 23.520 asylum applications with main applicants Iraq, Yugoslavia, Bosnia-Herzegovina, Russian Federation and Iran. A total number of 14.780 asylum applications were submitted to Norway in 2001 (17.864 in 2002) and the main countries were the Russian Federation, Croatia, Somalia, Iraq and Ukraine (UNHCR, 2002).

Not until the beginning of the nineties with the outbreak of the war in Former Yugoslavia when 12.000 refugees were received had there been more than a few thousand asylum-seekers arriving to Norway per year. The numerous war refugees at the beginning of the nineties, mostly from Bosnia Herzegovina were given temporary residence. At the end of the nineties the war in Kosovo resulted in another large number of refugees from the same region. The need for more asylum-centres to house the refugees resulted in a rapidly increasing number of centres spread all over Norway as well as a massive settling in municipalities called the "national voluntary communal task" to help people in need. The Norwegian policy of settling refugees was a "dispersing" model to avoid "Ghetto-like settlements" with large groups of refugees in few places. As a consequence of this policy the majority of municipalities in the country have settled some refugees.

In January 2000 1.8% of the total population had a refugee background, 27% of all refugees lived in Oslo which was 4.1 % of the total number of inhabitants. In the rest of the country it varied from less than 1% in Northern Norway (Nord Trøndelag 0.7%, Troms 0.8%, Nordland 0.9%) to 2.6 in Vest Agder in the south (Statistics Norway, 2002).

After the large numbers arriving during the 1990's there was a need for more knowledge about healthcare for traumatised refugees as well as frustrations about the difficulties in working transculturally. The social, professional and political challenge included all sectors in the society and involved people with no former experience from refugee receptions.

Table 2. Arrivals of refugees to Norway from 1945 until today in relation to shifting historical periods

Arrival characteristics	**Total no**	**Cold war European**	**Transcontinental**		**Transcontinental and European**	
Years of arrival		**1945-1970**	**1970-1980**	**1980 - 1990**	**1990-1995**	**1995-2000**
*Years lived in Norway**		*>30*	*29-20*	*19-10*	*9-5*	*4-0*
Total arrival **	**83978**					
E Europe		**818**	**106**	**2986**	**13623**	**8571**
Hungary	698	647	10	38	3	-
Czechoslovakia	297	151	64	76	6	-
Poland	968	2	9	908	41	8
Bosnia	11489	-	1	8	9471	2009
Kroatia	1293	1	1	20	95	1162
Yugoslavia	10622	6	11	1643	3792	5199
North America Oceania		**-**	**3**	**8**	**7**	
Asia, Turkey, Middle East, Africa, South America,		**2**	**2509**	**25082**	**11985**	**18032**
Asia						
Vietnam	10378	-	1714	6110	2405	149
Sri Lanka	5099	-	4	3116	1362	614
Pakistan	878	-	22	607	162	87
India	275	1	17	198	54	5
Cambodia	188	-	3	145	36	4
Afghanistan	1082	1	-	245	107	704
Turkey	1686	-	9	1139	393	145
Middle East						
Iraq	10470	-	-	680	1769	8006
Iran	8573	-	4	4803	1719	2040
Lebanon	742	-	-	442	229	68
Syria	470	-	1	174	154	139
Africa						
Etiopia	1738	-	37	891	347	449
Eritrea	388	-	21	210	75	82
Algeria	232	-	-	71	52	109
Sudan	303	-	-	21	93	189
South America						
Chile	4569	-	582	3729	250	8
Colombia	214	-	1	70	15	127

Number of refugees are based partly upon time lived in Norway (*) and exact numbers **. Major groups included (Statistics Norway, 2002). Reliable statistics for the Norwegian population of refugees related to immigrants is not available until 1986.

3.3 Research on migrants and refugees

3.3.1 Migration and mental health research

The research on migration in Norway goes back to the early studies of Norwegians migrating to USA. A total of 800.000 Norwegians migrated to USA from the early 18th century until the beginning of the 1990's with peak numbers between 1866-73, 1879-85 and 1900-10. In Ødegård's thesis "Migration and insanity" from 1932, the medical and psychosocial consequences are addressed and a critical view of contemporary studies is given (Ødegård, 1932). These studies were part of a tradition in research on mental diseases in countries receiving immigrants such as England and USA. Several were descriptive without age standardisation and were not population-based. An overrepresentation of immigrants at American hospitals was found. A hypothesis in the research was that mentally ill individuals were sent to USA from Europe. The most common age distribution of migrants was 20-40 years, which coincides with the age when serious psychiatric diseases are most common. This resulted in false high values of hospitalisation rates compared to the native born population. One of Ødegård's hypothesis was "the stress and selection hypothesis" - that individuals with psychiatric problems were likely to or tended to migrate and that the stress in exile, that is the migration and adjustment process to the new surroundings were likely to produce psychiatric disease. His theory concentrated on schizophrenia and individuals with a schizoid personality, but also dealt with less severe psychiatric illnesses. He gave attention to the fact that physical and mental strain of immigrant life, rather than constitutional psychopathic tendencies were responsible for a rather high incidence of 'senile and arteriosclerotic psychoses'. In his conclusion he gives advice for psychosocial interventions such as better working conditions, care of elderly employees with more suitable types of work for people over the age of 50, protection of arriving immigrant girls and homes for old people. In his work he points to the fact that during the 1920's the need for immigrants to USA almost ceased to exist. As a result of this only the very best of the Europeans should be admitted and the troublesome or dependent individuals should be deported to their native country. He warned about the political and moral aspects in research on migrant health and of the possibility of misuse in favour of nationalistic viewpoints (Lavik, 1993).

3.3.2 Refugees and mental health research

The refugee experience shares some features with migrant experience, such as change of culture and language, family disruption, social isolation and hostility from the population in the host country. In addition, refugees may have experienced additional strain such as war and

persecution leading to an unplanned and forced exile in addition to the preceding traumas. The health situation of refugees is a mixture of the basic health situation in the country of origin, consequences of traumatic exposures, deprivations during flight, and the conditions in exile.

Refugee research is conducted in a changing social and political context and reflects the underlying mechanisms forcing people to migrate. The possibility to return after cessation of atrocities, expectations of the society at home, the time perspective in exile, and the nature of trauma exposures such as war or torture will influence the exile experience substantially. The Norwegian refugees in Sweden after WWII had a realistic hope of returning to a well-functioning society, compared to the situation of Bosnian refugees after the war in former Yugoslavia. Ongoing use of inhuman treatment such torture as a means to control the population, as well as personal injuries, influence the wish to return home because of their direct effect on the health situation.

Holocaust, exile and PTSD

The early refugee research was community or case study research and until the 1960's mostly focused on the traditional refugees after WWII and the cold war. Studies in the 1950s and follow-up surveys of concentration-camp survivors from World War II indicated that prolonged exposure to atrocities and concentration camp experiences had serious long-term mental, physical and social effects (Eitinger, 1959, 1961; Strøm 1968). Thygesen, Hermann & Willanger (1970) reported from a 23-year follow-up survey of the long term effects of severe environmental stress in KZ-camps. The characteristic symptoms were to a great extent uniform although the dominant features could be either somatic or mental but rarely psychotic. Also it seemed clear that it was the intensity and duration of stress survived that determined the long-term effects to a far greater extent than the premorbid personality of the victim or his general background.

Yehuda *et al.* (1995) studied the impact of cumulative lifetime trauma and recent stressful events on current PTSD symptoms in Holocaust survivors. They demonstrated a significant association between recent and cumulative lifetime stress reflecting a heightened vulnerability of traumatized individuals to subsequent stressors.

The new refugees – Transcontinental refugees

The "new refugees", a term introduced by Paludan (1974), are refugees who are culturally and ethnically different from their host populations, coming form less-developed countries and lacking support groups in the resettling countries. These changes in refugee groups implementing a cross-cultural research gave rise to further challenges for the researchers.

The major groups emerging in the literature of refugee research reflects the refugee-producing areas at a given time and thus change in geographical focus, but show the same deteriorating effects of the violation of basic human rights. Review of earlier studies on refugee and mental health reveal a wide spectre of geographical locations, sample-size and designs. The majority of investigations focusing on the effect of war and persecution have been conducted in relocation countries years after the traumatic events. The refugee populations have been in conditions of additional abnormal stress, e.g. in exile or in refugee camps. The designs have been community studies, clinical studies or case descriptions. The majority of projects were conducted outside Europe, on refugees in camps or after resettlement in a third country, hardly any on asylum-seekers. Some have had a longitudinal design but only for 3-year's follow-up periods, longer follow-up periods and repatriation studies are scarce.

The frequency of posttraumatic responses, serious mental disorders (e.g. Major depression or posttraumatic stress disorder APA 1999) and related disorders has been investigated in projects on different refugee groups. Post-traumatic stress disorder and depression have been identified as the two most prevalent disorders in the refugee populations and some follow-up studies have been conducted showing the persistent high level of symptoms. The South East Asian refugees gathered in camps in Asia and later relocated to the United States, Canada, Australia and Europe gave rise to several studies on health consequences of exile and trauma e.g. Kinzie *et al.* (1990) who found a high prevalence (50%) of post-traumatic stress disorder (PTSD) symptoms among Indochinese patients in a psychiatric clinic. Mollica *et al.* (1993) explored the long-term impact of trauma and confinement on the functional health and mental health status of Cambodian displaced persons. In a household survey of 993 adult Cambodian living in a Thailand Cambodia border camp they reported extensive traumatisation. They found poor health status, 55% with depression and 15% with PTSD symptoms, but despite these reports they found well-preserved social and work functioning in the majority of the respondents. The prevalence and course of mental disorders among 145 Vietnamese refugees was studied in a prospective community cohort study. Three years after resettlement almost one in four suffered from psychiatric disorder. Extreme pre-flight stress exposure, negative life-events in Norway and lack of close family were identified as predictors for psychopathology (Hauff & Vaglum, 1995).

Steel *et al.* (2002) investigated the long-term effects of trauma on mental health and disability in a population-based research of 1413 adult Vietnamese refugees resettled in

Australia (Steel *et al.*, 2002). They reported that people who had been exposed to more than three trauma events had a heightened risk of mental illness after 10 years compared with people with no trauma exposure. Trauma-related mental illness seemed to reduce steadily over time, but a subgroup of people with a high degree of exposure to trauma had long-term psychiatric morbidity.

Few studies have been carried out on non-western population in low-income countries. In a community sample of 526 tortured and 526 non-tortured Bhutanese refugees in a U.N. refugee camp in Nepal van Ommeren *et al.* (2002; 2001) identified a strong association between somatic and PTSD symptoms, independent of anxiety and depression, among refugee survivors of physical torture. As it was carried out in a low-income country it also contained baseline population-information as well as information about a large group non-tortured individuals. These findings replicate other studies carried out in other parts of the world. In a survey by de Jong *et al.*'s (2001) a wide range of PTSD symptoms were found among 4 low-income community populations (from Algeria, Ethiopia, Gaza, Cambodia) who had experienced war, conflict or mass violence. They identified that there were specific patterns of risk factors per country. The findings indicated the importance of contextual differences in the study of traumatic stress and human rights violation. Tang and Fox (2001) investigated the experiences and mental health situation of West African Senegalese refugees randomly interviewed in refugee camps, by using HSCL-25 and Harvard trauma Questionnaire. They unveiled substantial mental health problems after large numbers of traumas and warned about a potential human crisis in this population. Lee *et al.* (2001) found similar results examining trauma experience and mental health conditions in a community survey among North Korean Refugees in China. Using HSCL-25 and HTQ they found higher degree of traumatisation than in two reports from Tamil refugees in Australia (Silove *et al.*, 1998) and Bosnian refugees in Croatia (Mollica *et al.*, 1999). The combination of starvation, exposure to traumatic events as well as lack of medical care gave high scores of anxiety, depression and PTSD symptoms.

Refugee research after the war in former Republic of Yugoslavia

The wars on the Balkan brought on the refugee research in Europe due to a huge increase in number of refugees from areas close to the recipient countries. After refugees from the war in Bosnia Herzegovina in the beginning of the 90's were spread to most European countries, as well as USA and Australia, and some became patients in health-institutions there, a number of studies on mental health consequences of war have been carried out. They have not been restricted to refugees from Former Yugoslavia only, but include other refugee groups as well

including the interaction of the exile experience as in Gorst–Unsworth & Goldberg's (1998) study of Iraqi refugee patients at Medical Foundation for the Care of Victims of Torture in Great Britain in 1998. Poor social support appeared to be a stronger predictor of depression in long term than severity of trauma. Silove *et al.*'s community study (1999) of the influence of post-migration stressors on Tamil asylum-seekers in Australia demonstrated the effect of post flight stressors. Asylum-seekers did not differ statistically in terms of levels of symptoms and past-trauma histories from refugees but were statistically higher on trauma and symptom scores than immigrants. When selective differences emerged between refugees and asylum-seekers they were specific to the post-migration stressors relevant to the asylum-seeker process.

The majority of the studies of war victims from former republic Yugoslavia were community studies with results similar to the previous described studies from other parts of the world. The amount of suffering is substantial in studies performed inside Bosnia e.g. in Dybdahl & Pasagic's study (2000) of 77 internally displaced women, Dahl *et al.*'s study in 1994 conducted among 209 displaced women in a war zone or in Mollicas survey (1999) of Bosnian refugees living in Croatia.

Several community studies have taken place in relocation countries and all reported heavy burdens of traumatic events and psychological symptoms. In a Norwegian study of 150 Bosnian refugees by Nygård & Malterud (1995) the prevalence of PTSD-symptoms was between 45% and 82% on three occasions during a twelve-month period. A Swedish survey of 206 Bosnian refugees in 1993 using two estimates showed a prevalence of symptoms of PTSD between 18-33% (Thulesius & Haakansson, 1999). In an American study by Weine r. (2000), 13 of 20 Bosnian refugees were diagnosed as having PTSD symptoms.

The majority of the longitudinal studies are after 3 years, with focus on living condition in exile in relation to post-traumatic symptoms. Kivling-Bondén & Sundbom (2002) followed 26 refugee patients from former Yugoslavia in psychiatric treatment in Sweden. High symptom level was associated with a pattern of negative living conditions – unemployment, social isolation and high dependency on social welfare. They indicated a need for integrated rehabilitation efforts. In Drozdek's (1997) clinical follow up study of Bosnian concentration camp survivors in the Netherlands, only social contact with Dutch hosts seemed to have been a protective factor against exacerbation of PTSD. Mollica *et al.* (2001) conducted a 3 year follow up community study among 534 adult Bosnian refugees originally living in Croatia. Twenty-one percent (114) had emigrated out of the region and the remaining 70% who stayed in the region either in camps in Croatia (179) or had resettled in Bosnia-

Herzegovina (197) were re-interviewed. A chronicity of baseline psychiatric disorder was demonstrated as 43% still met the DSM IV criteria for PTSD and depression. Healthier and better- educated refugees were more likely to migrate. Miller *et al.* (2002) examined the relative contribution of two exile-related variables – social isolation and daily activity level, and traumatic experiences during war, to PTSD and depressive symptoms in a clinical group and a community group of Bosnian refugees in USA. In the community group, depressive symptomatology was accounted for primarily by the exile-related stressors, social isolation and war-related violence were highly predictive of PTSD-symptoms.

In a meta-analysis of mental health between refugees and non-refugees from the former Yugoslavia, focused on moderating effects of a variety of enduring, contextual stressors, psychological consequences were found to vary significantly as a function of chronic stressors. Porter & Haslam (2001) state that standard analyses of coping with discrete stressors have difficulty in modelling these factors. They suggest that models of refugee mental health must include the impact of larger social, economic, political, and situational contexts that an individual experiences as she copes with the various phases of the refugee experience; that the process of cultural change and adaptation, and how coping decisions impact future mental health should be investigated. Shifting the focus away from refugee passivity towards partial agency of refugees through assessment as well as through action may have important policy implication for refugee aid organization. [3] Many mental health programmes were implemented in Croatia and Bosnia Herzegovina during and after the war. The aim was to counterbalance the psychosocial consequences of the traumatic experiences during the war and a need for development of intervention methods was present. Mooren *et al.* (2003) evaluated the short-term effects of a comprehensive psychosocial program in Bosnia-Herzegovina during 1994-1999. There was a substantial presence of mental health workers during the war and the years after. When differences between pre-and post assessments were compared to a baseline provided by a local sample who had not been recipients of mental health care, a better outcome was revealed than when baseline from nonwar-stricken populations were used.

After the war in Kosovo in 1999, reports have been published with results similar to those seen from other postconflict areas. In a community study by Amy *et al.* (2002) of 129 Kosovar refugees in USA, 60.5% had PTSD related symptoms. Women were more likely to have symptoms than men. Ekblad *et al.* (2002) found similar results in a 3 months follow-up of 131 Kosovar refugees in Sweden. Women had significantly higher mean on PTSD related

[3] "Brukermedvirkning"

symptoms, as well as anxiety and depression scores from HSCL-25, identifying them as a risk group. Recently published results from a longitudinal study in Sweden showed increase of PTSD-rates from 45% at baseline to 78% at 18-month follow-up among refugees from Kosovo (Roth & Ekblad, 2002).

Research on repatriated refugees

Parallel to the arrival of large numbers of refugees the question of going back has arisen as a political issue, as well as a shift in political attitude toward the reception of new refugees. Repatriation in general has been studied in the fields of sociology, political science, anthropology as well as medicine. Few reports in the medical field have been found comparing returning groups with remaining groups from the same population in exile in western countries. The mechanisms of choosing whether to return to the country of origin or to remain in exile are numerous, relating to the political and socio-economic situation and the possibilities to establish life in exile or in the home country as well as health factors and traumatic exposures pre- and post-flight (Berg, 1999; Mollica, 2001; Sundquist 1996). Knowledge of these aspects is of importance for caregivers as well as for policy makers. When a group of returnees were identified early in the follow-up we saw this as a valuable supplement to the study, on the issue of repatriation.

3.4. Ethical dilemmas in research on refugee-groups

To become an object of research

In addition to the need for a special attention due to increased vulnerability after exposure to severe traumas, this study of refugee health, faced similar ethical dilemmas as do other community studies In community research on health issues the same ethical dilemma arise: the risk of turning of people into patients. Approaching presumably healthy individuals in a non-clinical population to ask about health problems may induce or open up for a need for health care. Extreme stressors have traumatized many of the refugees and some are in need of treatment whereas others are not. They may be more vulnerable due to this traumatisation and the individual's sensitivity is high. The feeling of becoming an object, of loss of sense of freedom, may have a negative influence on the quality of life. Informed consent and ascertaining that information is understood is central in counteracting the feeling of powerlessness.

It is often discussed whether or not it is appropriate or ethically acceptable to ask mass displaced persons about their traumatic experiences. Clinical practice has left the impression that interviews and questions are accepted when conducted with respect, openness and care.

This is supported by the study of Dyregrov *et al.* (2000) who investigated how refugee families respond to participation in research. The refugee considered the participation positive and the researchers concluded that studies on traumatised populations might have beneficial effects. Ekblad (2002) validated questions from HCSL-25 and HTQ with the respondents who did not perceive them as being difficult to answer, intrusive or insulting. The respondents also found the questions to be sensitive to their stressful situation.

Using screening methods in psychiatric/psychosocial research and then diagnoses based upon the results, such as the PTSD diagnose, may stigmatise a whole group. On the other hand, not mapping the extent of the distress and suffering, may lead to an underestimation of problems and may result in a neglect of the real needs for psychosocial services. Reluctance in participating in a project may be based upon the fear of an abuse of results, stigmatising the group and the creation of stereotypic assumptions about refugees. Giving back information and openness about the use of the results is essential to create trust in the researcher.

Implementation of knowledge from this kind of project should be done at the same time as the research in order to make changes possible without too much delay. One has to be cautious in drawing conclusions as well as in conveying results to policymakers and media. Refugees are vulnerable minority groups in the reception country, and may easily become the subject of prejudice. In the present political situation after September 11th, and the past years' political changes with the increase of the right wing parties have lead to a growing hostility towards immigrants from non-western countries.

Research and investigation methods on minority patients

Investigations on migrant groups with methods developed in a majority population are challenging and special considerations have to be taken in the choice of methods as well as in the interpretation of the results. Culture, personality and interventions should be integrated in the approach and theories are likely to influence the instruments used. A distinction has to be made within culture specific (emic) and culture-general aspects of behaviour and many researchers argue that the whole complex of behaviour can only be understood within the context of the culture in which it occurs, in an emic approach (Berry *et al.*, 1992). By using psychiatric concepts, diagnoses and clinical screening methods designed in the West by western psychiatrists and psychologists on non-western populations cross-culturally, the conclusions have at times reflected ethnocentric or even racist interpretations of the results.

A historical glance on the critique launched by Franz Fanon (1925-1961) from Martinique against the South African psychiatrist John C.D.Carothers' views (1903-1989) of

African show some of the debate concerning the "colonial-psychiatry". (In Fanon's: 'Jordens fordømte') The medico-ethical standards did not allow the scientists to let go of Socio-Darwinist attitudes with the white man on the top. Not only were scientific attitudes of importance but also the psychiatric interpretation was a way to express political views with colonial attitudes without any sign of human rights principles. A well-known example is the development of IQ tests who has historically been closely linked up to the theories behind eugenics; "Rassenhygiene" [4]. The interpretation of the results gives room for feelings of cultural arrogance and racist attitudes. The contents of tests used have been passed on in other later developed tests. The research on intelligence conducted by Arthur Jensen and the book the Bell Curve is a continuation of the racist theories up to now (Lavik 1998).

Conducting studies in different parts of the world has become recognized and extensive research has been done in the field of cross-cultural psychology on research method. Using non-culture specific concepts makes methods uncertain and decreases the reliability and validity of the methods. Design and instruments used in cross-cultural research must be carefully considered with this in mind and the use of psychometric assessment scales is a choice among standard instruments, adapted instruments or local instruments. Bolton (2001) demonstrated in his work a new approach using local definition of illness as an alternative golden standard in his research on the depression scale of Hopkins Symptom Checklist (D-HSCL). His work approach was both emic and etic as a standard instrument was tested out and modified locally. This way of testing validity and reliability of standard mental health instruments across cultures may be of value in research among populations where gold standards are not available.

[4] "Rassenhygiene": A term introduced in Germany in 1895, which should come rather widely accepted in Europe and in the Nordic countries in the beginning of the 19'th century.

4. Theoretical considerations

The knowledge of war-related mental reactions and treatment principles has been transferred through different periods and diagnostic concepts. As diagnoses are used to guide treatment selection as well as to justify access to resources, influences on the political and economic situation may be seen more clearly in retrospective.

4.1 Mental health consequences of organized violence – PTSD and other diagnostic measures

Jones *et al*. (2002) analysed post-combat syndromes from the Boer War (1899-1902) to the 1990's as they have been described in medical files. Based upon their analysis they propose that it is not the symptoms that have changed but the way in which they have been reported by veterans and interpreted by doctors. When symptoms are regarded as understandable patterns of normal responses to the physical and psychological stress of war, they may be managed in a more effective manner. Three varieties of post-combat disorders were identified: a debility syndrome in the late 19th and early 20th century the "Shell-shock", "Combat exhaustion" and "Gross stress reaction". A somatic syndrome related primarily to World War I, "Shell-shock", was treated according to the principles 'Proximity, immediacy and expectancy' and received immediate treatment near the battlefield. It was interpreted as the physiological impact on the brain of physical explosions and psychological threat and horror. This knowledge was to some extent forgotten but rediscovered at a later stage. In the first part of World War II (WW II) diagnoses such as psychoneurosis and hysteria were used. The combat-syndrome associated with World War II and later conflicts was a neuro-psychiatric syndrome. A medical commission introduced the category "Combat exhaustion" during WW II in order to emphasise external stressors as the main underlying cause. This was a means of underlining the difference between the soldier's suffering and the civilian's reaction, which was considered more of a neurotic reaction. In the Diagnostic and Statistic Manual of Mental Disorders (DSM-I) of 1952 the reaction was categorized as "Gross stress reaction" but presented no criteria and described a reaction in a "normal personality" to severe trauma (Lavik, 1994).

The category "Gross stress reaction" was omitted in the second edition of DSM-II in 1968. It was not until the United States, involved in the Vietnam War, started to receive soldiers returning from the battlefield with psychological effects of war that the need for

special medical care and a diagnose was seen. The diagnose PTSD shifted the focus from the soldiers background and psyche to the traumatogenic nature of war.

In the climate of a growing interest in descriptive psychiatry, the category "Post-traumatic- stress- disorder" (PTSD) was introduced in 1980 in DSM-III. In the 1987 revision of (DSM-III R) it was specified that the stressor should be outside the range of human experience and "would evoke significant symptoms of distress in almost everyone". The recognition of the post-traumatic reaction as a diagnosis, a category; had a substantial impact on clinical practice as well as influence on the compensation for war-veterans and trauma victims. The DSM-III-R did not allow for the diagnose PTSD to be made until the symptoms had been present for at least 30 days and the only stress reaction available in the first month after a traumatic event was the non-specific diagnose of adjustment disorder. During the development of DSM-IV this problem was recognized and addressed. Criteria for acute stress disorder were selected that would theoretically identify criteria for PTSD one month later. Four symptom clusters were created: re-experiencing, avoidance, increased arousal and dissociative symptoms. The use of descriptors of sub-types such as "acute" (onset within 1 year), "delayed" (onset after 1 year), "recurrent" (a resurgence of symptoms after a period of recovery) and "residual" (for sub threshold symptoms in individuals who previously met criteria for full syndrome) was discussed (Marshall *et al*., 1999).

PTSD in DSM III include
Criteria: A. Experience a stressor that would evoke significant symptoms of distress in almost everyone. (required) Re-experiencing the trauma. (one required) B. Numbing of general responsiveness. (one required) C. Increased arousal, Cognitive impairment, avoidance of reminders of the trauma, re-experiencing symptoms in the presence of reminders of the trauma, and survivor's guilt. (two required). D. Experience of a stressor that would evoke significant symptoms of distress in almost everyone.
Subtypes:
Acute – onset within 6 months and symptom duration less than 6 months Chronic – symptom duration more than 6 months Delayed – onset at least 6 months after the trauma

The concept Post traumatic stress disorder (PTSD) may be seen as a construct that involves the drawing together of different types of reactions to traumatic events and conditions to the degree to which these reactions are experienced. The social usefulness of the psychiatric diagnosis PTSD is heavily debated and the concept PTSD has been met with the argument that it should not be regarded as a mental disorder since it is a normal reaction to an abnormal situation. In addition there are several reactions to severe stress that are not included in the criteria of PTSD. Patients with PTSD are often reported suffering from concurrent depression, anxiety disorders and substance abuse. In a study of drug abuse among individuals with PTSD the most plausible hypothesis was that the abuse and dependence in these individuals was the result of efforts to reduce symptoms (Breslau, 2001). The rate of concurrent depression in the literature is 30 % to 50% in PTSD patients (Shalev, 2001). Community studies and baseline values of the extent of PTSD in most refugee-producing populations are unknown. Breslau (2001) reviewed key findings from studies of general populations of western origin. Although looking at migrant populations and traumatised refugees gives us biased information, it provides insight into the burden of PTSD in a general population that may, to a certain extent, be useful in cross-cultural studies. A 2:1 female-to-male lifetime prevalence due to exposure of assaultive violence is described, and the fact that past exposure experiences seem to increase the vulnerability of both men and women is noteworthy.

The diagnose PTSD may be too simple to permit diagnoses of the disturbances some people undergo after multiple trauma. The symptoms found among many refugees are usually more complex, more heterogeneous and more sustained. When it comes to regarding the specific diagnosis of PTSD cross-culturally, criticism has been raised that it is based on and influenced by western psychiatry. Eisenbruch (1991; 1992) argued that the DSM-III PTSD criteria are based on an ethnocentric view of health prescribing how refugees should express this stress and how their distress should be ameliorated. He suggested the term “cultural bereavement” rather than PTSD for the posttraumatic reaction to make it a normal response rather than a psychiatric illness. The DSM taxonomy is seen as ‘merely a framework scaffolding upon which the clinician constructs a multi-layered picture of the biological, psychological, and sociocultural effects of severe trauma upon the individual, family and the culture at large’. Summerfield (2001) adds to the debate that the registration and measurement of human pain depends on the philosophical and socio-moral considerations evolved over time and cannot simply be reduced to a technical matter. He argues that: ‘The medicalisation” of life means that distress is relocated from the social arena to the clinical arena. Some may have a practical gain supporting this tendency but that costs may accrue for the society over

time if contributing factors rooted in political and commercial philosophies and practices escapes proper scrutiny.‘

Other clinicians argue, on the other hand, that the concept is looked upon as a useful category to assist managers and practitioners in determining overall and long-term impact on the community and developing appropriate services. (Bolton *et al*., 2001). As a parallel to this, Weisaeth (2002) underlines that ‘ the positive psychological effect of the introduction into nomenclature of the terms “concentration camp syndrome” and “war sailor syndrome” in the 1960’s can hardly be overestimated.’

Using the denomination ‘Post Traumatic’ implies a danger in focusing too much on the past and may take the attention away from ongoing stress and traumata. A balance in the use of diagnoses as well as a thorough investigation on past and ongoing stress is necessary if one is to draw relevant and sustainable conclusion.

4.2 Trauma and traumatic events

Traumatic events may be part of disasters or the results of man made actions affecting individuals or groups. The severity of a stressor is not equivalent to the type of stressor and the vulnerability is individual. The response physically and mentally will vary according to this and to the individual’s resilience (Ursano *et al*., 1994).

The American Psychiatric Association (1987) defines a traumatic event as:

> ‘… a psychological distressing event that is outside the range of usual human experience – that would be markedly distressing to almost anyone and is usually experienced with intense fear terror and helplessness … either a serious threat or harm to one’s life and physical integrity; a serious threat or harm to one’s children spouse or close relatives or friends; sudden destruction of one’s home or community; or seeing another person who has recently been, or is being seriously injured or killed as a result of an accident or physical violence. In some cases, the trauma may be learning about a serious threat or harm to a close friend or relative. The trauma may be experienced alone or in company of groups of people. Traumatic events include natural disasters, accidental disasters and deliberate caused events. Sometimes there is concomitant physical components of the trauma, which may even involve direct damage to the central nervous system’.

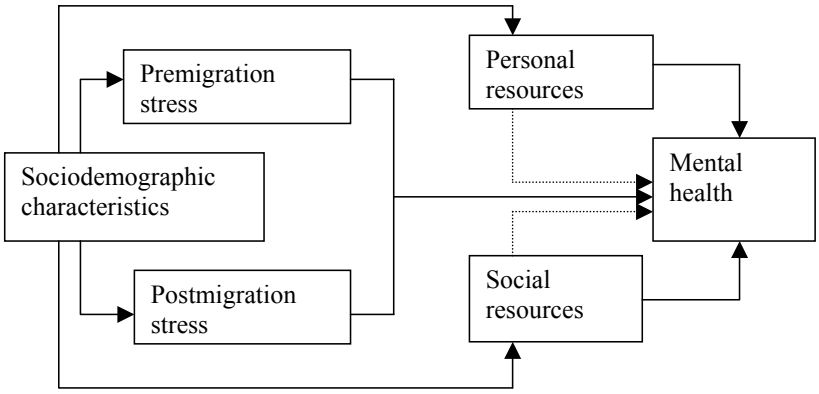
No empirically developed instruments assess the whole range of trauma experiences among refugees. The nature of traumatic exposures is experienced differently according to the context in which they take place. Polytrauma as a concept, or events related to a collective

experience e.g. war, are situations that may have been potentially traumatizing but where the traumatic experiences often have been experienced in a collective context. The war related events in the study indicate situations with a potentially traumatizing influence, but where the traumatic experiences often have been experienced in a collective context. The other events indicate experiences with a clearer individual involvement with an intrusive impact such as torture. Life events research methods may be a way to better define how and what events are weighted as traumatic and predictive of poor health. Psychological preparedness and its potential protective factor to trauma will be dealt with later.

4.3 Protective factors in survivors of severe stress

A model of pre- and post-migration stress, personal and social resources as seen in fig 1 is derived from stress process theory from the study of Beiser *et al*. (1997; 2001) at the Refugee resettlement Project in Toronto Canada. Available social resources help to protect mental health and the coping process may be defined as the mobilisation of personal resources to respond to stressors. The degree of stress load will create differences in mental health risks. Outcome of the model is a product of stress exposure, circumstances and of the success of coping strategies. Personal and social resources support mental health (indicated by solid arrows) and influence (buffer) the risk-inducing effects of environmental stressors (indicated by broken arrows).

Fig 1. Stress process theory; A model of the resettlement process and refugee mental health (Beiser & Hyman, 1997)



[1] Premigration and postmigration personal and social resources support mental health (indicated by solid arrows) and buffer the risk-inducing effects of environmental stressors (indicated by broken arrows)

Evidence from cross-sectional studies and longitudinal studies is good enough to claim with reasonable confidence that social support can influence the severity of stressors and the

psychological experience of individuals. There is diversity in the instruments used to measure social support that is difficult to measure. Ideally two waves of data are insufficient to properly test the effect of social support but Payne and Jones (1987) state that longitudinal studies nevertheless provide evidence for causal effect of social support and life events on psychological symptoms. Especially for vulnerable groups this may predicted for up to 30% of the variance in symptoms. A need for future studies to reveal the nature of social support such as intervention, experimental studies and large-scale surveys is underlined by Payne & Jones.

5. Aim of study

The aim of the study was to gain a broader and more differentiated knowledge about the health status of a non-clinical refugee population resettled in Norway at a certain point in time and in a longitudinal perspective. We wanted to investigate the relationship between the type and degree of psychological distress, symptoms and signs, on the one hand; and traumatisation, socio-demographic background, and factors relating to life in Norway on the other.

The specific research questions raised in the first part of the study (articles 1 and 2) were:

- What is the general level of psychological symptoms in a non-clinical refugee population exposed to an array of severe trauma?
- Do any specific traumatic exposures have a significant impact on the symptoms?
- Were there any connections between the attitude to repatriation and traumatic exposures and demographic factors?
- How are posttraumatic reactions affected by the psychosocial factors - family, employment or training, in exile?
- Is there a differential effect of these psychosocial factors depending on the level of traumatic exposure?

In the second part – the follow-up study, (article 3) the research questions were:

- Is there a change in refugees' psychological symptoms over time?
- What is the influence of risk factors such as torture, pre- and post flight traumatic events and demographic status on psychological symptoms?

- What is the influence of psychosocial factors such as family, daily activity, network-building and social contacts with one's own culture and Norwegian persons, on posttraumatic symptoms in traumatized refugees living in a host society?

As we had looked into connections between earlier expressed attitude to repatriation, traumatic exposures and demographic factors in the first part of the study, we wanted to explore differences in degree and course of symptoms between those remaining in Norway and those returning to Bosnia (article 4). The research questions were:

- Are there any differences in pre-flight traumatic experiences?
- Are there any differences between these two groups in the longitudinal course of psychological and somatic symptoms?
- To what extent was the wish to return home expressed early in the exile period put into practice in a de facto return later?
- What is the relation between pre-flight traumatic experiences and psychological symptom load early in the exile period within the group of refugees wishing to repatriate?

Additional focus was put on the experience of returning home after a period in exile based upon quantitative and qualitative data in the group of returnees. In addition to explorations on a general level, we wanted to look into health policy implications of the findings for psychosocial work with refugees. Practical usefulness was essential for the researchers as the experience could have a positive effect on routines for reception of refugees. Reporting to health-policymakers on the proceedings of the project and the application of results was an outspoken aim. Possible educational effects of the involvement of health workers in the municipalities in the compilation of data were also considered important.

For references of aim of study to tables and graphs in the articles see Appendix 1.

6. Material and Methods

In the following, the procedures and proceedings, the selection process for municipalities and refugees, as well as the development and content of the interview-guide will be described in order to give an overview of proceedings, methods and materials in the study.

6.1 Pilot study

In order to design a valid and useful instrument, an interview guide, for the main project a pilot study was conducted. Four general practitioners interviewed 63 refugees using a preliminary interview guide. Their viewpoints concerning the formulation, chronology of the questions and practical usefulness of the interview guide were gathered in a round table discussion, and taken into account in the final draft of the guide (Lie, 1998).

6.2 Municipalities in the study

All 58 municipalities accepting refugees for resettlement in four counties in Southern Norway were invited to cooperate in the study. This included larger, medium and smaller sized urban municipalities as well as non-urban municipalities. Twenty of the 58 municipalities (34.4%), decided to let their personnel assist in the compilation of this study.

Table 3. Invited and attending municipalities in the study from the counties Rogaland, Vest Agder, Aust Agder and Telemark.

Municipalities		**Attending**	**Total**
		N=20	N=58
Non-urban	<4.999	7	23
Small	5.000-19.999	8	25
Medium	20.000-49.999	3	7
Large	>50.000	2	3

6.3 Study procedures

The procedures used in the preparation and accomplishment of the project was diverse. The project involved many trained and skilled workers, and extensive contact was needed in order to secure a reliable compilation of data. In order to reduce the risk for interviewer bias, interviewers were instructed at seminars held before compilation of data commenced. Fifty-three health visitor nurses and general practitioners from the co-operating municipalities took

part in an introductory training seminar for interviewers in February 1995. Health personnel from attending municipalities not present at the first seminar were offered local seminars and a total of nine were arranged during 1995. During the whole period of the project the researcher was in close contact with the interviewers and was available for counselling and advice about clinical problems related to information from the interview. In order to train the interviewers and inform local authorities the following seminars and meetings were held during the starting period in 1995.

Seminars and courses in the project region during 1995:

Introduction course for all health professionals in the invited municipalities. Information about the project proceedings and lectures on psychosocial work and refugee health.

- 6th and 7th of February, Kristiansand.

Local seminars for health personnel, teachers and social workers about the project and lectures on psychosocial work and refugee health.

- 14th of February in Lyngdal.
- 25th of April in Tvedestrand
- 23rd of May, Mandal.

Seminar for Social workers together with UDI in region South.

- 1st of March, Kristiansand.

Seminar at Rogaland Central Hospital arranged by Psychiatric Department and Psychosocial Team for Refugees West for health personnel about the project and psychosocial work and refugee health.

- 25th August, Stavanger.

Seminar for health personnel, teachers and social workers about the first results from the project and psychosocial work and refugee health

- 5thof October, Edland in Vinje - for the municipalities Bykle, Tokke og Vinje.
- 24thof October in Mandal.

An orientation about the project, the background, structure and future plans.

- 26th of October Regional office Southern Region of UDI

Conference for politicians and health personnel, teachers and social workers in Vest Agder about the project and psychosocial work and refugee health. The first results from study and implications for planning of refugee work in the municipalities.

- 29th and 30th November in Lyngdal.

In addition to the above mentioned seminars, courses and meetings there were more informal visits and extensive telephone-contact with the involved municipalities with advice and counselling related to cases as well as to more overall questions.

6.4 Interviews and proceedings

Invitation to participate and translated information about the project were sent out to refugees in the attending municipalities by local health authorities. All subjects were interviewed according to a structured interview questionnaire specifically developed for the study. The interview, with duration of approximately one hour, supplemented the general health check offered to refugees settling in the municipalities. The interviewers asked all questions, using translators and translated versions of the questionnaires. The majority of the material in the cross-sectional study was collected during 1995 and 1996.

Three years after the study commenced, health care personnel in the 20 municipalities were asked to trace the 462 participating refugees. Prior to the interviews a seminar was held to train the interviewers in using a new interview guide.

6.5 Refugees in the study

6.5.1 Part 1 – Norway

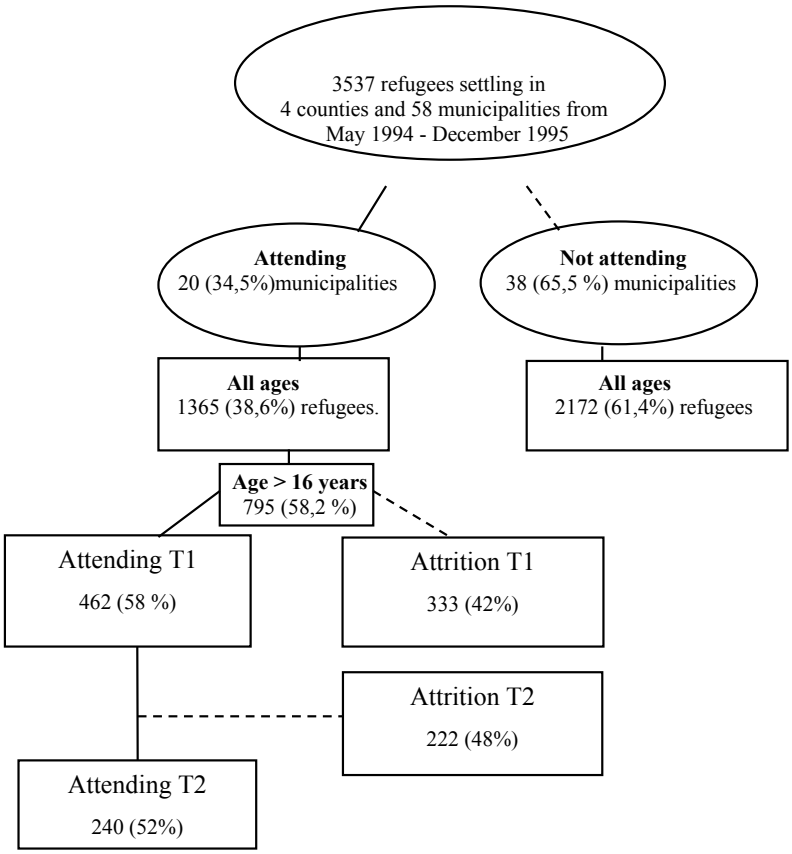
1365 refugees settled in these 20 municipalities between May 1994 and December 1995. All 795 refugees over 16 years of age (58 % of the total population) were invited to participate and a total of 462 (58 %) refugees were willing to participate in the study. The majority of the attending refugees in the study were from Bosnia (74%), coming as a result of the ongoing war in Former Yugoslavia. A few refugees were from other parts of former republic of Yugoslavia (4%) in addition to Kosovo (11%). The rest of the participants were from different parts of the world, reflecting the asylum seeker and refugee reception pattern at that time with South East Asian refugees (5%) as the third largest group followed by refugees from the Middle East (3.2%) and a few African (1.5%), and Latin American refugees (.9%).

6.5.2 Part 2 – Norway and Bosnia

Follow-up study Norway

All 462 refugees from T1 were traced and a total of 240 (52%) refugees were interviewed at T2 during the years 1997–1999. Mean time between the interviews was 28 months (SD 9.5 Range 1-57). The interview, with duration of approximately one hour, was performed with a modified structure of the interview guide at T2.

Fig. 2 Invited Refugees and municipalities in study - Participants and Dropouts



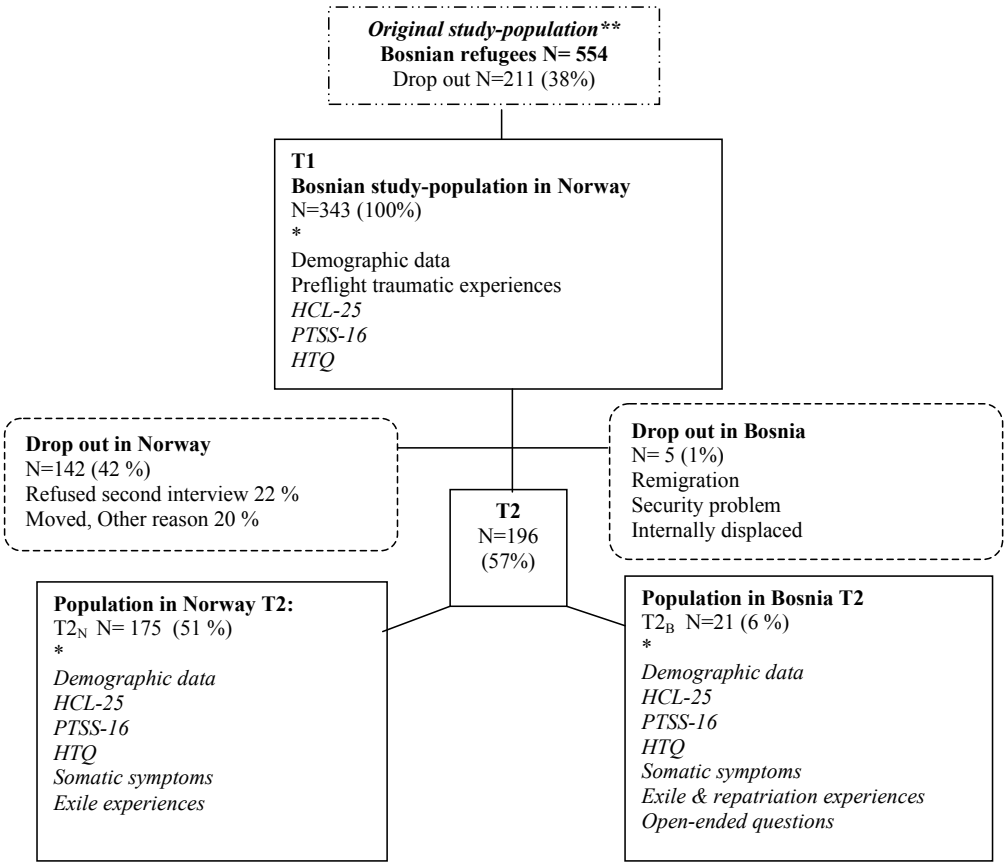
Follow-up study Bosnia

Of the 240 refugees who were re-interviewed at T2, 175(52%) were Bosnians. At the time of the second contact, a group of 26 (7.5%) Bosnian refugees had returned to Bosnia. Interviews of the returnees were required to gain a complete picture of the group of Bosnian refugees. The Norwegian immigration authorities provided all addresses of repatriated refugees in Bosnia who had given written consent to be re-interviewed in the follow-up study but had repatriated before these interviews took place.

The interviews of the repatriated refugees were conducted from 12- 28 June 1998 during a 1600 km journey in Bosnia Herzegovina, from the Mostar region in the south to Sarajevo and the neighbouring districts up to Tuzla in the north. Dr Nezla Sehovic Duric, a Bosnian colleague, and the researcher conducted all interviews together. Dr Duric had taken part as an interviewer in the first part of the study in Norway and functioned as co-worker,

interpreter and mediator of culture bound themes. This made the rather difficult process of finding the refugees possible and eased the communication. We found 21 (82%) of the 26 refugees and performed the interviews, with a total duration of 2 to 3 hours, in the homes of the refugees. After the structured interview, additional comments and viewpoints to open-ended questions were noted in an open rounding up. After each interview session, the author and co-worker went through the additional information that was translated and transcribed.

Fig. 3. Bosnian refugees in the study. Content of structured questionnaires (*) used at T1 and T2 in Norway ($T2_N$) and Bosnia ($T2_B$) Attending refugees (___) and attrition (------) in Norway and Bosnia. (** All nationalities, N=795)



6.6 Attrition

6.6.1 Attrition in part 1 - Norway

In order to gain a better understanding of existing attrition, a thorough study of this group was done; but data beyond age, gender and nationality on the individual level were not available for this group. We identified two layers of attrition: choosing not to participate on the municipality level and choosing not to participate on the individual level.

The most common reasons for not participating at the municipality level were practical problems in obtaining interpreters. Fears of finding problems, that health workers did not have the capacity to follow up and difficulties in obtaining psychiatric treatment for referred patients were also given as reasons for not attending. The only difference found at T1 on the individual level, using one-way ANOVA, was on the distribution of nationality: a larger share of Kosovo-Albanian and African individuals had dropped out. Additional information was not available for the attrition group.

6.6.2 Attrition at Follow-up in Norway

The attrition at T2 was due to such reasons as ‘did not want to’ (22 %), ‘migration’ (5.6%), ‘repatriation’ (6 %) and ‘other reasons’ (14 %). The only significant difference between the follow-up group and the attrition group as measured at T1, was that the follow-up group included a majority of participants who reported the traumatic exposure ‘Having been in concentration camp’ ($p = .004$).

Table 4. Study population attending T1 and T2 and attrition at T2 with reasons for not attending.

Attending in the study	N	*%*
Attending T1	462	
Attending T2	240	52
Reasons for attrition		
Individual level		**34**
No to be contacted at T2	39	8
Negative to attend at T2	64	14
Migration		6
• Moved inside Norway	19	
• Moved to a Scandinavian country	1	
• Moved to a European country	1	
• Moved to USA	5	
Death	1	
Repatriation		6
• Returned to Bosnia *	29	
Municipality level		**14**
Other reasons for not attending	63	

* 3 additional returns compared to the number given in article 4 due to unreported returns from attending municipalities.

6.6.3 Attrition in Follow-up in Bosnia - the repatriated population

The reasons for being unable to interview these individuals were diverse, but all on a structural rather than an individual level. No individuals declined to take part in the study. Attrition among the returnees was 5 (19%) reflecting the situation in Bosnia for the returnees; none declined to attend when contacted. One internally displaced woman was not found. Neither the local registration office in several possible municipalities nor the local Red Cross could provide any information about her. A woman who lived in an area inaccessible due to security reasons was contacted through International Organisation Of Migration (IOM) with no result. Three persons had, after returning to Bosnia, re-migrated: two to another European country and one back to Norway.

6.7 Interview design

The interview was designed to make comparison with other studies possible. It was not to be too time consuming as it took place in a primary health care setting, duration of one hour was considered to be the maximum length.

6.7.1 Screening methods for psychological distress symptoms and signs

When designing the interview we looked for methods previously used in cross-cultural research and well-known in Norway. We chose Hopkins Symptom Cheklist-25 (HSCL-25), the Harvard Trauma scale (30 questions) and the Posttraumatic Symptom Scale (PTSS-16).

The Hopkins Symptom Checklist-25 (HSCL-25) includes 10 items from the anxiety cluster and 15 items from the depression cluster, including 2 questions relating to somatic symptoms, with scores ranging from 1 (little) through 4 (very much). Adding all responses and dividing by the numbers of items derived a summary score. Scores above cut-off of 1.75 indicate 'clinically significant distress'. The HSCL-25 has been used in cross-cultural research (Mollica et al, 1987, Lavik et al, 1999) and has proved reliable and valid for measuring depression and anxiety in cross-cultural studies.

The Harvard Trauma Questionnaire (HTQ)[5] is an instrument designed for the assessment of trauma and torture relating to mass violence and their consequences. HTQ has been used in both clinical and research settings with patients and community-based populations of diverse cultural backgrounds. The instrument is based on the Western perspective of trauma-related illness as described in DSM-II-R and later in DSM-IV (Mollica et al, 1992).

The Posttraumatic Symptom Scale, is a 16 criteria checklist covering posttraumatic stress symptoms (PTSS-16) as described in the DSM-III-R and DSM-IV. PTSS-16 indicated whether participants had experienced each of the noted symptoms within the last 7 days. The items covered were: sleep disturbances, dreams/nightmares about imprisonment/torture, depression, startle reactions, tendency to isolation from others, irritability, emotional lability, guilt/self accusations, fear of the trauma scene or situations resembling it and bodily tension. For each item a 'yes' response was coded 1, and a 'no' response was coded 0 (Raphael et al, 1989; Lavik et al, 1996).

[5] Permission to use HSCL-25 and HTQ was obtained from Mollica et al at the pilot project stage

6.7.2 Demographic data

Background data included geographical origin, ethnicity, gender, religion, age, education, occupation in country of origin, living conditions, length of stay in Norway and legal asylum status.

Present exile situation at T2 was described by presence of family in Norway, current work status, social network in the sense of close friends and Norwegian contacts, and return experience to Bosnia.

The return to Bosnia was explored with standard questions on quality of welcome and attitudes of friends and neighbours. In addition this interview closed with an open-ended question opening up for supplementary information.

6.7.3 Present health

Self-perception of global health was answered with the categories 'very bad', 'bad', 'neither bad nor good' 'good' and 'very good'. The questions used to describe the health situation were equivalent to WHO "Level of living surveys' (Statistics Norway, 1997). Perception of life and health situation (this week) was measured on a scale from one to ten. Items of bodily symptoms (the last four weeks) were 'head ache', 'heart-symptoms', 'breathing-problems', 'gastrointestinal problems, 'symptoms from urinary tract', 'irregular menses' and 'aching in the body'.

6.7.4 Traumatic experiences

The pre-flight trauma history items were derived from Harvard Trauma Questionnaire (HTQ). The registration of trauma exposure consisted of 15 items ranging from separation from family members to torture and threat to life - and a positive answer was given score 1. Post-flight stressful events experienced as traumatizing were hearing about events at home and receiving news of losses, either human or material, as well as reported daily-life events in exile experienced as stress-full or traumatizing.

6.8 Translation of the questionnaire

The interview guide, a structured questionnaire, was translated into Albanian, Arabic, Bosnian/Serbo-Croatian, Somali, Spanish and Vietnamese. As a validity check, qualified interpreters back-translated the interview guide. Professional interpreters used the translated questionnaire during the clinical interview, in order to make the oral translation consistent.

7. Statistical methods

7.1 Main analyses

Data were analysed using Statistical Package for the Social Sciences (SPSS/PC). Univariate, bivariate, independent sample t-test, analysis of variance and block-wise multiple regression analysis was used in all articles.

Correlation of symptoms with psychosocial factors and traumatic events were examined. Sociodemographic variables (such as gender, age, groups of nations and education), social life in exile expressed by presence of close friends and family, work status and activity in Norway as well as traumatic exposures were used as explanatory variables.

In article 2 the first analyses, bivariate analyses, were carried out on merged samples from the two populations. In the secondary analyses the symptom scales - HSCL-25, PTSS-10 and the combined symptom measure - were used as dependent variables.

7.2 Combined psychological distress measure – 'Symptom' – in the study of referred and non-referred refugees described in article 2

The aim of the study was to describe the level of psychological distress in exile rather than specific diagnostic profiles. HCL-25 and PTSS-10 scores were found to be highly correlated (0.80, $p<0.01$). The two scales may be said to measure theoretically different aspects of psychological distress- that is, anxiety, depression and trauma-related symptoms. Nevertheless the symptoms that are measured may be interpreted as interrelated symptoms of underlying phenomena, namely psychological distress due to severe changes and stress. Regarding the two symptom scales, HCL-25 and PTSS-10, as a measure of identical or similar phenomena, a combined symptom measure based on the original scales was chosen. Reliability considerations supported the choice of making a combination of the two scales. The global symptom measure "Symptom" was created by transforming the two scales HSCL-25 and PTSS-10, rated on different scales, into scores with a mean of 10 and SD of 3, and then adding them together. With due regard to theoretical arguments against combining the two symptom measures, all analyses were carried out both with the symptom scales separately as well as with the combined measure "Symptom".

7.3 The follow-up study

In the longitudinal study, (Art 3) the first analyses, bivariate analyses, were carried out with a merged material from T1 and T2 in order to be able to compare the changes from T1 to T2. Only those responding both at T1 and T2 were included in the analyses. Testing the difference between groups we used one-way ANOVA and t-test. In the secondary analysis, all symptom scales were used as dependent variables. Symptom load at T2 and change in symptom load from T1 to T2 were examined with respect to correlation with psychosocial factors and traumatic exposures using Pearson's bivariate correlation analyses and logistic regression. Data on socio-demographic background (such as gender, age, groups of nations and education), social life in exile expressed by presence of close friends and family, work status and leisure time activity in Norway as well as self-perception of health and traumatic life experiences in exile were used as explanatory variables. Possible relation of symptoms to reported traumatic exposure at T1 was explored. The two trauma-factors (see 7.4) were used, with post-flight stress variables and psychosocial variables as explanatory variables and the psychological symptom load as dependent variables. Based on the correlation analysis the following subgroups were made: one with activity outside the home and another with no activity outside the home. Social network was expressed by information about close friends or Norwegian friends.

7.4 Factor analyses of trauma variables

The traumatic events from T1 were subjected to a factor analysis (actually principal component analysis) and rotated orthogonally (Varimax). Two factors were revealed, one related to war and group experiences (8 items), and the other (4 items) to prison and individual experiences. Scores were constructed by adding (equally weighted) the items loading more than .45 on each of the factors.

7.5 Bosnian refugees in part 2

In article 4 a merged material containing Bosnian refugees from T1 and T2 in Norway in addition to repatriated refugees in Bosnia was used. Chi-square test for expected count>5, Fischer's exact test for expected count < 5 and block-wise multiple regression analyses were used.

7.6 Qualitative data

A method triangulation in the last part of the study introduces the qualitative approach together with the use of quantitative methods. Information about the aspects of the repatriation process was supplemented with an open-ended question 'What would you like to add to this interview'. Thematic entities emerged from the gathered information and were systematized into thematic groups. Meaning categorization was applied in this process (Kvale, 1996).

8. Results – Summary of papers

8.1 Paper 1 - Traumatic Events and Psychological Symptoms in a non-clinical Refugee Population: The situation among 462 newly arrived Refugees in Norway.

In this paper the relationship between psychosocial problems and traumatic exposure in a non-clinical, non-selected group of newly settled refugees in Norway was studied. Main emphasis was placed on the Bosnian and Kosovo-Albanian refugees. The results showed a considerable number of PTSD-related symptoms, psychological suffering such as anxiety, depression, startling and flashbacks, in a population at risk. Exposure to life-threatening events, physical violence and forced separation from family were strong predictors of psychological distress. Forty-eight percent suffered from symptoms of depression and anxiety and 18 % had psychological reactions related to traumatic stress experiences. The study design had a three-targeted approach, with impact on the individual, educational and policy-oriented level. At an individual level the refugees attending the study received a thorough examination and early intervention when needed. The interview was experienced as a useful diagnostic tool for obtaining information on psychological and psychosocial distress in a specific group by the interviewers and the researcher. At the municipality level the information gathered served as a means for policymaking and facilitating an adjusted psychosocial service towards this group. On an overall level, information provided by this study was used in the planning of a purpose-built health service (Stortingsmelding (White paper) no 17, 2000-2001).

8.2 Paper 2 - Family, activity and stress reactions in exile

The possible protective effects of family network and employment /training on posttraumatic reactions in traumatized refugees living in a host society was explored. A total of 966

refugees participated in the study, the majority of whom had been exposed to numerous traumatic events prior to arrival in Norway. The study sample consisted of two groups: one had been referred to a psychiatric outpatient clinic for evaluation or treatment, the other consisted of refugees interviewed in connection with a health examination upon arrival in the municipalities to which they were allocated. The study showed that presence of family and employment/training had positive effects on posttraumatic symptoms regardless of level of traumatic exposure. But the results also showed that the higher the level of exposure to traumatic events, the stronger the influence of family (spouse and /or children) seemed to be. The study illustrates the importance of implementing psychosocial measures in relation to traumatized refugees in a host society, with special emphasis on activity and strengthening of family systems.

8.3 Paper 3 - A 3-year follow-up study of psychosocial functioning and general symptoms in settled refugees

This paper describes a longitudinal study where we investigated changes from the first (T1) to the second interview (T2), 3 years later. Local health professionals performed the interviews, using rating scales and a structured questionnaire. 240 (52%) refugees attended. The relationship between traumatic exposures and psychosocial factors / psychological symptom load were examined. Unchanged HSCL-25 and an increase in HTQ and PTSS-16 between T1 and T2 were found, indicating the severity and chronicity of problems. The mean Posttraumatic-Stress-Score was 15 % above cut-off. Severe life-threatening trauma and present life in exile with unemployment and unresolved family-reunion were risk factors.
The results of the study indicate that an interdisciplinary approach is necessary in this work in order to meet the obligations to provide sufficient psychosocial health services to arriving refugees.

8.4 Paper 4 - The psychological and social situation of repatriated and exiled refugees - a longitudinal, comparative study

In this study we explored possible differences in the longitudinal course of psychological symptoms and somatic symptoms between one group of Bosnian refugees (21) returning to their home country (B) and one group (175) remaining in the host country (N). We also looked for possible differences in pre-flight traumatic experiences and psychological symptom load within the groups. In addition we studied the experiences of returning home after a period in exile based upon quantitative and qualitative data. A persistence of

psychological symptoms indicating severity and chronicity of the problems was demonstrated in both groups. The main findings were that refugees with a former history of traumatic experiences of a physical character were less willing to return. A decrease over time in all parameters was however found in the repatriated group with a statistically significant decline for the PTSS-16 and HTQ scores ($p < 0.05$). Our results indicate that the decision to return home may be closely connected to pre-flight traumatic experiences as well as being influenced by psychological symptom load and post-flight conditions. The quantitative results from the structured interview were supplemented with qualitative information gathered through open-ended questions at the end of the interview.

8.5 General remarks on the main findings of the study

The specific research questions raised are presented in the different papers. Here follows a summing up and general review of the main results of the study.

The main findings in the study were that the non-clinical refugee-population, mainly consisting of war-refugees, had a considerable amount of psychological suffering such as anxiety, depression, startling and flashbacks as well as a substantial amount of traumatic exposures. Men had significantly higher traumatic exposure than women. Differences between geographical groups and gender were found in relation to load of psychological symptoms. Female gender and being Kosovo-Albanian were both significant for the psychometric tests HSCL-25, HTQ and PTSS-16 and showed higher symptom levels.

Exploring factors with a possible negative or protective influence, revealed how pre-flight experiences and the context in exile may influence refugees' post-flight life and health conditions. We used factor analyses to demonstrate possible differences in the nature of trauma exposures. A component analysis of the trauma variables revealed two meaningful factors. One factor comprised items related to stressors with an intrusive nature, prison and torture related variables. These 'trauma variables' related to a clearer individual involvement in events with an intrusive impact. The other factor consisted of items related to external stressors, loading war related variables. These events indicated situations that may have been potentially traumatising but where the traumatic experience had often been experienced in a collective context. The trauma variables with a significant relationship to the psychological symptom variables were all intrusive physical and psychological traumatic exposures, with a destructive effect on personal integrity and increasing vulnerability. The level of symptoms was seen to have a relation to the load of pre-flight traumatic exposures as well as being influenced by the level of social support and activity outside home. Gender, Time in Norway

and Activity were found to have a significant influence on all the symptom variables. A significant traumatic exposure by family interaction on "Symptom" [6] level was found the effect of presence of family was increased by increasing level of traumatic exposure. This pattern was consistent in the analyses of the sub-samples as well as for the total group.

The longitudinal design made it possible to demonstrate the persistence of psychological symptoms over time. There was a differentiated symptom pattern depending on the nature of pre-flight traumatic experiences, indicating that intrusive traumatic events were more destructive in their nature than group-experiences.

A statistically significant positive change over time in PTSD symptoms was found, with an increase in symptoms ($p < .05$) in PTSS-16 from T1 to T2. On nationality level there was an increase for the Kosovo group and a negative change for the Bosnian group of PTSD symptoms. For the rest of the symptom variables a chronic high level of symptoms was found. No differences in symptom load were found at T2 between the two sexes. Social activity outside home and integration correlated significantly to all psychological symptom variables. Social network, expressed by the component "Friends" had a significantly negative correlation to all symptom variables indicating that symptoms decreased when social interaction was taking place.

Attitude to repatriation and the consistency of action at T2 in relation to the original wish to return to the home country was explored. The severely traumatised seemed more reluctant to return compared to the rest of the group. The attitudes at T1 to repatriation were reflected in the T2-results. Severely traumatised tended to want to wait for better conditions, or not to want to go home at all. Women were more eager to go back as soon as possible compared to men, but the repatriated T2 group was too small to permit conclusions. Significant correlation was found between the attitude "Wants to go back but wait for better conditions" and PTSS-16 and HTQ.

The interviews performed in Bosnia made the circle complete. It allowed us to make a careful comparison between the exiled population and the returnees at an early stage after the war was ended. Some differences between the groups were found. A statistically significant, lower incidence was seen among the repatriated of some types of trauma that may jeopardize individuals' physical and mental boundaries. The repatriated group reported less somatic symptoms compared to the group in exile. The quantitative results were supported by qualitative information. The qualitative data supplemented and confirmed the results of the

[6] SYMPTOM - a combined symptom variable explained in article 2.

quantitative data and was presented in thematic groups. The themes were repeated in all the interviews with shifting emphasis, clarifying the picture.

9. Discussion

Studies of different refugee groups in exile countries contribute to the patchwork of knowledge necessary for gaining a deeper understanding of the impact of trauma, uprooting, and life in exile. It is not possible to get "The final picture" of "The refugee population", as these are non-uniform groups with a socio-cultural composition depending on the refugee background and refugee- generating factors at a given time. Official policy and socio-political attitudes in the reception countries also influence the opportunities to do systematic studies.

There are several discussion aspects related to this study. These aspects will be dealt with in separate parts, as follows: In the first part (12.1), strengths and limitations of methodological choices in the study will be discussed. This is followed by a general discussion of the results (12.2) with a comparative approach to other research in the field. Finally comes a discussion of future perspectives and implications of the study (12.3) on a theoretical, practical and socio-political level.

9.1 Strengths and limitations of methodological choices

The choice of Design

The study's strength is its longitudinal and prospective design. To design the present study, as a longitudinal community study was a choice based on a desire to achieve as thorough as possible a picture of a refugee population. Compilation of data from a non-clinical population was chosen for the present study. A longitudinal design was thought indispensable if one hoped to detect a possible influence of life in Norway on the change of psychological symptoms over time. The design provided baseline information on symptom level, correlations between symptom variables and the different background variables, as well as follow-up results with changes in relation to possible risk factors.

At the time of the follow-up interviews, a number of the Bosnian refugees had either migrated or returned to Bosnia. This opened up for a possibility to complete the circle of knowledge about flight, exile and return, and the repatriation study was added. The design had several implications of methodology and implementation, and presented a variety of challenges such as sampling procedures, attrition in an unstable population as well as assessment methods in a cross-cultural setting. Selections and other biases may have

influenced prevalence rates of disorder in this study. This will be discussed in the light of the measures taken to solve the problems we encountered or expected to arise. To counteract such prospective problems, thorough analyses of reasons for attrition were performed.

Interviewer bias

Using many interviewers may decrease the validity of a survey. To increase the inter-rater reliability, introduction seminars and meetings were arranged before the first and second parts of the study. The only evaluations done by the interviewers were in the GAF; a low degree of evaluation was a strength concerning the inter-rater reliability. The interviewers were given a written instruction as to the content and presentation of the interview in order to secure a common understanding. The researcher kept close contact with the interviewers in order to make the compilation of interviews as complete and consistent as possible. It was necessary to be consistently available for questions in meetings or on the phone, and to be prepared to give advice on how to handle clinical problems when difficult cases arose.

Interpreter bias

Refugees from many language groups represented a methodological challenge. The attrition on municipality level reflected difficulties getting hold of interpreters in the languages required for the study. The high costs of importing interpreters to more remote municipalities and general lack of skilled interpreters prevented several municipalities from participating. In order to avoid interpreter–bias, translated versions of the interview were made available and used with the interpreter present. The ongoing war in former Yugoslavia at the time of the study demonstrated the importance of this. Minor dialectal differences between Croatian, Bosnian and Serbo-Croatian created tensions in some interviews and resulted in more time-consuming interviews but did not lead to any withdrawals from the study.

Attrition

Study design and management influence the degree of attrition as well as characteristics of interviewed groups. As we were aware of the many different reasons for dropping out of this kind of studies, we have tried to investigate the attrition both on an individual as well as on a structural level, as thoroughly as possible.

In the first part of the present study we had an initial attrition on municipality level of 65%. The reasons for not attending were practical problems and costs involved in obtaining interpreters. Others were reluctant due to fear of finding problems they could not follow up, and difficulties in obtaining psychiatric treatment for referred patients.

In the 20 attending municipalities letters of information were sent out to make clear that the information should be used to ameliorate the conditions of refugees and that no data should be traceable on an individual level. The drop out was 42% on individual level. Information beyond gender, age and nationality were not possible to obtain in the attrition group due to data security rules, but no major differences in the attrition and the attending group were found in these variables (table 1, in Art. 1).

One may distinguish two categories of attrition causes: un-modifiable causes such as respondent characteristics and modifiable causes such as design, researcher efforts and study protocol (Deeg et al, 2002). Several study characteristics may affect the attrition rate: an unstable target population, failure to contact the respondents after they have dropped out once (as was the case in the present study), and the consequence of ethical research guidelines. The amount of personal attention paid to the respondents and contact frequency may also be reasons for attrition but are not obvious reasons here. Some factors may even be regarded as respondent burden, such as the time investment required of the respondent as well as the subject of the study- bringing back the memories of traumatic experiences may affect attrition by being too mentally demanding. Small numbers in some nationality groups of settled refugees may be reflected in a reluctance to attend due to fear of recognition where samples are small. These factors may have played a role in the attrition in this study but we are unable to confirm our assumptions. On the other hand, the project was an extension of the health care offered when settling in the municipality, and may by some have been regarded as a positive service rather than a burden, a fact that may have counteracted the dropout. The attrition may give rise to a question of bias in the material at T1. Individuals not willing to attend may be suspected of being more seriously affected than the interviewed group. Groups with higher degree of attrition were found to have a high degree of symptom load (Weiseth, 1986). The observed symptom load may be seen as minimum values in the population at large, because of a possible selection where non-attenders may be the more traumatised individuals. This implies that higher prevalence rates must be expected in the total population when the attrition group is included. (Art 1).

The total attrition rate may at a glance seem substantial (48 %) but the different reasons for this attrition may provide additional information about the obstacles and problems connected to refugee health care, as well as to follow up studies. Lack of health workers, sudden changes in routines in some municipalities, and fear of difficulties in referring patients to psychiatric clinics accounted for 14% of the follow-up attrition. The individual-level attrition rate was 34 % including 22% who were negative to a new contact, 8% who did not

allow a new contact to be taken at T2 and 14 % who were negative when contacted at T2. The rest (12%) had moved and were not possible to reach.

The attrition in the study is substantial but not alarming; van der Kamp & Biljeveld (1998) mention dropout rates of 40 – 60% as not uncommon in longitudinal studies. In a population of refugees one must foresee the likelihood of continued migration. Investigation of the attrition in a follow-up study of a group of 180 traumatised patients treated 1992-96 showed 60% (Dahl et al, 2003). The only significant difference between participants and non-participants was found in the area of traumatic exposures. Participants were more likely to have been imprisoned and subject to other serious trauma than dropouts. Accepting the fact that there is a high attrition rate in this type of studies disposes us to accept the importance of preparing and motivating patients for participation in a follow-up study. Sufficient and empathic information concerning the value of the research as well as the provision of necessary care is needed.

Investigating the presence of characteristic differences in the attrition group from T1, especially in relation to traumatic experiences and symptom load, revealed no major systematic deviation except for the traumatic exposure 'having been in concentration camp'. The attrition was considered random. The difference with regard to attending individuals with experiences from concentration camps may be connected to the previously mentioned beneficial effects of participating in this kind of study (Dyregrov et al 2000; Ekblad 2002). A feeling of being taken care of and being seen as an individual in need of special attention may have counteracted the tendency to drop out for reasons such as the revival of traumatic memories.

Longitudinal studies of health consequences of armed conflicts among refugees face additional logistic and methodological challenges when taking place in a post-war society. Hesitation to participate among the refugees; together with a low priority given to research by health workers in the field add to the attrition rates.

The key to finding the returnees under the difficult post-war conditions in Bosnia was the cooperation with a Bosnian colleague from Sarajevo who knew both the language and the country. We performed the interviews and traced the refugees as meticulously as possible, which without doubt reduced the potential drop out. This may have reduced the interviewer / interpreter bias in this section too. In order to find the study population at follow-up in Bosnia, one had to deal with lack of or low accuracy of registration, re-migration, hostile attitude towards returnees and security problems.

When comparing attrition in this study to studies performed in a different context we find the attrition rate reasonable, taking into account the design and methodological challenges. Steel et al's (2002) 11 year's follow up study of 1413 Vietnamese refugees had a low attrition rate of 19%. The study was concentrated in the Sydney area and 35 trained bilingual interviewers were used. The close contact and follow up of the informants contributed to the low attrition rate. The same may be seen in Mollica et al's (2001) follow up study of 534 refugees of whom 70% remained in a refugee camp and 21 % emigrated. They reported 23 % attrition with 9 interviewers performing the compilation of data. All the informants lived in a well-defined area and the interviewers were assigned to perform the study. Søndergaard's study (2002) of 86 Iraqi and Kurdish refugees had an attrition of 75% and accounted for this with the refugees' suspicion of authorities, having lived in a repressive regime in the home country, as well as an attrition due to the denial and avoidance inherent in PTSD. They found it hard to keep track of the participants as they frequently changed address, a political crisis in the home country led to further dropouts, and anger and suspicion developed against the researchers. These studies illustrate how study design, management, characteristics of interviewed groups, and location of interviews influence the attrition rate; but further details about the attrition were not available from the studies.

The close and repeated contact with the interviewers during the interview period counteracted the dropout due to interviewers. The dedication from the health workers and the positive linkage to the ordinary health care service may have reduced the attrition on an individual level.

The choice of Instruments - Reliability and validity of measures

The interview was designed to make comparison to other studies possible. The interview instrument used in the study was to be easy to use, not too time consuming, and well accepted by both interviewers and interviewees. As it took place in a primary health care setting, duration of one hour was considered to be the maximum length.

The interview should be relevant and comparable to other study designs. Length and design of the instrument were discussed in the focus group after the completion of the pilot study and viewpoints were taken into consideration. Core demographic information from Psychosocial Centre's patient registration form was included, making a later merging of study materials possible (art 2).

Choosing the instruments for psychological symptoms in the study presented several methodological challenges. They should cover the main areas of interest in the study -

psychological consequences of organised violence and war - represented by anxiety and depression and other posttraumatic symptoms. They should also have been used, and found reliable and stable in cross-cultural research.

The question of validity and generalisability of measurements in refugee research is difficult; use of results from clinical data to generalise about refugees in general will give a false picture of the real situation. Self-reporting of torture events may increase the probability of type II error, underreporting shameful or stressful events, thus causing a bias in regard to finding significant differences between the groups. We based the choice of instruments, HSCL-25, HTQ and PTSS-16, on clinical experiences in Norway and the available literature on instruments in cross-cultural research (Mollica et al, 1987; 1992). No diagnoses were made; the scales gave indications on symptom load.

In more recent studies of the psychometric properties of new translations of PTSS-16 derived from HTQ and HSCL-25, Kleijn et al (2001) conclude that the tests are adequate across different cultures and are in general applicable for measuring symptoms of depression, anxiety and posttraumatic stress disorder. The psychometric properties were considered good in extreme cases. In less severe cases, however, the cultural phenomena may have more influence and it was doubted whether this would be sufficiently reflected in the scales.

Hollifield et al (2002) made a critical review of instruments used in the research of refugee and health.183 publications on refugee trauma and health were studied and 125 instruments were found used. These instruments were evaluated after 5 criteria (purpose, construct definition, design, developmental process, reliability and validity) Only 12 were developed specifically in a refugee sample. None of the instruments fully met all 5 criteria. Three instruments met 4 criteria, the Harvard trauma Questionnaire (HTQ), Vietnamese Depression Scale and an unnamed scale developed by Bolton (2001) that assesses mental health factors. An additional 8 instruments developed for use in non-refugee research but adapted for use in refugee research were identified and evaluated. Two of these instruments, Hopkins Symptom Checklist-25 (HSCL-25) and Beck Depression Inventory, met all 5 criteria. Hollifield et al (2002) raised some questions concerning the trauma part of HTQ. They considered it reliable in clinical samples as it was developed in an outpatient clinical setting. Several alternative answers could be confusing. Reducing the alternatives to ”yes” and ”no” answers is intended to counteract this in the present study. The HTQ was rationally developed, and validity and reliability of the torture items had not been reported from community samples. Some criticism was incurred by the lack of gender specific questions. The question of sexual offence/ sexual violence was present in the original version of the

HTQ, but other experiences of women were not very well represented. This points to a need for renewal of tests for traumatic experiences designed for use in a community setting in order to get a picture of stressor load.

Therapeutic experiences indicate that themes about sexual assaults are kept secret until a trustful relationship is created and the patient feels secure. Rosner et al's study (2003) of 311 individuals who survived the siege of Sarajevo reports surprisingly low numbers for sexual violence. This may be an instance of underreporting due to unfamiliar interviewers. No men gave positive answer to questions of sexual violation.

In the pilot study of the present project, a question of sexual assault was included, but the answers revealed reluctance to answer and at a later stage clinical contacts revealed some to be false negative answers. Interviewers and interpreters of both sexes were to perform the interviews and it was considered an ethical problem to pose questions about sexual assault at the first meeting in a non-gender specific setting.

There is an ongoing debate on the appropriateness of different instruments for this kind of research. Since the project started, life events research has developed instruments that may become useful for refugee research. Community-specific function questionnaires as described in the work of Bolton (2002) where the instruments are created locally may be a means to avoid problems of limited local relevance. To obtain clear constructs for devising adequate psychometric scales is fundamental but demanding, and needs further research (Rudmin & Ahmadzadeh, 2001).

The choice of data processing methods

Problems with anonymity had to be considered in the analyses of the general population. Splitting the sample into too transparent geographical groups, in which the numbers of interviewees from some countries were too small to guarantee anonymity, could not be accepted. For this reason nationality-groups or regions were used instead of countries in the analyses. The statistical methods chosen were standard procedures with robust analyses. They are described in detail in the articles.

The comparative study of returnees versus exiled Bosnian refugees had a small number in the returnee group. This may be considered a weakness of the study but was the only available group for the comparison between an exiled and a repatriated group of Bosnian refugees. The conclusions must therefore be restricted to main tendencies, and this has been taken into consideration in the interpretation of findings. An aim of the journey to Bosnia was to get a more valid and complete understanding of the condition in Bosnia. In order to

confirm the information in the structured interview we chose to supplement the structured interview with qualitative 'open-end questions'. Combining the methods from the quantitative and the qualitative area in the repatriation study, between-method triangulation[7], was a way to give a more complete understanding to the study and to increase the validity of the results (Kimchi et al, 1994, Breitmayer et al 1993).

9.2 General discussion of the results

Longitudinal community studies are valuable when they are able to provide a means to identify risk factor on health parameters, but the outcome will inevitably vary depending on the context in which they have been performed. Differences in the background in the native country, stressful events during flight and in exile, the asylum process and reception routines all influence the long time course of psychological symptoms and health parameters. Traumas are serious risk factors. The trauma 'load' and the nature of the traumatic events, especially those with an individual physical character such as torture, rape and concentration camps, influence mental health and are in turn modified or aggravated by personal or external factors.

Mental health and traumatic experiences

The results in this study add additional facets to the pool of knowledge. The high prevalence of symptoms is supported in other cross sectional studies with comparable design and populations. The study revealed the influence of post-migration stress in the chronicity of psychological symptoms. In this study the results are not to be considered as measures of diagnoses but are indications of the degrees of symptom load expressed by scales measuring different aspects of psychological symptoms. The high level of traumatic exposures in the interviewed population combined with the fact that traumatised individuals with severe symptom load seem to avoid getting interviewed supports the assumption of suffering among the dropouts. The level of psychological symptom load in the study may thus be regarded as minimum values of suffering in the total refugee population.

Findings in the different parts of the study support the hypothesis that traumatic events must be considered as important risk factors. An elevated level of psychological symptoms in relation to increasing trauma load was seen in the whole populations, regardless of age. In

[7] Triangulation – technical term used in navigation whereby two known or visible points are used to plot the third. In research defined as the combination of two methods, theories, data sources, investigators in the study of a phenomenon

article 2, the clinical group was seen to have a higher level of symptoms, indicating that the influence on symptoms was the same but that the level in the community group was lower.

The relationship between psychological symptoms and traumatic exposures was persistent in the study. The nature of trauma as well as the amount of trauma had an impact on the results. This was demonstrated where the impact of family and activity was seen on level of symptom in relation to level of trauma. The study also revealed the importance of post-migration stress in perpetuating psychological symptoms. For the refugees not only exile stressors but also the ongoing war or political problems in the home country, perpetuated the uncertainty and level of stress as they affect the situation of family and friends.

The indication from the initial baseline results at arrival show a significant relationship between trauma exposures of genocidal character and psychological symptom load. A painstaking interpretation is obviously necessary, but the high prevalence of psychological symptoms and linkage to traumatic events is also reflected in different studies generated in other parts in the world. (Mollica et al 1993, Hauff&Vaglum 1995, Shretsna et al 1998, Weine et al 1998, Durakovic-Belko et al 2003)

The chronicity of the psychological symptoms is serious. These results are supported by earlier as well as recent studies. Rates of reported PTSD differ in community and clinical studies, and will also depend on the definition of PTSD – whether merely partial symptoms or the full-blown diagnose. The tendency in some studies to underreport PTSD symptoms may also influence on the results (Westermeyer, 1989).

When these considerations are taken into account in the interpretation, we still end up with a picture of severe and longstanding problems after severe trauma exposures. Hauff and Vaglum (1994) reported in a prospective community study of Vietnamese boat refugees that the refugees who were assessed to have experienced the greatest danger before the flight had the highest prevalence of PTSD symptoms at follow-up. In Mollicas et al's (2001) follow-up study of Bosnian refugees, PTSD symptoms, and in particular depression, persisted after 3 years. The influence of traumatic events is demonstrated in Steel at al's (2002) 10-year follow-up of Vietnamese refugees in Australia. Individuals exposed to more than three trauma events had heightened risk of mental illness after 10 years compared to those with no trauma exposure. A small group with very high levels of premigration trauma and high rates of early psychological symptoms had persistent high symptom level after 10 years. Ekblad & Roth (2002) showed an increase in PTSD symptoms in an 18-months follow up of Kosovo refugees from a baseline of 45% to 78%. The study provided support for the identification of torture experiences as a particularly traumatising event even when impact of other war traumas was

considered. These results demonstrate how exposure to extreme traumatic stress puts individuals at risk of developing chronic psychiatric problems; the results also underline the need to develop targeted health services.

What aspects influence mental health?

Differences in country of origin

In the study we found differences between refugees from Bosnia and Kosovo. Though lacking war experiences, the Kosovars had, contrary to expectation, higher symptom load at baseline. They were granted temporary residency on a collective base. The reflection of the effect of the asylum-process and the less positive attitude to this group at that time may be seen in the higher load of psychological symptoms of the Kosovo Albanian population in higher symptom levels at T1 and an increase of PTSD symptoms at T2. They had years of insecurity in Kosovo, flight and a long period as asylum-seekers, some in Sweden before Norway, before they were resettled in municipalities (Abiri, 2000). The uncertain and slow processing of the application, loneliness, separation from family and unemployment in the background of refugees coming as asylum seekers and add to the burden of being a refugee. (Silove, 2000) The Bosnian refugees came directly from the war or had fled at the outbreak of the war, but preceding years were normal and the reception in Norway must be considered more positive than for those living in the uncertainty of an application for asylum. They were granted an intermediate permission to stay in the country as war-refugees and did not experience the uncertainty of the asylum seeker process. Being a homogenous group with mostly Bosnian refugees included the possibility for group support, which may have influenced the observed decrease in PTSD symptoms over time.

Gender differences

Gender differences are reflected in general psychiatric research with higher symptom level of depression and anxiety. This study did not go in depth on the gender issue but further study of gender specific predictor and risk factors will be of interest. This is in line with governmental recommendations for more knowledge about the relation between trauma, psychological symptoms and health problems among immigrant women. (NOU 1999:13)

Women were found to have a higher degree of symptom load than men in the first part of the study. This difference in gender on psychological symptom load was consistent with general psychiatric research. From the National Comorbidity Study, Kessler et al (1995) reported that women had significantly higher lifetime PTSD prevalence than men. Women were significantly more vulnerable than men even when they controlled for sex differences in

the types of most upsetting traumas. Durakovic-Belko's study (2003) among adolescents from Sarajevo demonstrated that common risk factors for more serious depression and PTSD symptoms in post-war adjustment were female gender and low optimism. When the category of loss was investigated in the study material, the strongest predictor of post-traumatic reactions was trauma experience, and of depressive symptoms, female gender.

In the follow up study there was no gender differences with regard to changes in symptoms, and the gender differences at T2 was no longer present. The relation between longstanding psychological symptoms and trauma exposures, and the fact that men were more traumatised than women may have contributed to the levelling out of symptoms between men and women in the follow-up results. In addition to the healing influence and gender differences in the use of a social network, expression of symptoms as well as trauma experience-categories may have a differential impact on the pattern of psychological symptoms in exile as well as among repatriated refugees.

S*ocial support*

In this project a multi-variant model permitted us to study psychosocial factors in exile on a large sample of refugees arising from a clinical material and a non-clinical study population. The procedures were standardised with the limitation that the clinical sample was not specifically designed for the study but provided information comparable and applicable to the rest of the study (sample?). Combining a clinical and a non-clinical population may be discussed. It did however provide a material that allowed us to observe the differences in symptom-load and similarities in influence of psychosocial factors on the symptoms. The differences were parallel in values and the influence was the same within the groups.

The effect of pre- and post flight stress is modified by different factors and the outcome is a product of the nature and dimension of the trauma, the posttraumatic environment and of the success of coping strategies. Resettlement countries cannot alter pre-flight stress but may affect the post-migration stresses relevant to mental health. The challenges met by refugee families when they establish a new life in exile may call for assistance from helpers. Psychosocial and/or therapeutic measures together with a socio-political willingness to assist refuges to regain heeling capacity are necessary (Sveaass & Reichelt 2001). When the influence of culture of origin and context were studied among refugee children from Central America and South East Asia, the results indicated how culture of origin modulates the relationship between the pre-migration experiences and the developing post-migration universe (Rousseau et al 1997). Models of pre- and post-migration

stress, personal and social resources as described by Beiser (see 6.3) illustrate the importance of social resources in protecting mental health.

The term 'activity' did not differentiate between training, education or work but did imply an activity outside the home with a possibility for social interactions and potential social support. The presence of family, friends, and social contact outside the home may provide support in difficult life situations. When several individuals in the family are traumatised the family may be more of a burden than a support. Likewise when the exile society gives negative signals to the refugee, or the work-categories obtainable are isolating, with little contact to colleagues or with lower status than at home, both social contact outside home and work may turn into risk factors. Nevertheless we have found an indication of the fact that the role of social support, though only studied through presence of family and regular activity, seemed to have an influence on the risk of developing mental disorders when exposed to negative life events.

This view is supported by Dalgaard et al's (1995) 10-year follow up study of mental health in relation to social support and negative life events. Social support may have a positive effect on mental health by buffering the risk of developing mental disorders when exposed to negative life events. Dalgaard et al state that the combination of a personality-related feeling of powerlessness and a lack of social support when exposed to stressors indicates a psychiatric high-risk group. To strengthen social support may be expected to have a preventive effect. Similar results were reported in Goodkind & Foster-Fishman's (2002) study where the descriptions of the participation experiences and desires of a group of Hmong refugees living in the United States were investigated. Numerous barriers made a meaningful participation in the daily life difficult. To regain the sense of efficacy and control and counteract powerlessness with its negative effect on well-being was considered important.

There were limitations in the study in the measurement of social support. It did not provide detailed information on the quality of the family structure or presence of family as a protective factor and there were no specific data on cultural differences in family structure. As social support is an interaction variable, it is not possible in this study to exact a clear picture of underlying causes of the problems in getting a job or the impact of presence of family. . The analyses of impact of family and activity on the relation between trauma-load and symptoms in the study give, however, an insight into the contribution of social support to the total situation. With regard to questions concerning mental health, salient presence of family support, and activity outside home, we could see tendencies and directions but could not detect whether social support had a direct effect on health by providing emotional comfort. A

direct reduction of the stressors' effect by received practical or emotional support, or a disturbed or mitigated relationship between stressors and health is not obvious in this study. The psychosocial processes involved in giving and receiving social support need further study in order to give more than directional answers.

How to deal with repatriation

Northern Norway has also experienced the aftermath of war – the burned down villages and destroyed homes. The reconstruction of this part of the country gave a notion of what it was like to go back to a destroyed home after despair in exile. The Norwegian refugees did however not go back to hostility, insecurity and political conflicts. Not all refugees are as lucky as the Norwegian refugees repatriating in 1945.

Few comparative studies have been made on mental health and repatriation. This study, comparing an exiled and a repatriated population, was done 2 years after the war ended in Bosnia Herzegovina. The situation described at that time may have changed and it may have been those most resourceful who returned at that stage. The motivations for return were diverse, but all the participants stressed the importance of a safe return. A correct indication of who actually did return was fond in the initial wish to go back shortly after arrival to Norway. The most severely traumatised refugees with intrusive traumas did not want to go back. Fear of meeting the perpetrators, political instability in the country of origin may have added to the reluctance to return.

The informants we interviewed confirmed that some were met by suspicion from those who had remained in Bosnia and had problems in recovering jobs. These factors may have been of significance in the decision-making process. The study of repatriated Latin American refugees by Sundquist (1995) reports similar findings.

The findings in the study concerning the attitude to returning home is supported by Berg's report (1999) from the Nordic comparative studies on the reception of refugees seen from a repatriation perspective. The return home is called " a dream, a reality or the end of exile". In a study of 800 refugees from Chile in six different countries by CIDE [8], 28% wished to go back, 57% wanted to wait and 15 % did not want to return to Chile. There were differences in the different exile country in the attitude to repatriation: 80% did not want to return from DDR whereas 13% did not want to go back from Sweden. In a study of newly arrived refugees from Bosnia in 1994, 14 % wanted to go back, 36 % did not wish to return and the remaining 50% did not know at that point (Berg, 1999).

[8] CIDE Centrum för Utbildingsforskning och Utveckling, Sverige

In Norway the refugee policy of the time was two-tracked. One track aimed at integration, with differentiated language courses, active efforts to qualify for continued education or work, contact with the neighbours, and integration in the local community. The other track was directed toward active measures to encourage repatriation. Through this the refugee perspective was to become clearer. Recommendations from the Nordic comparative project were that temporary residence should last only a short period. There should be clear conditions for permission to stay, and measures in order to minimize insecurity when going back and support coping ability was needed. In a recent report on means to motivate repatriation, the researchers report that in the past 10 years less than 10% of the 90.000 returnable refugees have returned. None of the efforts from the Norwegian authorities have been successful and many of the repatriated refugees give up once back home and wish to return to Norway. Safety problems, distrust, problems of getting a job and the feeling of alienation are factors of importance. The researchers did not find any indication of a misuse of the economic support to repatriation (Berg & Valenta 2003).

9.3 Lessons learned

In the previous section strengths and limitation of the study's methods and design and the general results have been discussed. The study provided substantial information about the refugee's background, health conditions and factors that seem to have had an influence on life in Norway.

The results and experiences from the project have been of value on several levels. It has given practical implications for the planning and implementation of health care services for refugees, at different stages of the study, contribution to medical as well as socio-political guidelines, theoretical insights and contributions to the pool of research results. We are left with a clear picture of future needs for research. .

Practical implication of the study then and now

The implications of the project were both at the intervention level and at the public health level. It was designed with a three-targeted approach for impact on individual, methodological, and educational level, as well as a policy-oriented level based on the research results. The study also had an action research aspect consisting of practical implications of the project in progress.

On an *individual* level the refugees involved in the study received a thorough health check on arrival at the municipality, with better possibilities for early intervention than the standard services included. This also entailed the possibility of following individuals at risk for later chronic symptoms, and counteracting this development, either through different levels of medical treatment or through actions of a more social character such as getting into some kind of activity.

Health personnel attending the study raised their awareness of the problems refugees carry and considered the method, a structured interview, useful. It was not experienced as too time-consuming in the research setting; it accessed the relevant information from the refugees, and it was well accepted by the patients. For their future work they expressed a wish for a modified form as part of their general reception routines. Several interviewers wished to continue to use the interview-guide as part of their regular routines, and a modified version was designed for this purpose.

The epidemiological data served as basic prerequisite for informing policy makers about refugee reception routines and healthcare planning, and results from the study proved useful in planning health services at *local authority level*. One of the attending municipalities reported that they could apply for extra funding, which resulted in substantial support to the municipality, after they had obtained an overview of severe traumas and the need for extra services through the interviews [9]. By getting an overview of the problems in the refugee – population, a targeted health care approach was possible, permitting planning for groups at risk such as traumatised or disabled refugees.

On an *overall level*, the information provided from this study was used in the planning of such services for refugees as the establishment of a Regional Psychosocial Team in Southern Norway [10]. This opened up for a systematic approach to information and education of health care personnel in the region in different aspects of refugee health: routines on arrival, risk factors and risk groups, and the need for targeted community services; treatment of torture survivors and challenges of different aspects of work with a multicultural patient group. During the war in Kosovo in 1999, experiences from the project were applied and found useful when establishing emergency health care services for large number of Kosovo Allbanian refugees arriving to the area, and 800 were registered. The robustness of the questions was apparent, the design well accepted by the refugees, and health personnel were

[9] Possible to achieve for all municipalities receiving refugees to settle, the need for extra funding must be raised within a certain time after the arrival. Interview routines is a tool in providing sufficient information

[10] www.flyktning.info

able to access sufficient information about the health in this acute situation. The need for standardised reception instruments for the health check on arrival was confirmed and demonstrated by additional field experience during the reception of the Kosovo refugees and this information was conveyed to the authorities. It resulted in the assumption of parts of the background material into the new guidelines for health services to refugees published in December 2002.

In the light of recent research on repatriation, the study underlines the necessity of providing proper health services, support, and coping strategies to traumatized refugees at an early stage. The cost benefit value is present both for those who remain in Norway and for those who chose to return. The return process seems to rely on coping strategies and strengths within the refugees themselves rather than on the assistance of projects in the recipient country. (Berg & Valenta, 2003).

Implication for future research

The results from the study draw attention to certain specific research questions as well as adding information to the pool of general knowledge about the basic problems and health consequences of human rights offences. It will never be possible to make a generalisation of single research results, as the research is dependant on the historical as well as the socio-political context in which the refugees are housed. Research from countries with jobs, good housing and positive attitudes towards refugees will give better and more positive results than research from areas where newcomers are kept in detention and the integration and job possibilities are limited (Silove& Ekblad, 2002).

The findings in the study concerning refugees' situation: the initial burden of suffering, the serious and chronic level of psychological symptoms, the influence of risk factors in exile, and the long-term effect of pre-flight traumas, are supported by research reports from Europe, Latin-America, United States, Asia and Australia.

Further studies of the course of the chronicity of psychological symptoms are needed. Longitudinal community intervention studies need to be carefully designed and have a strong focus on coping. Changing political situations lead to new refugee groups and the economic and political situation constrains the efforts in the refugee field. The fluctuation of symptoms and the many dimensions that influence a life, in exile as well as in the country of origin, are challenging both to the study design and the interpretation of the results.

Different interventions, support strategies, and methods of therapy need further investigation. The deleterious influence of traumatic exposures with intrusive character was

demonstrated in the study and a serious picture of potential risk groups stressed the need to strengthen the research on resilience and natural regeneration capacity. The recognition of the importance of individuals' ability to face the acute and long-term challenges of mass violence is needed, and its importance for future rehabilitation and integration as well as its impact on repatriation, are central issues in the research. Gender specific refugee projects on health consequences, with focus on differences in predictors due to gender differences in the migration process, are also of research interest. In intervention studies the relation between health, gender and culture, geopolitics, inter-group conflict and socio-economic underdevelopment should be taken into consideration and further investigated.

Research should continue on a local as well as well as on an international level, and multi-centre research would add additional strength. Based upon the present knowledge, health policy implementation with adequate ethical standards should be designed, put into practice, and evaluated on primary health care as well as specialist level. Collaboration with immigrant ethnic minority health workers should take place and would add valuable multicultural facets to this work.

10. Concluding remarks – where do we want to go?

The study has demonstrated the consequences of the triple burden of trauma, uprooting, and resettlement. The destructive results of forced relocation and war - a high level of psychological distress and human suffering - are seen no matter where in the world studies of the consequences of atrocities are performed.

What may this study contribute to the refugee field and what has been learned that is of value for a clinician and researcher? These questions are posed after extensive practice in the refugee health-care field, with close contact clinically and theoretically to groups of people arriving in our country from all parts of the world. The physical and mental health effects of pre- and post flight stress on refugees has been experienced by the writer both as clinician and as researcher. Detention and prison-like reception routines are used for asylum seekers in some countries. In addition to the consequences of having been trapped in political games or after political violence and human rights abuses these routines are burdens that could have been avoided. Reluctance to treat health problems grounded in arguments like 'they are not going to stay in the country anyway', may in turn contribute to chronic problems for some refugees and low-priority of work with refugees. The large group of strong, resilient

refugees, who have lived through the horrors of war and political oppression, uprooting, flight, and finally the arrival in exile, have always puzzled me as a clinician.

How is it possible to continue to manage to hold on to dignity and pride under such conditions? Some answers were suggested by the study regarding how they managed to cope, but many questions still remain unanswered.

The knowledge is to a large extent present concerning what needs to be done in the prevention of health problems, in clinical work, and in socio-political decisions and policies. It is a moral and ethical issue as well as a political choice. To observe the way one of the weakest groups in the society is treated, places the policy-planning and performance of state and society under a magnifying glass: the weak spots may grow into and affect other groups and areas at a later stage. Through the study, results relevant for clinical work as well for national guidelines during the time of the study were achieved, thus fulfilling the aims of the practical implication of the acquired knowledge. The research results gave additional knowledge to the general pool of results from refugee research, filling in another piece in the jigsaw and highlighting the need for future research in the field.

The task is huge, but our knowledge allows us to design and implement more rapid and effective interventions to reduce the acute and chronic consequences of armed conflicts. This was for example demonstrated in the reception of war refugees from Kosovo in 1999 and may become useful again. Left alone, medicalisation of the human consequences of political misbehaviour is a dead end track and not the answer (Silove, 2000; Summerfield, 2002). It has to be accompanied by an interdisciplinary approach to research and problem-solving efforts. Implications of the knowledge underscore the need for decent routines during the reception process, both for asylum-seekers and in the resettlement process of refugees. The health issue is not only a matter of providing more doctors and nurses – it is as much an issue of providing satisfactory psychosocial frames, including human resettlement routines, asylum routines, reunion of families, and jobs.

It is important in today's political situation, with a growing xenophobia in Northern Europe, to be aware of and cautious about the way research results of this kind are conveyed to the public. Stigmatisation of a group, creation of stereotypes, and prejudice in the society place additional strain upon a stressed group.

A multidimensional approach is necessary, to contribute to peacemaking processes – alongside the task of healing the injuries in exile as well as at home. A reluctance to go back to the home country due to the refugee's mental wounds, and a hesitation, rooted in the practical, economic, and security problems, is demonstrated in the study and supported in

other research. This underlines the complex task of repatriating an exiled population. National and international work has to be coordinated with an awareness of and a focus on human-rights issues, conflict-solving operations, and support to rebuilding of war-torn societies. The challenge is to make space, and open up for individuals, humanity, and real life.

The socio-political role of health professionals should not be underestimated, and the ethical responsibility not forgotten. The medical profession has an obligation to engage in this work, and a position allowing practitioners to get close to the victims and survivors, as well as a unique opportunity to reduce human sufferings due to faulty political decisions and mismanagement both in refugee producing and receiving countries.

11. References

Abiri, E. 'The Changing Praxis of "Generosity: Swedish Refugee Policy during the 1990's' Journal of Refugee Studies 2000; 13: 11-28.

Amy, L. Ai., Peterson, C. & Ubelhor, D. 'War-related Trauma and Symptoms of Posttraumatic Stress Disorder among adult Kosovar Refugees.' J of Traum Stress 2002; 15, 2: 157-160.

APA 1987. Diagnostic and Statistical Manual of mental disorders 3rd edn. Revised, Washington, DC: American Psychiatric Association, pp 247-51.

Beiser, M. & Hou, F. 'Language acquisition, unemployment and depressive disorder among Southeast Asian refugees: a 10-year study.' Social Sci Med 2001; 53, 1321-1334.

Beiser, M. & Hyman, I. 'Refugees' time perspective and mental health.' Am J Psych 1997; 154:7, 996-1002.

Berg 1999: Ramirez G (1990) "Återvändandet: En dröm för eller mot livet?" i: Tor Birkeland m fl: Asyl i Norden: Dansk Flygtningehjælp.

Berg B & Valenta M Prosjekt tilbakevending 2003.

Berg, B. *Når situasjonen gjør det mulig ... Om bosniske flyktnigner og tilbakevending.* (When the conditions allows …. About Bosnian refugee and repatriation) Nordic comparative studies on the reception of refugees from a repatriation perspective. SINTEF IFIM. 1999.

Berry, J.W. Poortinga, Y.H., Segall, M.H. & Dasen, P.R. *Cross cultural psychology. Research and applications*. 1994. Cambridge University Press

Böcker, A. & Havinga, T. 'Asylum applications in the European Union: Patterns and trends and the effects of policy measures.' J Ref Studies 1998; vol 11: 3, 245-266.

Bolton, D., Gillespie, K., Duffy, M. & Burges, C.M. (2001) 'Misappropriation and misuse of PTSD' BMJ Electronic response to Education and debate: Summerfield D. (2001).

Bolton, P. & Tang, A.M. 'An alternative approach to cross-cultural function assessment.' Soc Psychiatr Epidemiol 2002; 37(11): 537-43.

Bolton, P. 'Cross-cultural validity and reliability testing of a standard psychiatric assessment instrument without a Gold Standard.' J Nerv Ment Dis 2001;189:238-242.

Boltotn D., Gillespie K., Duffy M., Burges C.M. (2001) 'Misappropriation and misuse of PTSD' BMJ Electronic response to Education and debate: Summerfield D. (2001).

Breitmayer, B.J., Ayres, L., Knafl, K.A. 'Triangulation in qualitative research: Evaluation of completeness and confirmation purposes.' Image Journal of Nursing Scholarship 1993; 25 (2): 237-243.

Breslau, N. 'Outcomes of Posttraumatic Stress Disorder.' J Clin Psyhiatry 2001; 62 (suppl17): 55-59.

Breslau, N. 'The Epidemiology of Posttraumatic Stress Disorder: What Is the Extent of the Problem?' J Clin Psychiatry 2001; 62 (suppl17): 16-22.

Brunvatne, R., Lysgaard, K.H. & Hjortdahl, P. 'Psychosocial preventive work among war refugees - a task for primary health care?' Tidsskr Nor Lægeforen 1995; 115: 23-26.

Dahl C.I., Dahl, S., Sandvik, L. & Hauff, E. 'Problems of attrition in a follow-up study of traumatized refugees patients: Practical and methodological issues.' J. of Ref Studies, 2003. (accepted for publication).

Dahl, S., Mutapcic, A. & Shei, B. 'Traumatic events and predicitve factors for posttraumatic symptoms in displaced Bosnian women in a war zone.' J Trauma Stress 1998; Jan, 11(1):137-145.

Dalgard, S., Bjørk, S. & Tambs, K. 'Social support, negative life events and mental health' Br J of Psych 1995; 166: 29-34.

De Jong, J.T.V.M., Komproe, IhH., van Ommeren, M., El Masri, M., Araya, M., Khaled, N., van de Put, W.& Somasundaram, D. 'Lifetime events and posttraumatic stress disorder in 4 postconflict settings.' JAMA 2001; 286: 555-562.

Deeg, D.J.H., van Tilburg, T., Smit,J.H. & de Leeuw E.D. 'Attrition in the longitudinal aging study Amsterdam: The effect of different inclusion in side studies.' Journal of clinical epidemiology 2002; 55: 319-328.

Drozdek, B. 'Follow-up study of concentration camp survivors from Bosnia-Herzegovina: Three Years later.' J Nerv Ment Dis 1997; 185: (11), 690-694.

Durakovic-Belko, E., Kulenovic, A. & Dapic, R. 'Determinants of Posttraumatic Adjustment in Adolescents from Sarajevo who experienced War.' J of Clin Psychol 2003,59;1 :27-40.

Dybdahl, R. & Pasagic, I. 'Traumatic experiences and psychological reactions among women in Bosnia during the war.' Med Confl Surviv 2000 Jul-Sep;16(3):281-90.

Dyregrov, K. Dyregrov A. & Raundalen, M. 'Refugee Families' experience of research participation.' J of Traum Traum Stress 2000; 13,3, 413-426.

Eisenbruch, M. 'From posttraumatic stress disorder to cultural bereavement: Diagnosis of Southeast Asian Refugees' Soc Sci Med 1991; 33: 673-680.

Eisenbruch, M. 'Toward a culturally sensitive DSM: Cultural bereavement in Cambodian refugees and traditional healers as taxonomist' Diagnosis of Southeast Asian Refugees' J Nerv Ment Dis 1992; 180: 8-10.

Eitinger, L. 'Pathology of the concentration camp syndrome.' Arch Gen Psych 1961; 5: 371-380.

Eitinger, L. 'The incidence of mental disease among refugees in Norway.' J Mental Scien 1959; vol 105,326-338.

Ekblad, S., Prochazka, H. & Roth, G. 'Psychological impact of torture: a 3 month follow-up of mass-evacuated Kosovan adults in Sweden. Lessons learnt for prevention.' Acta Psychiatr Scand 2002; 106 (Suppl 412): 30-36.

Fact sheet: *The Armenian Genocide*, April 1996. The University of Michigan-Dearborn, Dearborn, MI 48128. http://www.umd.umich.edu/dept/armenian facts/genocide.html (03.02.03)

Flynn M. Searching for a safe Haven. Bulletin of Atomic Scientists. Special Issue Seeking Refuge. Nov/Dec. 2002, 23-25. (Sources: U.N. High Comissioner fir Refugees, The state of the world's refugees: Fifty years of Humanitarian Action (Oxford University Press, 2000);

Goodkind, J. & Foster-Fishman, P.G. 'Integrating diversity and fostering interdependence: Ecological lessons learned about refugee participation in multiethnic communities.' J of Com psychol 2002; 30,4: 389-409.

Gorst-Unsworth, C. & Goldberg, E. 'Psychological sequelae of torture and organised violence suffered by refugees from Iraq.' Br J Psychiatry 1998; 172: 90-94.

Haarr, D. 'Tveit Transitt – et samfunnsmedisinsk drama i 5 akter.' Utposten 2002; 6, 18-20.

Hauff, E. & Vaglum, P. 'Organized violence and the stress of exile. Predictors of mental health in a community of Vietnamese refugees 3 years after resettlement.' Br. J Psychiatr 1995: 166, 360-67.

Hauff, E. 'The Stresses of War, Organized Violence and exile. A prospective Community Cohort Study of Mental health of Vietnamese Refugees in Norway.' 1998. Oslo, University of Oslo.

Hollifield, M., Warned, T.D., Lian, N., DOM (NM), Krakow, B., Jenkins, J.H., Kesler, J., Stevenson, J., Westermeyer, J. 'Measuring Trauma and Health Status in Refugees. A Critical Review.' JAMA 2002; 288, 611 621.

Ikke eget helseprogram for flyktningar" NTB tekst 16.02.1993.

Jenkins, R. 'Making psychiatric epidemiology useful: the contribution of epidemiology to government policy' Acta Psychiatr Scand 2001;103: 2-14.

Jones, E., Hodgins-Vermaas, R., McCartney, H., Everitt, B,, Beech, C., Poynter, D., Palmer, I., Hyams, K. & Wessely, S. 'Post-combat syndromes from the Boer was to the Gulf war: a cluster analysis of their nature and attribution'. BMJ 2002; 324:1-7.

Kimchi, J., Polivka, B., Stevenson, J.S. 'Triangulation: Operational Definitions Nursing Research' 1994; 40 (6):364-366.

Kinzie, J.D., Boehnlein, J.K., Leung, P.K., Moore, L.J., Riley, C., Smith, D. 'The Prevalence of Post Traumatic Stress disorder and Its Clinical Significance Among Southeast Asian Refugees.' Am J Psychiatry 1990; 147: 7: 913-917.

Kivling-Bondén, G. & Sunbom, E. 'The relationship between post-traumatic symptoms and life in exile in a clinical group of refugees from the former Yugoslavia.' Acta Psych Scand 2002;105: 461-468.

Kleijn, W.C., Hovens, J.E. & Rodenberg, J.J. Posttraumatic stress symptoms in refugees: Assessments with the Harvard Trauma Questionnaire and the Hopkins Symptom Checklist-25 in different languages. Psychol Rep 2001; 88 (2): 527-532.

Kvale, S. Interviews. An introduction to qualitative research interviewing. 1996 Thousand Oaks: Sage.

Lavik, N.J. 'Organized Violence and Mental Health – historical and psychological perspectives on the 20th century.' Chap.6 p 86 – 117. In Lavik NJ, Nygård M, Sveaass &

Fannemel E (eds) *Pain and survival. Human rights violations and mental health.* 1994. Scand. Univ Press.

Lavik, N.J. 'Psykisk helse blant norske Amerika-emigranter. Ørnulv Ødegårds migrasjonsforskning i historisk perspektiv.' (Ørnulv Ødegårds's migration research in a historical perspective) Tidsskr Nor lægeforen 1993; 113: 2085-8.

Lavik, N.J., Laake, P., Hauff, E. & Solberg, Ø. 'The use of self-reports in psychiatric studies of traumatized refugees: validation and analysis of HSCL-25.' Nord J Psychiatry 1999; 53:17-20.

Lavik, N,J. 'Historisk hjørne: Flyktninglæger til Norge 1939.' (Historical corner –Refugee doctors to Norway in 1939). Linjer1991: 2,16-18.

Lavik, N. J. Rasismens intellektuelle røtter, 1998, TANO, Aschehoug Oslo.

Lavik, N.J., Hauff, E., Skrondahl, A. & Solberg, Ø. 'Mental disorder among refugees and the impact of persecution and exile, Some findings from an out-patient population.' Br J Psych 1996; 169:726-732.

Lee, Y., Lee, M.K., Chun, K.H., Lee, Y.K. & Yoon, S.J. 'Trauma experience of North Korean Refugees in China.' Am J Prev Med 2001;20 (3) 225-229.

Lie, B. Psychosocial problems among newly arrived refugees *(*Psykososiale problemer blant nylig ankomne flyktninger i Norge), (1998) Psychosocial Centre for Refugees, University of Oslo, ISBN 82-91049-14-9.

Lie, B., Lavik, P., Laake, N.J. 'Traumatic Events and Psychological Symptoms in a non-clinical Refugee Population: The situation among 462 newly arrived Refugees in Norway.' Journal of Refugee Studies 2001; 14 (3): 276-294.

Marshall, R.D., Spitzer, R. & Liebowitz, M.R. 'Review and Critique of the new DSM-IV diagnosis of Acute Stress Disorder' Am J of Psych 1999, 156(11) 1677-1685.

Miller, K.E., Weine, S.M., Ramic, A., Brkic, N., Bjedic, Z.D., Smajkic, A., Boskailo, E. & Worthington G. 'The relative contribution of War experiences and exile-related stressors to levels of psychological distress among Bosnian Refugees.' J Traum Stress 2002, 15 (5) 377-387.

Mollica, R.F., Caspi-Yavin, Y., Bollini, P., Truong, T., Tor, S. & Lavelle, J. 'The Harvard Trauma questionnaire. Validating a cross-cultural instrument for measuring torture, trauma and posttraumatic stress disorder in Indochinese refugees.' J Nerv Ment Dis. 1992; 180 (2): 111-116.

Mollica, R.F., Donelan, K., Svang, T., Lavelle, J., Elias, C., Frankel, M. & Blendon, R. 'The effect of trauma and confinement on functional health and mental health status of Cambodians living in Thailand-Cambodia border camps.'JAMA 1993; 270(5): 581-586.

Mollica, R.F., Favaro, A., Maiorani, M., Colombo, G. & Santonastaso, P. 'Traumatic experiences, posttraumatic stress disorder and disociative symptoms in a group of refugees from former Yugoslavia.' J Nerv Ment Dis 1999; 187: 306-308.

Mollica, R.F., McInnes, K., Sarajlic, N., Lavelle, J., Srajlic, I. & Massagli, M.P. 'Disability associated with psychiatric co morbidity and health status in Bosnian refugees living in Croatia.' JAMA 1999; 282 (5): 433-439.

Mollica, R.F., Sarajlic, N., Chernoff, M., Lavelle, J., Vukovic, I.S. & Massagli, M.P. 'Longitudinal study of psychiatric symptoms, disability, mortality and emigration among Bosnian refugees.' JAMA 2001; 286 (5): 546-555.

Mollica, R.F., Wyshak, G., de Marneffe, D., Khuon, F. & Lavelle, J. 'Indochinese version of the Hopkins Symptom Checklist-25: A screening instrument for the psychiatric care for refugees.' Am J of Psych 1987; 144: 497-500.

Mooren, T.T.M, deJong, K., Kleber, R.J. & Ruvic, J. 'The efficiacy of a Mental Health Program in Bosnia Herzegovina: Impact on coping and general health.' Journ of Clin Psychol, 2003; 59 (1): 57-69.

NOU 'Kvinners helse i Norge' (Women health in Norway) Chap 7.2. 1999:13.

NTB tekst 'Ikke eget helseprogram for flyktningar' (16.02.1993)

Nygård, M.. & Malterud, K. 'Enkel kartlegging av posttraumatisk stressforstyrrelse hos bosniske krigsflyktninger i Norge' Tidsskr Nor Laegeforen 1995; 115: 1971-4.

Ødegård, Ø. Emigration and insanity. A study of mental disease among the Norwegianborn population of Minnesota. Acta Psychiatrica Neurol. Scand Suppl IV 1932 (4).

Paludan, A. 'The new refugees in Europe (1974). – International University Exchange Fund, Geneva.

Payne, R.L. & Jonesm G.J. 'Measurement and Methodological Issues in Social Support' chap 7, p 167-203: in Ed: Kasl SV & Cooper CL Research Methods in Stress and Health Psychology, 1987 John Wiley & Sons ltd.Toronto, New York.

Porter, M. & Haslam, N. 'Forced displacement in Yugoslavia: a Meta-Analysis of Psychological Consequences and Their Moderators.' Journ of Traumatic Stress. 2001;14:4, 817-834

Psychosocial Team for Refugees (Psykososialt Team Sør for flyktninger i Agder og Telemark) – www.flyktning.info

Raphael, B., Lundin, T. & Weisaeth, L. 'A research method for the study of psychological and psychiatric aspects of disaster.' Acta Psych Scand, Suppl 1989; 353:1-75.
refugees.' Am J of Psych 1987; 144: 497-500.

Rosner, R., Powell, S. & Butollo, W. 'Posttraumatic stress disorder three years after the siege of Sarajevo.' J of Clin Psychol 2003;59:1,41-55.

Roth, G. & Ekblad, S. 'Decreased levels of cortisol and testosteron among mass evacuated adults from Kosovo with trauma experiences and PTSD.' Abstracts 11th Cong Assoc European Psychiatrists, Stokholm, 4-8 May. J Assoc Eur Psychiatr 2002;17(Suppl.1):94s.

Roth, G. Decreased levels of cortison and testosteron among mass evacuated adults from Kosovo with trauma experience and diagnosis of PTSD. (S62.2) Abstracts 11th Cong Assoc European Psychiatrists, Stokholm 4-8 May. J Assoc Eur Psychiatr 2002;17(Suppl.1):94.

Rousseau, C., Drapeau, A. & Corin, E. 'The influence and context on the pre- and post-migration experience of school-aged refugees from central America and Southeast Asia in Canada.' Soc Sci Med 1997;44(8):1115-27.

Rudmin, F.W, & Ahmadzadeh ,V. 'Psychometric critique of acculturation psychology: The case of Iraninin Migrants in Norway' Scand J Psychol 2001; 42, 41-56

Shalev, A. 'What is Posttraumatic Stress Disorder?' J Clin Psyhiatry 2001; 62 (suppl17): 4-10.

Silove, D. & Ekblad, S. "How well do refugees adapt after resettlement in Western countries?" Acta psych Scand 2002; 106: 401-402.

Silove, D., Steel, S.D., McGorry, P. & Mohan, P. 'Trauma exposure, postmigration stressors , and symptoms of anxiety, depression and post-traumatic stress in Tamil asylum –seekers; comparison with refugees and immigrants.' Acta Psychiatr Scand 1998; 97:175-81.

Silove, D., Steel, Z. & Watters, C. Policies of deterence and the mental health of asylum seekers. JAMA 2003;284:5,604-611.

Søndergaard, P., Ekblad, S. & Theorell, T. 'Self-reported life events patterns and their relation to health among recently resettled Iraqi and Kurdish refugees in Sweden.' J Nerv Ment Dis 2001;180 (12): 838-845.

Statens Helsetilsyn: 'Veileder – Helsetjenestetilbudet til flyktninger og asylsøkere.' December 2002. (Guidelines in healthcare for refugees and asylsumseekers).

Statistics Norway 2002 (Innvandring og innvandrere 2002, Innvandrerbefolkningen p 15-47)
Statistics Norway, 1997.

Steel, Z., Silove, D., Bird, K., McGorry, P.& Mohan, P. 'Pathways from war to trauma to posttraumatic stress symptoms among Tamil asylumseekers, refugees and immigrants.' J of Traum Stress. (1999),12; 421-435.

Steel, Z., Silove, D., Phan, T. & Bauman, A. 'Long-term effect of psychological trauma on the mental health of Vietnamese refugees resettled in Australia: A population based study.' Lancet, 2002; 360: 1056-1062.

Stein, B.N. 'The experience of being a refugee: Insights from the research literature.'1956, Pp 5-23. In Refugee Mental Health in developing countries. Williams CL & Westermeyer J (eds) Taylor & Francis group, New York.

Strøm, A. 'Norwegian Concentration camp survivors.' Universitetsforlaget, Oslo 1968

Summerfield, D. 'The invention of posttraumatic stress disorder and the social usefulness of a psychiatric category' BMJ, 2001; 322: 95-98.

Sundquist, J., Iglesias, E. & Isacsson, A.A. 'Migration and Health. A study of Latin American refugees, their exile in Sweden and repatriation.' Scand J of Prim Health Care 1995; 13: 135-140.

Sveaass, N. & Reichelt, S. 'Engaging refugee families in therapy: Exploring the benefits of including referring professionals in the first family interviews. Family Process 2001; 40, 95-114.

Tang, S.S. & Fox, S. 'Traumatic experiences and mental health of Senegalese refugees.' J Nerv Ment Dis (2001) 189: 507-512.

Thulesius, H & Haakansson, A. 'Screening for Posttraumatic Stress Disorder Symptoms amon Bosnian Refugees' J Traum Stress 1999; 12: 1,167-174.

Thygesen, P., Hermann, K. & Willanger, R. (1970) 'Concentration camp survivors. Persecution, disease, disability, compensation. A 23-year follow-up. A survey of the long-

term effects of severe environmental stress.' Danish Medical Bulletin **17** (3-4): 66-108.

Tiltak for bedring av flyktningers psykiske helse. Rapport fra arbeidsgruppe avgitt juli 1993. KAD.

UN-convention,1951. www.unhcr.ch/html/menu3/b/o_c_ref.htm (03.03.2003)

UNHCR 2002: Refugees by numbers 2002 www.unhcr.ch (03.03.2003)

UNHCR Web site (www.unhcr.ch); The Ecologist july/august 2002.)

Ursano, R.J., Fullerton, C.S. & McCaughey B.G. Trauma and disaster. In Ursano, R.J.., McCaughey B.G. & Fullerton, C.S. (eds) *The structure of Human Chaos.* p 3-20 Cambridge, Cambridge University Press.

Van der Kamp,L.J.T. & Biljeveld, C.C.J.H. Methodological issues in longitudinal research. In Biljeveld CCJH, Van der Kamp LJTH ed. Longitudinal data analysis: Designs, models and methods. London: Sage, 1998: 1-45.

Van Ommeren, M., de Jong, J. T. V. M., Sharma, B., Komproe, I., Thapa, S. B. & Cardena, E. Psychiatric disorders among tortured Bhutanese Refugees in Nepal. Arch Gen Psychiatry, 2001; 56 (5): 475-482.

Van Ommeren, M., Sharma, B., Sharma, G.K., Komproe, I. & Cardeña, de Jong, E. JTVM. 'The relationship between somatic and PTSD symptoms among Bhutanese refugee torture survivors: Examination of comorbidity with anxiety and depression.' J of Traum Stress, 2002, vol 15,5; 415-421.

Weine, S., Kuc, G., Dzudza, E., Razzano, L. & Pavkovic, I. 'PTSD among Bosnia Refugees: A survey of provider's knowledge, attitudes and service patterns.' Comm Ment Health Jour. 2001, 37; 3: 261- 271.

Weine, S.M., Razzano, L., Brick, N., Ramic, A.R.N., Miller, K., Smajkic, A., Bijedic, Z., Boskailo, E., Mermelstein, R. & Pavkovic, I. 'Profiling the trauma related symptoms of

Bosnian Refugees who have not sought mental health services.' J of Nerv Ment Diseases 2000; 188:7,416-421.

Weisaeth, L. 'A factory fire – attitudes after a catastrophe and the posttraumatic stress reactions' (in Norwegian). Tidskr den Nor Laegefor 1986; 27: 106, 2220-4.

Weisaeth, L. 'The European History of Psychotraumatology.' J of Traum Stress 2002;15: 6, 443-452.

Westermeyer, J. 'Cross-cultural care for PTSD: Research training and service needs for the future.' J Traum Stress 1989; 2: 4, 515-536.

Yehuda, R., Kanaha, B., Schmeidler, J., Southwick, S.M., Wilson, S., Gillert, E.L. 'Impact of cumulative lifetime trauma and recent stress on current posttraumatic stress disorder symptoms in holocaust survivors.' Am J Psychiatry 1995; 152: 1815-1818.

12. Appendix

Appendix number	English title	Norwegian title
I	Aim of study corresponding to tables and graphs in the articles	Liste over korresponderende forskningsspørsmål og tabeller/grafer i de respektive artikler
II Papers	1. Lie B, Lavik NJ & Laake P. Traumatic Events and Psychological Symptoms in a non-clinical Refugee Population: The situation among 462 newly arrived Refugees in Norway. Journal of Refugee Studies 2001; **14** (3): 276-294. 2. Lie B, Sveaass N & Eilertsen DE. Family, activity and stress reactions in exile (Comm Work & Fam , Accepted for publication, jan 2003) 3. Lie B. A 3-year follow-up study of psychosocial functioning and general symptoms in settled refugees. Acta Psych Scand 2002,106:6; 415-425. 4. Lie B. The psychological and social situation of repatriated and exiled refugees - a longitudinal, comparative study. (Scand J Publ Health, Accepted for publication, april 2003)	

APPENDIX III – X on request from the author

III	Information to health personell	Informasjon til Helsepersonell Invitasjon
IV	Invitation to introduction seminars	til introduksjonsseminar
V	Instruction for completing interviews at T1 and T2	Veiledning ved utfylling av skjema ved T1 og T2
VI	Invitation to refugees to attend in the study	Invitasjon til flyktninger til å delta i undersøkelsen
VII	Interviewguide, T1	Spørreskjema, del T1
VIII	Interviewguide, T2 Norway	Spørreskjema, T2 Norge
IX	Interviewguide, T2 Bosnia	Spørreskjema, T2 Bosnia
X	Health personnel questionnaire / attrition analyses	Helsepersonell enquette / frafallsanalyse

APPENDIX I

Appendix I

AIM OF STUDY CORRESPONDING TO TABLES AND GRAPHS IN ARTICLES.

1. What is the general level of psychological symptoms in a non-clinical refugee population exposed to an array of severe trauma?
   ART 1, table 2.
2. Do any specific traumatic exposures have a significant impact on the symptoms?
   ART 1, table 3.
3. Were there any connections between the attitude to repatriation and traumatic exposures and demographic factors?
   ART 1, table 4.
4. How are posttraumatic reactions affected by the psychosocial factors - family, employment or training, in exile?
   ART 2, table 4.
5. Is there a differential effect of these psychosocial factors depending on the level of traumatic exposure?
   ART 2, Graph 2, 3 and 4.
6. Is there a change in refugees' psychological symptoms over time?
   ART 3, Table 3.
7. What is the influence of risk factors such as torture, pre- and post flight traumatic events and demographic status on psychological symptoms?
   ART 3, Table 4 and 5.
8. What is the influence of psychosocial factors such as family, daily activity, network-building and social contacts with one's own culture and Norwegian persons, on posttraumatic symptoms in traumatized refugees living in a host society?
   ART 3, table 4 and 5.
9. Are there any differences in pre-flight traumatic experiences?
   ART 4, table 2.
10. Are there any differences between these two groups in the longitudinal course of psychological and somatic symptoms?
    ART 4, table 3.

11. To what extent was the wish to return home expressed early in the exile period put into practice in a de facto return later?
    ART 4, table 4.
12. What is the relation between pre-flight traumatic experiences and psychological symptom load early in the exile period within the group of refugees wishing to repatriate?
    ART 4, table 4.

APPENDIX II

I

PAPER 1

Journal of Refugee Studies Vol. 14, No. 3 2001

Traumatic Events and Psychological Symptoms in a Non-clinical Refugee Population in Norway

BIRGIT LIE, NILS J. LAVIK

Psychosocial Centre for Refugees, University of Oslo, Norway

PETTER LAAKE

Section of Medical Statistics, University of Oslo, Norway

The Psychosocial Centre for Refugees at the University of Oslo conducted a project to study the relationship between psychosocial problems and traumatic exposure in a non-clinical, non-selected group of newly settled refugees in Norway. Fifty-three doctors and health visiting nurses interviewed 462 refugees over the age of 16, in 20 municipalities in Norway. Exposure to life-threatening events, physical violence and forced separation from family were strong predictors of psychological distress. The correlation between attitude to repatriation and traumatic exposure was explored. The main emphasis was put on the Bosnian and Kosovo-Albanian refugees. 48.3 per cent suffered from symptoms of depression and anxiety and 18.2 per cent had psychological reactions related to traumatic stress experiences.

Introduction

Background

When the Republic of Yugoslavia began to disintegrate, with war starting in Slovenia and Croatia in 1991 and in Bosnia in 1992, thousands of refugees sought safety in Western European countries as well as in the countries neighbouring Yugoslavia. During the years 1994 and 1995 12,000 refugees, the majority from the Former Republic of Yugoslavia (FRY), were to be settled from asylum centres in Norway. This study reflects the situation in a non-selected, non-patient, group of 462 refugees shortly after settling in the municipalities.The official immigrant policy for settling refugees in Norway is a model of dispersion. The political consensus of the authorities is that refugees should be settled in smaller communities as well as in larger cities all over the country. The aim is to avoid ghettos and to facilitate all parts of society

shouldering what is perceived as a burden, as in other European countries (Kjaerum 2000).

At the time of the present study the public health challenges were substantial, as the large groups of refugees represented a relatively new group of patients and systematic diagnostic procedures were lacking. Furthermore, there was a need for a common understanding and general awareness of the special needs of this group in the health care system.

Socio-political Situation and Resettlement Policy

The Bosnian refugees coming to Norway in the period 1991–1994 were granted temporary protection for 12 months. After some months in reception centres they were settled in municipalities throughout the country. Later they could apply for, and were all granted, permanent residence on 'humanitarian grounds'. The war in Bosnia-Herzegovina continued until 1995 and the study was conducted at a time when the situation in Bosnia-Herzegovina as well as in the rest of the FRY was very unstable and insecure.

In Kosovo tension between the Serbian government and the Kosovo-Albanian population had been high for many years. Many of the refugees from Kosovo in the study had arrived in the late eighties in Sweden, where it was considered easy to obtain residence. Over the years, it had become increasingly difficult to obtain refugee status in Western European countries and Sweden followed the rest of Europe after passing the Aliens Act in 1989. Abiri (2000) points to the fact that Sweden, from that time, treated the asylum applicants from Kosovo with suspicion and denied asylum to the majority of them. A number of refugees from Kosovo travelled on to Norway in order not to be sent back to Yugoslavia, and some of these were granted residence on humanitarian grounds.

The remaining groups of refugees in the present study originated from outside Europe. They were UN registered refugees with experiences of war or persecution, or were asylum-seekers who had been granted permission to stay in Norway.

Theoretical Framework

The majority of studies focusing on the effect of war and persecution have been conducted in relocation countries years after the traumatic events. Early studies in the 1950s and follow-up surveys of concentration-camp survivors from World War II indicated that prolonged exposure to atrocities and concentration camp experiences had serious long-term mental, physical and social effects (Eitinger 1959; Thygesen *et al.* 1970; Kuch and Cox 1992; Yehuda *et al.* 1995). A number of studies on mental health consequences of war have been carried out in different European countries since the outbreak of war in the Balkans (Thulesius and Haakansson 1999, Favaro, Maiorani, Colombo and Santonastaso 1999).

The frequency of post-traumatic responses, serious mental disorders (e.g. major depression or post-traumatic stress disorder, American Psychiatric Association 1994) and related disorders have been studied in different refugee groups, e.g., among Iraqi refugees in Great Britain (Gorst-Unsworth and Goldenberg 1998) and Tamil aylum-seekers in Australia (Steel *et al.* 1999). A review of earlier studies in relocation countries indicates that psychological tests used internationally confirm an increased level of psychological distress in refugee populations. The Hopkins Symptom Checklist-25 (HSCL-25) and Harvard Trauma Scale (HTQ), including Post-Traumatic Symptom Scale-16 (PTSS-16) were used in the work of Mollica *et al.* (1993) on a large group of Cambodian refugees. The tests showed a clear relationship between traumatic exposures and psychological symptoms. They emphasize the need for concern about future morbidity and mortality in this population. 'Threat to life' or 'Sustaining physical injury' were reported as risk factors for PTSD (post-traumatic stress disorder) in a study of women exposed to civilian trauma by Resnick *et al.* (1993). Vrana and Lauterbach (1994) found that both depression scores and PTSD symptoms were positively related to the number of traumatic events the person had experienced, especially among women. Kinzie *et al.* (1990) found a high prevalence (50 per cent) of PTSD among Cambodian refugees. Similar findings were demonstrated in a longitudinal study of Vietnamese refugees in Norway conducted by Hauff and Vaglum (1995) using, among other tests, Hopkins Symptom Check List-90 (HSCL-90) and Global Assessment Functioning Scale (GAF). They also found high scores indicating a high level of psychological symptoms and signs. When re-examining the group three years after resettlement, they found the effects of war and persecution protracted. The need for early diagnosis and treatment to avoid the long-term effects of traumatization is emphasized in the study of Lavik, Christie, Solberg and Varvin (1996).

The symptoms observed after exposure to multiple traumas are heterogeneous and complex. Reactions such as having nightmares, problems in falling asleep, concentration difficulties, irritability, and hyper-vigilance, are mentioned. They also include chronic somatization (headache and other pains), and dissociation and enduring affective changes such as major depression, feeling lonely and desolated. Additional findings are changes in self-perception, in the relationship with others and in meaningful interpretation of the social context, the interpersonal world. The concept, 'Post-traumatic stress disorder' may be seen as a construct that involves the drawing together of different types of reactions to traumatic events, and depends on the degree to which these reactions are experienced. The diagnosis of PTSD may be too simple to diagnose the disturbances of people after multiple trauma. The symptoms found among these patients and also many refugees are usually too complex, heterogeneous and sustained to fit this single label (Herman 1992).

Regarding the specific diagnosis of PTSD cross-culturally, Eisenbruch (1991, 1992) argues that the DSM-III PTSD criteria are often based on an ethnocentric view of health that prescribes how refugees should express this

stress and how their distress should be ameliorated. He suggests the term cultural bereavement rather than PTSD for the post-traumatic reaction to make it a normal response rather than a psychiatric illness. The DSM taxonomy is merely a scaffolding upon which the clinician constructs a multilayered picture of the biological, psychological, and sociocultural effects of severe trauma upon the individual, family and the culture at large. Social usefulness of psychiatric diagnosis such as PTSD is heavily debated and further culturally specific studies of PTSD seem to be needed (Summerfield 2001; Bolton *et al.* 2001).

Studies of acute health consequences of armed conflicts involve many logistic and methodological challenges. Even though selections and other bias may have influenced prevalence rates of disorder in the studies conducted, there are findings of substantial psychological morbidity (prevalence of ill-health) between refugee and asylum-seeker groups residing in several recipient countries (Silove *et al.* 2000). Studies of different refugee groups in exile countries all contribute to the patchwork of knowledge necessary for gaining a deeper understanding of the impact of trauma, uprooting and life in exile. Nevertheless, one must bear in mind the challenges this kind of research places upon an ethical approach. The negative effects of group classification may lead to stereotypical generalizations (Moore 2000).

Aim of the Study

The overall aim of the present study was to investigate the health status of a non-clinical refugee population resettled in Norway, including the nature and extent of psychological distress, symptoms and signs. We wanted to investigate the relationship between the type and degree of psychological distress, symptoms and signs, on the one hand, and traumatization, socio-demographic background, and factors relating to life in Norway on the other hand.

The present paper will describe the design and sampling procedures used in the survey as well as the socio-demographic background of the group of refugees. We also wish to investigate the following questions:

- What is the relationship between psychological distress and dysfunction, and age, gender, nationality and extent and nature of pre-flight traumatic exposures?
- Do any specific traumatic exposures have a significant impact on the symptoms?
- Are there any connections between the attitude to repatriation and traumatic exposures and demographic factors?

Procedure

Pilot Study

A pilot study was conducted in order to design a valid and useful instrument, an interview guide, for the main project. Four general practitioners interviewed

63 recently settled, randomly chosen refugees, using the interview guide. Their viewpoints concerning the formulation, chronology of the questions and practical usefulness of the interview guide were taken into account in the final draft of the guide (Lie 1999).

Main Study

All 58 municipalities accepting refugees to be settled in four counties in Southern Norway were invited to cooperate. This included (1) three larger urban municipalities (population $>50{,}000$), (2) seven medium sized (20,000–49,999) and (3) 25 smaller sized (5000–19,999), as well as (4) 23 non-urban municipalities (<5000). Twenty of the 58 municipalities (34.4 per cent), decided to let their personnel assist in the compilation of this study; of these municipalities, two were from group 1, three from group 2, eight from group 3 and seven from group 4. 1365 refugees settled in these 20 municipalities between May 1994 and December 1995.

All refugees over 16 years of age (58.2 per cent of the total population) were invited to participate and received an invitation letter with information about the project. An informed consent form was returned at the time of the interview. All information was translated to the refugee's mother tongue. A total of 462 (58.4 per cent) refugees were willing to participate in the study.

Fifty-three health visitor nurses and general practitioners from the co-operating municipalities took part in an introductory training seminar for interviewers in February 1995. Municipalities not able to be present at the first seminar were offered local seminars and a total of nine were arranged during 1995. The interview, with duration of approximately 1 hour, consisted of structured questions and answers. The interviewers asked all questions. The interview could be regarded as a supplement to the general health check offered to refugees settling in the municipalities. In the majority of the cases it was carried out shortly after the general health check. As the interviews took place in a primary health care setting and were carried out by a number of interviewers, family physicians and health visitor nurses, the aim was not to describe each single patient diagnostically. The main intention using the scales was to give an indication of the amount of distress present in the studied population. The majority of the material in this cross-sectional study was collected during 1995 and 1996. In this situation a control group was unavailable but comparisons between the results from this study and findings published in other surveys give indications of the symptom load and patterns of coping strategies (Mooren and Kleber 2001).

Instruments

Interview Guide

The interview guide, a structured questionnaire, was translated into Albanian, Arabic, Bosnian/Serbo-Croatian, Somali and Vietnamese with back translation

as a validity check. Professional interpreters used the translated questionnaire during the clinical interview, in order to make the oral translation consistent. The ongoing war in former Yugoslavia at the time of the study made minor dialectal differences between Croatian, Bosnian and Serbian into major issues at some points.

The headings in the questionnaire were as follows:

1. Demographic data Demographic data including religion, ethnicity, living conditions, education, occupation in country of origin, length of stay in Norway and legal asylum status were asked for.
2. Present health Questions equivalent to WHO 'Level of living surveys' were used (Statistics Norway 1997).
3. Traumatic experiences The registration of trauma exposure consisted of 15 items ranging from separation from family members to torture and risk to life. A positive answer was given score 1.
4. Psychological symptoms and signs, HSCL-25 The degree of psychological distress was measured using the Hopkins symptom checklist, 25-item version (HSCL-25). The HSCL-25 includes 10 items from the anxiety cluster and 13 items from the depression cluster, with scores from 1–4. HSCL-25 has been used in cross-cultural research (Mollica *et al.* 1987) at rehabilitation centres for traumatized refugees (Al-Hammadi *et al.* 1994). It has proved reliable and valid for measuring depression and anxiety in cross-cultural studies.

There have been no community studies validating HSCL-25 for a mixed population. It may be argued whether the standard threshold point of expected illness on a scale measuring symptoms of distress, the cut-off point, of 1.75 is appropriate for measuring severity of symptoms in such mixed populations. Nevertheless, as the instrument has been applied in several cross-cultural studies and found satisfactory to measure anxiety and depression, it was used in this study.

Post-traumatic Stress Symptoms, PTSS-16

Symptoms of post-traumatic stress disorder were measured using HTQ's Post-traumatic Symptom Scale, PTSS-16, with 16 items with scores from 1–4 for each item. The standard threshold point for expected illness (cut-off) is 2.5 for this scale (Mollica *et al.* 1992).

Harvard Trauma Questionnaire (HTQ)

The Harvard Trauma Questionnaire (HTQ) is a cross-cultural instrument designed for the assessment of trauma and torture relating to mass violence and their consequences. HTQ has been used in both clinical and research settings with patients and community-based populations of diverse cultural backgrounds. The instrument is based on the Western perspective of trauma-related illness as described in DSM-II-R and later in DSM-IV (Mollica *et al.*

1992). Permission to use HSCL-25 and HTQ had previously been obtained from Mollica *et al.* It was used in its original form, accepting the weakness of not being culture-specific for all the different groups in the study as the exact number of groups was unknown at the outset of the study.

GAF (Global Assessment Functioning Scale)

Luborsky in 1962, in the Health-Sickness Rating Scale, operationalized the rating of overall psychological functioning on a scale of 1–100. Spitzer and colleagues developed a revision of this scale, called the Global Assessment Scale (GAS), in 1979. A modified version of the GAS was included in the DSM-III-R as the Global Assessment of Functioning (GAF) Scale (DSM-IV, 1994).

The interviewer was to rate his evaluation based on presence of symptoms observed during the interview. The intention of the use of GAF in the present study was to get a scale to compare the patient's self-evaluation in the interview with the health worker evaluation of the patient based upon the impression given during the interview. As no structured clinical interviews were performed, the self-reported symptoms of HCL-25, PTSS-16 and HTQ findings were not expected to match clinical diagnoses but would to some extent give an indication of the tendencies.

Attrition

The reasons for attrition on the municipality level were examined. Health personnel in co-operating and non-co-operating municipalities were asked about their experience of the study, or for reasons for not participating in the study. 62 answers from 50 municipalities (82 per cent) were received, as in some municipalities both the local physician and nurse were engaged in the study. 29 municipalities had taken part in the study, 30 had not taken part and 2 had stopped during the study for different reasons. The most common reasons for not attending were 'practical problems in obtaining interpreters because of a lack of local interpreters', 'fear of finding problems which they did not have the capacity to follow up' and 'difficulties in obtaining psychiatric treatment for referred patients'.

The attrition group consisted of 174 women (52.3 per cent) and 159 men (47.7 per cent). Age and other data beyond gender and nationality on the individual level were not available. The only difference found between the attrition group and the interviewed group was on distribution of nationality. A larger share of Kosovo-Albanian and African individuals had dropped out (Table 1).

Analyses

The Statistical Package for the Social Sciences (SPSS/PC) was used to analyse the data. Two sample t-test, analysis of variance and block-wise multiple

Table 1
Demographic Characteristics

	Study population	%	Attrition group	%
Total population	462	58.1	333	41.9
Sex				
Male	216	46.8	159	47.8
Female	246	53.2	174	52.3
Mean age	38.31 years			
Standard deviation	13.77 years		Not available	
Min.	16 years			
Max.	84 years			
Marital status				
Single	64	13.9	Not available	
Married	347	75.1		
Co-habiting	14	3.0		
Divorced	13	2.8		
Widowed	23	5.0		
Education				
No formal education	13	2.8	Not available	
Primary	92	19.9		
Vocational	79	17.1		
Secondary	146	31.6		
University	126	27.3		
Geographical region/country of origin				
Bosnia	343	74.2	211	63.4
Kosovo	51	11.0	82	25.0
Other nationalities*	19	4.1	—	—
Africa	7	1.5	15	4.5
Middle East	15	3.2	15	4.5
Far East	23	5.0	9	2.7
Latin America	4	0.9	1	0.3
Traumatic exposures				
T1. Have been living in hiding	291	63.0		
T2. Have been in prison	66	14.3		
T3. Have been in a concentration camp	81	17.5		
T4. Have experienced war	335	72.5		
T5. Have been exposed to threat to life	361	78.1		
T6. Have witnessed torture	190	41.1		
T7. Have witnessed killing	142	30.7		
T8. Have been separated from family	346	74.6		
T9. Have experienced physical violence	104	22.5		
T10. Have experienced torture	67	14.5		
T11. Have been beaten unconscious	38	8.2		
T12. Have been unconscious without having been beaten	34	7.4		
T13. Have been near drowning	13	2.8		
T14. Have been nearly suffocated	27	5.8		
T15. Have had other extreme experiences	223	48.3		

*Other nationalities: from other republics of former Yugoslavia. Not obtainable from non-attendees.

regression analysis were used. Only associations which were significant at a level below or equal to 0.05, will be discussed.

Results

Sociodemographic Characteristics

Table 1 displays selected demographic characteristics. The distribution between the sexes was 246 women (53.2 per cent) and 216 men (46.8 per cent). The mean age in the interviewed survey group was 38.31 (min. 16, max. 84, SD 13.77). A high proportion (75.1 per cent) were married and 27 per cent had a university level education.

Religious backgrounds were distributed as follows, 359 Muslims (77.7 per cent), 50 Christians (10.8 per cent), including Protestants, Orthodox and Catholic, 1 Hindu (0.2 per cent), 11 Buddhist (2.4 per cent), 27 other confessions (5.8 per cent) and 14 missing information (3 per cent) (Not shown in table 1).

Traumatic Exposure

The trauma exposures are listed in Table 1, with 'being in danger of losing life' (78.1 per cent), 'separated from family' (74.5 per cent), 'experienced war' (72.5 per cent), and 'witnessed torture' (41.1 per cent) as the most common exposures. With 15 different experienced or witnessed traumatic incidents we found a mean of 5.24 (min. 0, max. 14, SD 2.96) traumatic exposures per person with the 462 valid observations. Men had significantly higher traumatic exposure (6.4) than women (4.2) and the older age groups were more strongly exposed than the younger. There was a significant difference between national groups. The Middle East group had the largest exposure score (not shown in Table 1).

Relation between Psychological Symptoms and Signs, and Demographic Factors and Traumatic Exposure

Table 2 illustrates the relationship between the demographic factors gender, age, country of origin and measures for psychological signs and symptoms of distress: HSCL-25, PTSS-16, HTQ and GAF. Significant difference at the 0.05 levels was found between men and women on HSCL-25. When using the Bonferroni test, comparing groups, there was a significantly higher degree of anxiety and depression in the Kosovo-Albanian group than in the Bosnian group. 84 (18.2 per cent) had a PTSS-16 score >2.5 (Mean 1.18 min. 1.00, max. 3.56, SD 0.59). Kosovo-Albanians also had significantly higher scores than the Bosnian group for the PTSS-16. HTQ mean was 1.07 (min. 0.605, max. 2.093, SD 2.96) and no significant differences were found between the groups of nations. The GAF scale ranges from 1 to 100, with 70 considered as

Table 2
Relationship between Scores of HSCL-25, PTSS-16, HTQ, GAF and the Demographic Factors Gender, Age and Nation of Origin

	HSCL-25 Mean (p)	PTSS-16 Mean (p)	HTQ Mean (p)	GAF Mean (p)
Gender	(0.051)	(0.59)	(0.77)	(0.144)
Male	1.77	1.17	1.06	70.47
Female	1.88	1.19	1.07	72.21
Age-group				
16–24 years	1.78	1.13	1.01	74.25
25–34 years	1.80	1.19	1.06	72.81
35–44 years	1.85	1.19	1.10	69.42
45–54 years	1.96	1.24	1.13	69.72
55–64 years	1.67	1.08	1.01	69.09
65–74 years	1.84	1.11	1.04	69.50
75–84 years	2.21	1.25	1.17	70.33
Nationality				
1 Bosnia	1.78	1.15	1.78	71.46
2 Kosovo	2.07	1.32	2.07	69.13
3 Other nationalities	1.85	1.23	1.85	71.13
4 Africa	1.98	1.50	1.98	75.86
5 Middle East	2.03	1.25	2.03	70.18
6 Far East	1.75	1.14	1.75	75.05
7 Latin America	2.33	1.00	2.33	73.25

One-way ANOVA with significance level of 0.05.

acceptable social functioning but some psychological difficulties. The GAF mean was 71.40 (min. 31, max. 90, SD 11.96) 70.47 for men and 72.21 for women. There were no significant differences found between groups of nations.

Table 3 illustrates the relationship between HSCL-25, HTQ, PTSS-16 and GAF and specific traumatic events. Some specific groups of traumatic exposures had significant effect at the 0.05 and 0.01 level. Exposures with a physical component, including either experienced or witnessed physical violence and torture, were strong indicators of ill-health as was having been in danger of life. Having been forcibly separated from family was also seen to have a significant impact on psychological symptoms and signs.

In order to analyse further the relationship between the socio-demographic variables and traumatic events block wise multiple regression analyses were carried out, with HSCL-25, PTSS-16, HTQ and GAF as dependent variables (see Table 4). The predictor variables selected were gender, nationality and traumatic exposures. The predictor variables are often referred to in earlier research on traumas and refugees, and thus demonstrate theoretical meaningfulness; as well as being found to have significant relationships in the bivariate analysis, as shown in Tables 2 and 3. The groups of nations apart from 'Bosnia' and 'Kosovo-Albanian' were too few in number for separate

Table 3
Relationship between Scores of HSCL-25, PTSS-16, HTQ, GAF and Traumatic Exposures *(Corresponding to Table 1)*

Traumatic exposures		HSCL-25 Mean (p)	PTSS-16 Mean (p)	HTQ Mean (p)	GAF Mean (p)
T1. Have been living in hiding	Yes	1.85 (0.374)	2.01 (0.008)	1.1 (0.037)	70.31 (0.016)
	No	1.80	1.85	1.01	73.30
T2. Have been in prison	Yes	1.87 (0.600)	2.01 (0.117)	1.17 (0.014)	69.04 (0.103)
	No	1.82	1.92	1.05	71.90
T3. Have been in concentration camp	Yes	1.92 (0.128)	1.99 (0.492)	1.12 (0.158)	66.19 (0.000)
	No	1.81	1.94	1.06	72.63
T4. Have experienced war	Yes	1.83 (0.659)	1.96 (0.579)	1.08 (0.443)	71.14 (0.409)
	No	1.86	1.92	1.06	72.26
T5. Have been exposed to threat to life	Yes	1.86 (0.125)	1.98 (0.14)	1.09 (0.15)	70.35 (0.000)
	No	1.75	1.82	1.00	75.66
T6. Have witnessed torture	Yes	1.91 (0.16)	2.08 (0.000)	1.16 (0.000)	68.66 (0.000)
	No	1.78	1.84	1.01	73.56
T7. Have witnessed killing	Yes	1.96 (0.003)	2.07 (0.003)	1.16 (0.000)	67.61 (0.000)
	No	1.77	1.89	1.03	73.24
T8. Have been separated from family	Yes	1.86 (0.115)	1.98 (0.027)	1.09 (0.017)	70.59 (0.014)
	No	1.76	1.84	1.01	73.97
T9. Have experienced physical violence	Yes	2.00 (0.001)	2.14 (0.000)	1.25 (0.000)	65.93 (0.000)
	No	1.78	1.89	1.04	73.29
T10. Have experienced torture	Yes	2.08 (0.000)	2.23 (0.000)	1.25 (0.000)	65.15 (0.000)
	No	1.79	1.89	1.04	72.50
T11. Have been beaten unconscious	Yes	2.19 (0.000)	2.45 (0.000)	1.34 (0.000)	62.03 (0.000)
	No	1.8	1.9	1.05	72.27
T12. Have been unconscious without having been beaten	Yes	2.11 (0.003)	2.19 (0.008)	1.23 (0.001)	62.90 (0.000)
	No	1.81	1.92	1.06	72.11
T13. Have been near drowning	Yes	1.97 (0.375)	2.15 (0.202)	1.21 (0.139)	65.69 (0.81)
	No	1.83	1.94	1.07	71.59
T14. Have been nearly suffocated	Yes	2.16 (0.002)	2.36 (0.00)	1.32 (0.000)	61.19 (0.000)
	No	1.81	1.91	1.05	72.14
T15. Have had other extreme experiences	Yes	1.94 (0.000)	2.09 (0.000)	1.15 (0.000)	69.12 (0.000)
	No	1.72	1.79	0.99	73.74

analyses. Differences between the ethnic refugee groups are difficult to interpret in this material and need further consideration. Gender and being Kosovo-Albanian were both significant at the 5 per cent level for the psychometric tests HSCL-25, HTQ and PTSS-16.

The variable '*Have been in danger of losing life*' (T5) shows a significant relationship to HSCL-25, PTSS-16 and GAF. The variable '*Have witnessed killing*' (T7) shows a significant relationship to GAF. The variable '*Have been beaten unconscious*' (T11) shows a significant relationship to PTSS-16. The variable '*Have had other extreme experiences*' (T15) shows a significant

Table 4

Multiple Regression Analysis with Scores on HSCL-25, HTQ, PTSS-16 and GAF as the Dependent Variables and Gender, Nationality and Traumatic Exposures as Predictor Variables

	Constant	Gender (Male)	T2	T4	T5	T6	T7	T8	T9	T10	T11	T13	T14	T15		Adjusted R-square
HSCL-25																0.127
B	1.720	−0.255	−0.114	−0.005	0.173	−0.003	0.009	0.104	0.005	0.113	0.189	0.135	−0.159	0.105	0.156	
SE	0.085	0.060	0.88	0.077	0.079	0.067	0.066	0.070	0.111	0.111	0.125	0.117	0.169	0.133	0.059	
P	0.000	0.000*	0.193	0.527	0.030*	0.627	0.153	0.138	0.681	0.311	0.133	0.249	0.348	0.432	0.009*	
HTQ																0.153
B	0.938	−0.121	0.002	0.004	0.008	0.005	0.004	0.004	−0.003	0.01	0.127	0.001	−0.002	0.104	−0.009	
SE	0.045	0.032	0.046	0.040	0.041	0.035	0.035	0.037	0.057	0.061	0.069	0.063	0.096	0.075	0.031	
P	0.000	0.000*	0.742	0.912	0.056	0.128	0.299	0.272	0.567	0.102	0.064	0.827	0.803	0.165	0.003*	
PTSS-16																0.147
B	0.168	−0.242	−0.004	0.002	0.187	0.004	0.002	0.009	0.005	0.110	0.350	0.004	−0.005	0.103	0.190	
SE	0.087	0.061	0.086	0.077	0.079	0.066	0.067	0.070	0.107	0.113	0.127	0.116	0.170	0.136	0.059	
P	0.000	0.000*	0.678	0.785	0.019*	0.531	0.763	0.221	0.963	0.330	0.006*	0.753	0.788	0.452	0.001*	
GAF																0.110
B	77.36	2.15	2.24	2.36	−4.18	−0.205	−2.94	−1.49	−3.60	0.173	−4.13	−3.36	1.467	−3.26	−2.39	
SE	1.87	1.29	1.86	1.67	1.72	1.41	1.42	1.48	2.22	2.34	2.67	2.50	3.49	2.83	1.24	
P	0.000	0.095	0.229	0.158	0.15*	0.884	0.039*	0.313	0.105	0.941	0.122	0.180	0.675	0.249	0.053	

T 2, 4, 5, 6, 7, 8, 9, 10, 1, 12, 13, 14, 15: Traumatic exposure, see tables 1 and 3 for details.
*Indicates significant relationship with significance level 0.05.

relationship to HSCL-25, HTQ and PTSS-16. The exposures listed are all intrusive physical and psychological traumatic exposures, with a destructive effect on personal integrity and increasing vulnerability.

Repatriation

The distribution of attitude to repatriation was as follows: 46 (10 per cent) '*Want to return to their country as soon as possible*' (level A), 204 (44.2 per cent) '*Want to wait for better conditions in the country of origin*' (level B), and 93 (20 per cent) '*Do not want to go back to the country of origin*' (level C) and 116 (25.1 per cent) '*Do not at the time of the interview know what to choose*' (level D). The distribution of answers when split into gender followed the same pattern as the total population. In the Kosovo Albanian group no refugees wanted to go home as soon as possible (level A). We found positive significant correlation ($p < 0.05$) between repatriation at level A (wanting to go) and C (not wanting to return) for the Bosnian population and negative significant correlation ($p < 0.05$) between level A and the Kosovo Albanian group indicating that no refugees from this group wanted to go home. Significant correlation ($p < 0.05$) was found between repatriation at level C and D and the traumatic exposure: '*Having been in concentration camp*' and at level D for the traumatic exposures*: 'Have been in prison*', '*Have experienced torture*', '*Have been beaten unconscious*' and *'Have been unconscious without having been beaten*' and '*Have had other extreme experiences*'. We found no correlation between the psychometric measures HCL-25, PTSS-16 and HTQ and levels of attitude to repatriation, whereas GAF was correlated to level C '*do not want to go back to the country of origin*'.

Discussion

With this study we attempted to illustrate the relation between psychological distress and dysfunction, and age, gender, nationality and extent and nature of pre-flight traumatic exposures. In particular we wanted to look for the impact of any specific traumatic exposures on the symptoms. We also wanted to investigate the connection between the attitude to repatriation, traumatic exposures and demographic factors. Before going into discussion of the findings, the mechanisms around attrition will be dealt with, as this may be a methodological shortcoming in this kind of study.

Attrition and Trauma

The attrition group may give rise to a question of bias in the material, as individuals not willing to attend may be suspected of being more seriously affected than the interviewed group. Weisaeth's factory fire research (1986) studied reasons for refusing to take part in examination/treatment after a disaster in a factory. He found that knowledge about stress management was

highly negatively correlated to the development of post-traumatic stress reactions when exposed to severe traumas. Knowledge and training in disaster management had a preventive impact. He also found that the major intermediate variable between the experienced traumatic incident and the development of PTSD was the intensity of feeling one has been in danger of losing life. In his study, 16 per cent of those unwillingly attending the health care offered after the incident were 38 per cent of the group presenting PTSD in a control 7 months later.

Weine *et al.* (1995) found that older age was associated with more frequent diagnosis of PTSD. It correlates with having suffered more types of traumatic experiences than younger age groups. Older age groups as well as individuals in a difficult situation are less favourably disposed towards interviews than persons with fewer problems (Statistics Norway, 1998).

The non-attending Kosovo-Albanians and African refugees may represent more severely affected individuals thus more unwilling to attend health controls and examinations. In the study these groups are found to have a high degree of symptom load. These findings may be expected to be similar in the attrition group, aggravating the long-term situation of this part of the refugee population. Because of the possible selection based on traumatic experience and age, some influence on the higher prevalence rates in the total population, including the attrition group, must be expected.

Psychological Distress in Relation to Demography and Trauma

The prevalence of the parameters for psychological symptoms in this non-selected, non-clinical population, HSCL-25 (48.3 per cent), PTSS-16 score (18.2 per cent) above threshold point for expected illness (cut-off point) for HSCL-25 > 1.75 and PTSS-16 > 2.5, is consistent with studies done in other groups of traumatized refugees (Kessler *et al.* 1995, Weine *et al.* 1998, Thulesius and Haakansson 1999). Although there is generally an overlap between psychiatric symptoms and psychiatric diagnosis, not all individuals who are found to be highly symptomatic on a survey instrument will subsequently be shown to have a formal psychiatric diagnosis (Van Velsen *et al.* 1996). The results still confirm the high level of intrapsychic stress in this refugee population when compared to prevalence data in a two-phase Norwegian population survey. The prevalence data of HSCL-25 cases was 14.9 per cent in a random sample of 3656 individuals (Sandanger *et al.*1998; Sandanger, Moum, Ingebrigtsen, Sorensen, Dalgard and Bruusgard 1999; Sandanger, Nygard, Ingebritsen, Sorensen and Dalgard 1999).

Women were found to have a higher degree of anxiety and depression than men, expressed by HSCL-25. This was consistent with general psychiatric studies where women more frequently express psychiatric symptoms compared to men. The age groups 45–54 years and 75–84 years in this study have high symptom scores as well as trauma scores.

We found some differences between national groups where HSCL-25 showed a significant difference between the Kosovo Albanian group and the Bosnian group. This indicates a higher degree of anxiety and depression in the Albanian group than in the Bosnian group. The need for careful interpretation is obvious. Differences in background in the native country and stressful events in exile, such as the time spent applying for asylum, are factors that may have had an impact on the differences in psychological symptoms. The Albanian group was characterized by having waited for asylum in Norway for a long period, some up to three years, in addition to having experienced a similarly long waiting period in asylum centres in Sweden (Abiri 2000). The social harassment in Kosovo and insecurity regarding the political and social situation in their native country may have influenced the symptoms in a more serious direction, but would need further investigation.

In terms of future mental and physical health problems this non-selected group is a high-risk group considering the high degree of traumatization. 'Having been in danger of losing life', 'experiencing physical violence' and 'witnessing killing'—all traumatic exposures with a high physical component—have a strong impact on psychological findings. This is consistent with other studies on the relation between the degree and nature of traumatic exposures and the severity of the psychiatric symptoms (Carlson and Rosser-Hogan 1991; Mollica *et al.* 1993; Resnick *et al.* 1993). We did not find a significantly lower degree, but a tendency to lower exposure to trauma, comparing the Bosnian (5.58) and Kosovo Albanian (4.51) groups. The genocidal character of the traumatic experiences among a number of Bosnian refugees highlights the parallels to victims of World War II (Eitinger 1959; Thygesen *et al.*1970; Kuch and Cox 1992).

The current study did not go specifically into coping characteristics but the level of the GAF-scores indicates a rather high level of coping within this non-clinical population, in spite of exposure to traumas and psychological symptoms comparing to clinical populations (Lavik, Hauff, Skrondal and Solberg 1996).

Repatriation in Relation to Country of Origin and Pre-flight Trauma

A reflection of the situation in the country of origin, the insecurity and life threatening conditions, was found in the question about repatriation. The attitude correlates to the unstable situation in the refugee producing countries at the time of the study: 'Waiting for better conditions in the country of origin' was the choice of the majority of the Bosnian population. For the majority in the study, the Bosnian group, peace in their home country was very fragile and fear of repetition of hostilities as well as fear of meeting perpetrators from torture experiences and concentration camps may be connected to their attitude to going home. This view was shared by the Kosovo Albanian population who only a few years later were to experience similar atrocities. The uncertainty or negative attitude with regard to repatriation was significantly

correlated to pre-flight traumatic exposures with elements of physical violence and detention in concentration camps. The remaining groups from the Middle East, Far East and Africa were too small to give any valid statistical analyses, but showed a tendency towards 'not wanting' to go home or 'waiting for the situation to get better'. There were no significant correlations to the present psychological symptoms and the attitude to repatriation.

As epidemiological results may be used for planning health services, a 'case' (an individual with an identified health problem) implies a demand for resources in terms of professionals and money. Sandanger, Moum, Ingebrigtsen, Sorensen, Dalgard and Bruusgaard (1999) compared HSCL-25 to Composite International Diagnostic Interview (CIDI) as methods for identification of 'cases' in an epidemiological population. They found that CIDI and HSCL-25 behaved in a very similar manner and that HSCL-25, as a distress measure, expressed more the urgency with which psychiatric services was needed.

Limitations of the Study and Ethical Concerns

The survey reflects the situation in a refugee population above the age of 16. It did not include children who, as individuals, must be considered a high-risk group with their own traumas, as well as being children of traumatized refugees. Their needs must be seen in the context of the population at large.

Ethical concerns approaching this kind of research are important and stereotypic interpretations should be avoided. The interpretation of results in studies like the present one implies a risk for generalizations and ethnocentric interpretations (Moore 2000). The relationship between mental illness and socio-economic status, social and cultural factors may be under-evaluated by over-focusing on pre-flight traumatic exposures. The present paper does not have this as a major topic but it has been kept in mind in the present discussion and is taken into account in the three-year follow-up study. Likewise, diagnoses as constructs of reactions to traumatic experiences are in that sense arbitrary but founded upon considerable reflection. They may like many other ideas be misappropriated and misused. PTSD as one of the available diagnostic tools may be considered a framework that helps in the determination of an appropriate understanding of the patient's condition through which the client can be helped, not as a means to distort suffering (Bolton *et al.* 2001).

Health Policy Implications of the Study

The study was designed as a three-targeted approach, with impact on the individual, educational and policy-oriented level. It served as a useful diagnostic tool to obtain information on psychological and psychosocial distress in a specific group. The results showed a considerable amount of psychological suffering such as anxiety, depression, alarm and flashbacks, often understood as PTSD-related symptoms, in a population at risk. More complex

disturbances (Herman 1992) as well as non-disordered forms of adaptation (Kleber 1997) should be kept in mind. Too much focus on PTSD as a diagnosis may lead to a possible underestimating of the complexity of maladjustment as well as the resiliency of refugees.

At an individual level the refugees attending the study received a thorough examination and early intervention when needed. The method was regarded as useful by public health nurses and family physicians, as it was not time consuming and was well accepted by the patients. Information provided by this kind of study should be used in planning a purpose-built health service (Westermeyer 1989; Williams 1991; Weine *et al.* 1995). At a municipality level the information gathered served as a means for policymaking and facilitating an adjusted psychosocial service towards this group. On an overall level, information provided by this study has been used in advising the planning of a purpose-built health service (Stortingsmelding (White paper) no 17, 2000–2001).

A three-year follow-up study of the refugees in Norway, as well as those repatriated in Bosnia, is now coming to its end where the pre-flight-traumatic exposures, exile life events as well as repatriation are seen in a common context.

Acknowledgements

The support of the Norwegian Research Council for Science and the Department of Health and Social Affairs in funding this research is gratefully acknowledged. The Norwegian National Ethical Research Committee approved the survey. I would also like to thank all the refugees and the interviewers who participated in the study and made it possible.

ABIRI, E. (2000) 'The Changing Praxis of "Generosity": Swedish Refugee Policy during the 1990s', *Journal of Refugee Studies* **13**(1): 11–28.

AL-HAMMADI, A., STAEHR, A. BEHBEHANI, J., STAEHR, M., MOHAMMED, A., AL-TURKAIT, F. and **AL-ASFOUR, A.** (1994). 'The Traumatic Events and the Mental Consequences Resulting from the Iraqi Invasion and Occupation of Kuwait.' Al-Riggae Specialized Centre, Kuwait.

AMERICAN PSYCHIATRIC ASSOCIATION (1994) *Diagnostic and Statistical Manual of Mental Disorders*, Fourth edition—DSM IV. Washington, DC: American Psychiatric Association.

BOLTON, D., GILLESPIE, K., DUFFY, M. and **BURGES, C. M.** (2001) 'Misappropriation and Misuse of PTSD' *BMJ Electronic response to Education and debate: Summerfield D. (2001)* (see this list).

CARLSON, E. B. and **ROSSER-HOGAN, R**. (1991) 'Trauma Experiences, Post-traumatic Stress, Dissociation and Depression in Cambodian Refugees', *American Journal of Psychiatry* **148**: 1548–1551.

EISENBRUCH, M. (1991) 'From Post-traumatic Stress Disorder to Cultural Bereavement: Diagnosis of Southeast Asian Refugees', *Social Science and Medicine*, **33**: 673–680.

—— (1992) 'Toward a Culturally Sensitive DSM: Cultural Bereavement in Cambodian Refugees and Traditional Healers as Taxonomist' Diagnosis of Southeast Asian Refugees', *Journal of Nervous and Mental Disease*, **180**: 8–10.

EITINGER, L. (1959) 'The Incidence of Mental Disease among Refugees in Norway.' *Journal of Mental Science* **105**: 326–338.

FAVARO, A., MAIORANI, M., COLOMBO, G. and **SANTONASTASO, P**. (1999) 'Traumatic Experiences, Posttraumatic Stress Disorder and Dissociative Symptoms in a Group of Refugees from Former Yugoslavia', *Journal of Nervous and Mental Disease* **187**: 306–308.

GORST-UNSWORTH, C. and **GOLDENBERG, E.** (1998) 'Psychological Sequelae of Torture and Organized Violence Suffered by Refugees from Iraq', *British Journal of Psychiatry* **172**: 90–94.

HAUFF, E. and **VAGLUM, P.** (1995) 'Organized Violence and the Stress of Exile. Predictors of Mental Health in a Community Cohort of Vietnamese Refugees Three Years after Resettlement', *British Journal of Psychiatry* **166**: 360–367.

HERMAN, J. L. (1992) *Trauma and Recovery: The Aftermath of Violence From Domestic Abuse to Political Terror*. New York: Basic Books.

KESSLER, R. C., SONNEGA, A., BROMET, E., HUGHES, M. and **NELSON, C. B.** (1995) 'Posttraumatic Stress Disorder in National Comorbidity Survey'. *Archives of General Psychiatry* **52**: 1048–1060.

KLEBER, R. J. (1997) 'Psychobiology and Clinical Management of Posttraumatic Stress Disorder', in J. A. den Boer (ed.), *Clinical Management of Anxiety: Theory and Practical Applications*. New York: Marcel Dekker.

KINZIE, J. D., BOEHNLEIN, J. K., LEUNG, P. K., MOORE, L. J., RILEY, C. and **SMITH, D.** (1990) 'The Prevalence of Post Traumatic Stress Disorder and Its Clinical Significance Among Southeast Asian Refugees.' *American Journal of Psychiatry* **147** (7): 913–917.

KJAERUM, M. (2000) 'Refugee Protection between State Interests and Human Rights. Where is Europe Heading' Paper in 'The Challenge of Refugee Movement in Europe' to ISSEI-Conference, August 2000.

KUCH, K. and **COX, J. B.** (1992) 'Symptoms of PTSD in 124 Survivors of the Holocaust.' *American Journal of Psychiatry* **149**: 337–340.

LAVIK, N. J., CHRISTIE, H., SOLBERG, O. and **VARVIN, S.** (1996) 'A Refugee Protest Action in a Host Country: Possibilities and Limitations of an Intervention by a Medical Health Unit', *Journal of Refugee Studies* **9**(1): 73–88.

LAVIK, N. J., HAUFF, E., SKRONDAL, A. and **SOLBERG, O.** (1996) 'Mental Disorder among Refugees and the Impact of Persecution and Exile: Some Findings from an Outpatient Population.' *British Journal of Psychiatry* **169**: 726–732.

LIE, B. (1999) 'Psykososiale problemer blant nylig ankomne flyktninger i Norge' (Psychosocial problems among newly arrived refugees), Psychosocial Centre for Refugees, University of Oslo.

MOLLICA, R. F., WYSHAK, G., de MARNEFFE, D., KHUON, F. and **LAVELLE, J.** (1987) 'Indochinese Version of the Hopkins Symptom Checklist-25: A Screening Instrument for the Psychiatric Care of Refugees', *American Journal of Psychiatry* **144**: 497–500.

MOLLICA, R. F., CASPI-YAVIN, Y., BOLLINI, P., TRUONG, T., TOR, S. and **LAVELLE, J.** (1992) 'The Harvard Trauma Questionnaire. Validating a Cross-cultural Instrument for Measuring Torture, Trauma and Post-traumatic Stress Disorder in Indochinese Refugees.' *Journal of Nervous and Mental Disease* **180** (2): 111–116.

MOLLICA, R. F., DONELAN, K., SVANG, T., LAVELLE, J., ELIAS, C., FRANKEL, M. and **BLENDON, R.** (1993) 'The Effect of Trauma and Confinement on Functional Health and Mental Health Status of Cambodians living in Thailand–Cambodia Border Camps.' *Journal of the American Medical Association* **270** (5): 581–586.

MOORE, L. J. (2000) 'Psychiatric Contributions to Understanding Racism', *Transcultural Psychiatry* **37** (2): 147–182.

MOOREN, T. M. T. and **KLEBER, R. J.** (2001) 'The Impact of War: Studies on the Psychological Consequences of War and Migration' Chap 6 : Bosnian refugees in the Netherlands; towards a Model of Coping and Mental Health Related to War, Migration and Acculturation. (submitted).

RESNICK, H. S., KILPATRICK, D. G., DANSKY, B. S., SAUNDERS, B. E. and **BEST, C. L.** (1993) 'Prevalence of Civilian Trauma and Post-traumatic Stress in a Representative National Sample of Women', *Journal of Consulting and Clinical Psychology* **61**: 984–991.

SANDANGER, I., MOUM, T., INGEBRIGTSEN, G., DALGARD, O. S., SORENSEN, T. and **BRUUSGAARD, D.** (1998) 'Concordance between Symptom Screening and Diagnostic Procedure: the Hopkins Symptom Checklist-25 and the composite International Diagnostic Interview I', *Social Psychiatry and Psychiatric Epidemiology* **33**: 345–354.

SANDANGER, I., MOUM, T., INGEBRIGTSEN, G., SORENSEN, T., DALGARD, O. S. and **BRUUSGAARD, D**. (1999) 'The Meaning and Significance of Caseness: the Hopkins Symptom Checklist-25 and the Composite International Diagnostic Interview II', *Social Psychiatry and Psychiatric Epidemiology* **34**: 53–59.

SANDANGER, I., NYGRD, J. F., INGEBRIGTSEN, G., SORENSEN, T. and **DALGARD, O. S.** (1999) 'Prevalence, Incidence and Age at Onset of Psychiatric Disorders in Norway', *Social Psychiatry and Psychiatric Epidemiology* **34**: 570–579.

STATISTICS NORWAY (1997) 'Level of Living Surveys 1996'.

SILOVE, D., STEEL, Z. and **WATTERS, C. H.** (2000) 'Policies of Deterrence and the Mental Health of Asylum Seekers', *Journal of the American Medical Association* **284** (5): 604–611.

STEEL, Z. SILOVE, D., BIRD, K., McGORRY, P. and **MOHAN, P.** (1999) 'Pathways from War Trauma to Posttraumatic Stress Symptoms among Tamil Asylum Seekers, Refugees and Immigrants', *Journal of Traumatic Stress* **12**: 167–174.

SUMMERFIELD, D. (2001) 'The Invention of Posttraumatic Stress Disorder and the Social Usefulness of a Psychiatric Category', *British Medical Journal* **322**: 95–98.

STORTINGSMELDING NO 17 (2000–2001) *Asyl og flyktningpolitikken I Noreg*. Det Kongelege kommunal- og regionaldepartement. (Report (White Paper) no 17, 2000–2001 on Norwegian refugee policy to the Storting (Norwegian Parliament).)

THYGESEN, P., HERMANN, K. and **WILLANGER, R.** (1970) 'Concentration Camp Survivors. Persecution, Disease, Disability, Compensation. A 23-year Follow-up. A Survey of the Long-term Effects of Severe Environmental Stress', *Danish Medical Bulletin* **17** (3–4): 66–108.

THULESIUS, H. and **HAAKANSSON, A.** (1999) 'A Screening for Posttraumatic Stress Disorder Symptoms Among Bosnian Refugees', *Journal of Traumatic Stress* **12**(1): 167–174.

VAN VELSEN, C., GORST-UNSWORTH, C. and **TURNER, S.** (1996) 'Survivors of Torture and Organized Violence: Demography and Diagnosis', *Journal of Traumatic Stress* **9**(2): 181–193.

VRANA, S. and **LAUTERBACH, D.** (1994) 'Prevalence of Traumatic Events and Post-traumatic Psychological Symptoms in a Non-clinical Sample of College Students', *Journal of Traumatic Stress* **7**(2): 289–302.

WEINE, S., BECKER, D., McGLASHAN, T., LAUB, D., LAZROYE, S., VOJVODA, D. and **HYMAN, L.** (1995) 'Psychiatric Consequences of "Ethnic Cleansing": Clinical Assessments and Trauma Testimonies of Newly Resettled Bosnian Refugees', *American Jouurnal of Psychiatry* **152**: 536–542.

WEINE, S., VOJVODA, D., BECKER, D., McGLASHAM, T., HODZIC, E., LAUB, D., HYMAN, L., SAWYER, M. and **LAZROYE, S.** (1998) 'PTSD Symptoms in Bosnian Refugees 1 Year after Resettlement in the United States', *American Journal of Psychiatry* 155: 562–564.

WEISAETH, L. (1986) 'A Factory Fire: Attitudes after a Catastrophe and the Posttraumatic Stress Reactions' (in Norwegian). *Tidsskrift for den Norske Laegeforening* **27**(106): 2220–4.

WESTERMEYER, J. (1989) 'Cross-cultural Care for PTSD: Research, Training and Service Needs for the Future', *Journal of Traumatic Stress* **2**(4): 515–536.

WILLIAMS, C. L. (1991) 'Primary Prevention and the Need for a Public Health Approach', in *Mental Health Services for Refugees*, DHHS Publication No (ADM) 91-1824, Washington DC: US Government Printing Office: 203–217.

YEHUDA, R., KANAHA, B., SCHMEIDLER, J., SOUTHWICK, S. M., WILSON, S. and **GILBERT, E. L.** (1995) 'Impact of Cumulative Lifetime Trauma and Recent Stress on Current Posttraumatic Stress Disorder Symptoms in Holocaust Survivors', *American Journal of Psychiatry* **152**: 1815–1818.

MS received September 2000; revised MS received July 2001

II

PAPER 2

Family, activity and stress reactions in exile [1]

Birgit Lie*, Nora Sveaass** and Dag Erik Eilertsen***

*Psychosocial Team for Refugees in Agder and Telemark / Psychosocial Centre for Refugees, University of Oslo

**Psychosocial Centre for Refugees, University of Oslo

*** Institute of Psychology University of Oslo

Accepted for publication: Community Work and Family 2003.

Abstract

The possible protective effects of family, and activity (including work and employment training) on posttraumatic reactions in traumatized refugees living in a host society were explored. A total of 966 refugees participated in the study, the majority of whom had been exposed to war and/or torture trauma prior to arrival in Norway. The study sample consisted of two groups: one had been referred to a psychiatric outpatient clinic for evaluation or treatment, the other consisted of refugees interviewed in connection with a health examination upon arrival in the municipalities to which they were allocated. The study showed that presence of family and employment/training had positive effects on posttraumatic symptoms regardless of level of traumatic exposure. But the results also showed that the higher the level of exposure to traumatic events, the stronger the effect of family (spouse and/or children) seemed to be. The study illustrates the importance of implementing psychosocial measures with special emphasis on activity and strengthening of family systems, in the integration of traumatized refugees in a host community.

Key words:

Refugees – posttraumatic symptoms – exile

Psychosocial factors – family – work – community

[1] Corresponding author: Birgit Lie Psychosocial Team for Refugees in Agder and Telemark/Psychosocial Centre for Refugees, University of Oslo Address: Tordenskjoldsgate 16, N-4612 Kristiansand Norway

Relaciones familiares, actividad y reacciones ante el estress en exiliados

Resumen

El artículo explora los posibles efectos protectivos que tienen las edes de apoyo familiares y el empleo/entrenamiento en las reacciones post-traumáticas de refugiados traumatizados residentes en una sociedad receptora. Participaron en el estudio un total de 966 refugiados de los cuales la mayoria fueron víctimas de varios eventos traumáticos previo a su llegada a Noruega. La muestra consiste en dos grupos: el primer grupo habia sido referido previamente a una clinica psiquiátrica para evaluación y tratamiento; el segundo grupo consiste en refugiados que habian sido sometidos a una examinación clínica llevada a cabo en las municipalidades que les fueron asignadas a su llegada a Noruega. El estudio muestra que la presencia familiar y laboral/entrenamiento tienen efectos positivos en síntomas post-traumáticos, sin importar el nivel de exposición raumática. Los resultados también demuestran que los efectos de la presencia familiar en los síntomas son todavía más evidentes en personas que han sufrido experiencias traumáticas más fuertes. El estudio ilustra la importancia de implementar medidas psicosociales con especial énfasis en la actividad y el fortalecimento de los sistemas familiares para la integración de refugiados traumatizados en sociedades receptoras.

Palabras claves:

Refugiados, síntomas post-traumáticos, exilio, factores sicosociales, familia, trabajacdora, communidad.

The effects of social support and employment on quality of life and health in general (Sheeran & Abraham 1994; Rantakeisu *et al.*1999) as well as on mental health following stressful life events and transitions have been explored in numerous studies (Dalgard *et al*, 1995). This research suggests that psychosocial factors such as social support and employment have protective or buffering effects, showing rather important differences between groups with different access to these resources (Cohen & Wills, 1985; Flannery, 1989; Figley, 1986). This mitigating effect on posttraumatic reactions has also been described after exposure to extreme traumatisation (Engdahl *et al*, 1991; Joseph *et al,* 1995; McFarlane & van der Kolk, 1996;

Sarason *et al,* 1995). However, there are few studies directly related to refugees in which these questions have been raised (Ullman & Siegel, 1994).

The nature of social support in connection to stress and trauma has been discussed (Llabre & Hadi, 1997).

Different models of explanation exist, where the role of social support is described as alternative (but not mutually exclusive) causal models, namely the main effect model and the stress-buffering model. The protective effects of social ties are not uniform across different social groups and differences across gender have also been observed (Kawachi & Berkman, 2001, Llabre & Hadi, 1997).

Pre- and post-migration stress

People living as refugees in a host society have been exposed to a double set of stressors, pre-migration trauma events, like serious human rights violations, loss and uprooting, and the ongoing post-migration stressors in a new society (Hauff, 1998; Mollica & Caspin-Yavin, 1992; Silove, 1999; van der Veer, 1992). Refugees are considered at risk for mental disorders (Lavik *et al,* 1996), and studies have documented a higher incidence of psychiatric illness in refugee populations compared to a non-refugee general population (Westermeyer, 1991; Hauff, 1994, Johansson *et al,* 1997).

From a mental health point of view the impact of psychosocial factors on posttraumatic reactions in exile must be considered as a highly relevant area to explore. In the present study the possible association between factors like presence of family, social network and employment or training activities on psychological distress in traumatized refugees is investigated.

Trauma and social support

Some investigations have been conducted on psychosocial factors, trauma and exile and stand out as important in this context. Gorst-Unsworth & Goldenberg (1998) found that poor social support in exile seemed to be a stronger predictor of depressive morbidity than trauma factors. They found that the level of affective social support in exile was an important determinant of the severity both of posttraumatic stress disorder and depressive reactions, particularly when combined with a severe trauma, such as torture. In a study of Tibetan refugees the long-term consequences of torture on mental health far exceed the effects of being uprooted. Social support in exile was among factors that seemed to foster resilience against psychological sequelae (Holtz, 1998).

A study by Beiser (1988) concludes that refugees accompanied by a spouse were less depressed than those who came unaccompanied, both after 10-12 months, and after 2 years in exile. In contrast to this, Krupinski and Burrows (1986; referred in Hauff, 1998) did not find significant differences in psychiatric morbidity between refugees who had come alone and those who had arrived with family. The study nevertheless demonstrates that loneliness was a strong predictor of psychiatric illness.

Trauma and employment status

Other studies have concentrated on activity measures like employment or training. At the Psychosocial Centre for Refugees, Lavik *et al (*1996) analysed the relationship between general level of psychosocial function and impact of socio-demographic factors, traumatisation and exile. It was found that of 9 independent predictor factors, the only variable that proved to be highly significant in relation to Global Assessment Functioning Scale was the lack of routine activity labelled as "Unemployment vs employment".

Westermeyer *et al.* (1996) found a clear relationship between depression, living on social welfare and being in poor command of English in a refugee population. Depression and unemployment seemed mutually reinforcing. Acquisition of language skills when burdened with severe depressions also seemed difficult. Schwarzer *et al* (1994) found that East-German refugees who remained unemployed were worse off in terms of self-reported health, but that this was moderated to some degree by social support. A study of adaptation problems of Vietnamese refugees found that the level of unemployment as well as underemployment among the South East Asian refugees was high, but found no significant effect of employment status on the health indices used (Lin *et al*, 1979). In this study no measure regarding traumatic exposure was included. A significant relationship between traumatic experiences and current employment status was described in a study by Uba & Chung (1991), They conclude that traumatic experiences seemed to predict unemployment, low income and poor health in the US among refugees from Cambodia.

The studies described above may indicate that employment, as well as social support; seem to have a beneficial effect on refugees. The question has been raised as to the impact of employment over, at or under level of competency. Sundquist *et al.* (1995) reported that the main complaints of the refugees interviewed in their study were degradation in work-life, social isolation in relation to citizens of host society and lack of emotion. Beiser *et al.* (1993) on the other hand found that refugees and Canadians reacted differently to underemployment. Whereas both groups, that is refugees and permanent residents in Canada, showed a clear

relationship between unemployment and depressive affect, being employed seemed to be beneficial for the refugees, regardless of its relation to former working experience and education.

The studies mentioned have all contributed significantly to our knowledge about the importance of psychosocial factors in exile in relation to psychological distress. The present study was motivated by an interested in a further exploration of possible differential effect of psychosocial factors on trauma-related symptoms.

Main focus of the study

The main focus of this study is on the relationship between traumatic exposures, symptoms and psychosocial factors.

The specific research questions raised are:

1. What is the level of posttraumatic reactions expressed by psychological symptoms in a refugee population exposed to an array of severe trauma?
2. What is the relationship between the type and degree of traumatic exposures and posttraumatic reactions?
3. How are posttraumatic reactions affected by the psychosocial factors, family, employment or training, in exile?
4. Is there a differential effect of these factors depending on the level of traumatic exposure?

METHOD

Sample

The participants were recruited from two different groups. One group consisted of refugees who had been referred from the primary health care to an outpatient clinic for psychiatric evaluation and treatment. The other consisted of refugees invited to participate in a general health check offered to all refugees settling in municipalities. The referred group consisted of people, self-selected for their symptoms of distress and thus gave an indication of the symptom level in a help seeking population. The non-referred group, however, could be considered as providing the best indicator of general symptom level in a large refugee population. Merging the two sub-samples into one large sample, gave us an opportunity to explore a wide range of individuals with a variety of experiences and to look more closely at the relation between background factors, present psychosocial factors in exile and symptom

level. The sub-samples showed important common features as well as expected differences, which will be dealt with in the result and discussion sections.

The referred group consisted of 504 (172 female/332 male) consecutively admitted patients to the psychiatric outpatient unit at the Psychosocial Centre for Refugees, University of Oslo in the period between October 1991 and September 1994.[2] The non-referred group consisted of 462 (216 female/246 male) refugees settled in 20 municipalities in Southern Norway in the period between May 1994 and December 1995 and the information was collected during 1995 and 1996. This population was considered a population at risk showing a considerable amount of psychological suffering, with PTSD-related symptoms, but at the time of the study, nobody had yet been referred for treatment. (Lie *et al* 2001).

Table 1 displays demographic characteristics of the group and differences between the sub-samples with total number of 966 participants, 40.1 % women and 59.8% males. As is clear from Table 1 the patterns of country of origin and time of exile vary considerably between groups. This varies the issue of the role of post-settlement experiences in contributing to psychological distress, but this will not be a focus of this paper. Two hundred and sixty six (28.7%) had high school/university background and 615 (66.3%) had from 1 to 12 years of education. Forty seven (5.1%) had no formal education at all. Time in Norway varied from 0 to 260 months, with a mean of 34.7 months (SD=34.8). Twenty-eight percent had status as political refugees (that is convention refugees and refugees granted political asylum in Norway). Thirty eight percent of the refugees had been granted a residence permit, 33 % had an undecided status and 1 % of the refugees had been denied permit. Geographically the two largest groups were from the Middle East (31.3%) and Europe (Former Republic of Yugoslavia) (31.6%).

Procedures and measures

Interviews and questionnaires

A standard procedure for evaluation consisting of a structured interview was applied. The information in the non-referred group was gathered in a specially designed project. Fifty-eight municipalities in Southern Norway, all of them accepting refugees to be settled were invited to collaborate in this project. Twenty of these municipalities (34.4%) decided to participate and health personnel affiliated to the municipalities assisted in the compilation of the research data. A total of 1365 refugees had settled in these 20 municipalities between May 1994 and

[2] They were all adults when they arrived

December 1995. All refugees over the age of 16 (N=791, or 58 % of the total population) were invited to participate. Of these, 462 refugees, or 58% of those over 16, took part in the study.

All participants were interviewed according to a structured interview questionnaire specifically developed for the study. The interview, with duration of approximately one hour, supplemented the general health check by family physicians and health visitor nurses, offered to refugees when settling in the municipalities. The interview guide, a structured questionnaire was translated into Albanian, Arabic, Bosnian/Serbo-Croatian, Somali, Spanish and Vietnamese with back-translation as a validity check. The ongoing war in former Yugoslavia at the time of the study made dialectal differences between Croatian, Bosnian and Serbo-Croatian into major issues at some points.

In the referred group, all participants were interviewed according to a structured interview and a questionnaire used as a routine procedure at the clinic (Psychosocial Centre for Refugees at University of Oslo) covering the same information as in the non-referred population. The therapists carried out these interviews. Professional interpreters were used in the interviews and the questionnaires were available in different languages. The interview covered data on sociodemographic variables, present exile situation, traumatic events, and psychological symptom load. The sociodemographic variables included geographical origin, ethnicity, gender, religion, age and education. Present exile situation was described by presence of family in Norway, current activity status and refugee status.

The presence of family in Norway was categorized into the following two categories: "close family in Norway" expressed by the interviewees' concept of close relatives and presence of core family and "no family in Norway" expressed by the interviewees' concept of only distant family or no presence of family members in Norway.

The present study focused on the refugees' participation in the new society and activity out-side the home was of great importance. A global measure of «activity» vs. "no activity» was used. «Activity» indicated routine activity outside the home, either work, studies or training, whereas «no activity» indicated no routine activity outside home.

Pre-flight exposure to traumatic events was measured by 8 items, based on Harvard Trauma Questionnaire (Mollica *et al.,* 1992), where each item indicated the presence of one of the following stressors: hiding (living underground), imprisonment, concentration camp, physical torture, war-exposure, separation from family, danger of life and other extreme events (rape, psychological torture and witness to violence). Exposure to any one of these

events was given a score of 1 in the analyses. The nature of the pre-flight events was categorized as war-related events and torture-related events. War-related events indicate situations that might have been potentially traumatising but where the traumatic experiences often have been experienced in a collective context. The other events indicate experiences with a clearer individual involvement with an intrusive impact such as torture. The trauma exposures, with the exception of life-danger, were given unit weights, and additively combined into a measure we called "traumatic events", ranging from 0 through 7. Having been in danger of losing life was not included – both because of it's unclear meaning, and because it was found to have very low correlations with all the symptom measures.

Psychological symptom load was measured with two checklists: The Hopkins Symptom Checklist (HSCL-25) includes 10 items from the anxiety cluster, 13 items from the depression cluster and 2 items related to somatoform problems, with scores ranging from 1 through 4. Scores above cut-off of 1.75 indicate 'clinically significant distress'. HSCL-25 has been used in cross-cultural research (Mollica *et al.*, 1987; Lavik *et al.*, 1999) and has proved reliable and valid for measuring depression and anxiety in cross-cultural studies. The Posttraumatic Symptom Scale (PTSS-10) is a self-report 10-items questionnaire derived from PTSS-16, where in participants are asked to indicate whether they had experienced each of the noted symptoms within the last 7 days. The 10 items are: sleep disturbances, dreams/nightmares about imprisonment/torture, depression, startle reactions, tendency to isolation from others, irritability, emotional lability, guilt/self accusations, fear of the trauma scene or situations resembling it and bodily tension. For each item a yes response was coded 1 and a no response was coded 0 (Raphael *et al.*, 1989; Lavik *et al.*, 1996).

Studies of the psychometric properties of new translations of PTSS-16 derived from HTQ and HSCL-25, have shown that the tests are adequate across different cultures and are in general, applicable to measure symptoms of depression, anxiety and posttraumatic stress disorder (Kleijn *et al.*, 2001; Hollifield *et al.*, 2002).

PTSS-10 and HSCL-25, the chosen measures were commonly used in studies of refugee health when the study was designed (Eid *et al.*, 1999).

Statistics

In the first analyses, bi-variate analyses were carried out on merged samples from the two populations. In the secondary analyses all symptom scales HSCL-25, PTSS-10 and the combined symptom measure were used as dependent variables. Correlation of symptoms with

psychosocial factors and traumatic events were examined. Socio demographic variables (such as gender, age, groups of nations and education), social life in exile expressed by presence of close friends and family, works status and activity in Norway as well as traumatic exposures, were used as explanatory variables.

Factor analysis

In the multivariate analyses the pre-flight traumatic events were grouped into two factors according to the nature of stress exposure described in more detail in Lie, 2002. In order to reduce the complexity of the different trauma variables we carried out a factor analysis with principal component extraction and varimax rotation. The component analysis revealed two meaningful factors above the elbow of the scree plot. Cumulative explained variance found was 51.7%, 27.1% by the first component after rotation. All items loaded higher than .45 on the respective components. One of the factors comprised items related to stressors with an intrusive nature, loading prison and torture related variables. The prison and torture related events indicate experiences with a clearer individual involvement and with an intrusive impact. (A,B,C,D) The other factor consisted of items related to external stressors, loading war related variables. War related events indicated situations that may be potentially traumatizing but where the traumatic experiences often have been experienced in a collective context (E,F,G,H). Based upon the factor analysis two new variables (Stress 1 and Stress 2) were constructed by an equally weighted sum-score of chosen items.

Combined psychological distress measure -Symptom

The aim of the study was to describe the level of psychological distress in exile rather than specific diagnostic profiles. HSCL-25 and PTSS-10 scores were found to be highly correlated (0.80, $p<0.01$). They showed a very similar pattern when correlated with the independent variables.

The results from the two sub-scales of the HSCL-25 were also strongly correlated with each other (0.85, $p<0.01$) as well as with PTSS-10 scores.

The two scales may be said to measure theoretically different aspects of psychological distress, that is, anxiety, depression and trauma-related symptoms. Nevertheless the symptoms that are measured may be interpreted as interrelated symptoms of underlying phenomena, namely psychological distress due to severe changes and stress. As the two symptom scales may be regarded as a measure of a same or similar phenomena a combined symptom measure

based on the original scales was chosen. This gave us a more general measure of the psychological distress in exile, as well as providing us with stronger measure from a statistical point of view. Combining the two scales was considered to be strengthening the statistical reliability of the measure.

The global symptom measure "Symptom" was created by transforming the two scales HSCL-25 and PTSS-10, rated on different scales, into scores with a mean of 10 and SD of 3, and then adding them. Having due regard to theoretical arguments against combining the two symptom measures arguments, all analyses were carried out both with the symptom scales separately as well as with the combined measure "Symptom". Statistical Package for the Social Sciences (SPSS) was applied for data analyses.

RESULTS

Socio demographic characteristics expressed by education, activity and family.

The sub-samples showed significant differences in all sociodemographic variables except distribution of educational background. The total group and the two sub-samples are displayed in table 1. Differences between the samples are indicated.

Education

One third of both groups had more than 12 years of education and very few had no schooling at all.

Activity

Sixty-five percent of the total population was engaged in some kind of activity outside home such as paid working language courses, in employment training and in other kinds of studies. Thirty-five percent had no activity outside home. The referred group had significant higher proportion individuals without daily activity outside home (53%). In the total population 1.6% were above working age (> 67 years). In the referred group none were above working age and in the non-referred group 3.3 % were above working age

Family

A percentage of 64% of the total population had either "close family in Norway whereas 37% had "no family in Norway". A larger share of the non-referred population had close family in Norway than in the referred group.

Table 1. Sociodemographics in relation to sample groups referred, Non-referred and total sample.

	REFERRED	NON-REFERRED	TOTAL	Difference between samples [2]
Total group	n=504 (52%)	n=462 (48%)	N=966	
GENDER				
Male	332 (66)	246 (53)	578 (60)	**
NATIONAL GROUPS[1]				**
Africa	63 (13)	7 (2)	70 (7)	
Middle east	286 (57)	15 (3)	301 (31)	
Far east	40 (8)	23 (5)	63 (7)	
Latin America	28 (6)	4 (.9)	32 (3)	
Europe	83 (17)	413 (89)	496 (52)	
EDUCATION				NS
No school	34 (7)	13 (3)	47 (5)	
1-12 years	298 (63)	317 (70)	615 (66)	
>12 years school	140 (30)	126 (28)	266 (29)	
STATUS				**
Refused	10 (2)	-	10 (1)	
Not decided	51 (11)	259 (56)	310 (33)	
Residence permit *	167 (35)	184 (40)	351 (38)	
Political refugee	246 (52)	18 (4)	264 (28)	
ACTIVITY				**
Activity outside home	218 (47)	387 (84)	605 (65)	
No activity outside home	248 (53)	73 (16)	321 (35)	
FAMILY IN NORWAY				**
Only family	190 (45)	363 (81)	553 (64)	
No family	231 (55)	83 (19)	314 (36)	

All percentages are computed as percentages of valid responses and represent counts within groups, except for "Total"

[1] Includes citizenship.

[2] Difference between referred and non-referred population: NS: non significant, * significant at.05 level, **: significant at .01 level.

Exposure to traumatic events

As shown in table 2 the participants had been exposed to serious hardships, but the groups had experienced different kinds of traumatic events. In the referred group a large percentage had been exposed to detention - prison or camp (65 %) and torture (57%) and other extreme events (98%), including rape, psychological torture and witness to violence, variables with an intrusive character. In the non-referred group the number of refugees exposed to war related, external, traumatic events was larger

Table 2. Traumatic exposures in relation to sample groups referred, Non-referred and total sample.

	REFERRED	**NON-REFERRED**	**TOTAL**	**Difference between samples** [2]
Total group	n=504 (52%)	n=462 (48%)	N=966	
TRAUM. EXPOSURE				
Torture	266 (57)	67 (15)	333 (35)	**
Other extreme [1]	492 (98)	247 (54)	741 (77)	**
Concentration camp	66 (15)	81 (18)	147 (16)	**
Prison	271 (58)	66 (15)	337 (37)	**
Sep. from family	345 (69)	346 (75)	691 (72)	*
Exposed to war	287 (61)	335 (74)	622 (67)	**
In danger of life	122 (32)	361 (79)	483 (58)	**
Lived in hiding	191 (43)	291 (63)	482 (53)	**

[1] Includes rape, psychological torture and witness to violence
All percentages are computed as percentages of valid responses and represent counts within groups, except for "Total")
[2]Difference between referred and non-referred population: NS: non significant, * significant at.05 level, **: significant at .01 level

Psychological symptom level

Table 3 displays the mean level of psychological symptoms for the entire group. The mean symptom-levels were significantly higher in the referred than in the non-referred group for all measures. In the referred group the means of the three different measures were HSCL=2.7, PTSS=0.8 and "Symptom"=11.9. In the non-referred, the mean levels were HSCL=1.87, PTSS=0.47 and "Symptom"=8.4.

Table 3. Psychological distress as measured by HSCL, PTSS and "symptom" by activity, education, family, and type of trauma exposure.

	REFERRED						NON-REFERRED						TOTAL								
	Symptom		PTSS		HSCL		Symptom		PTSS		HSCL		Symptom			PTSS			HSCL		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	p	Mean	SD	P	Mean	SD	p
TOTAL POPULATION	11.9	2.1	.8	.2	2.7	.6	8.4	2.4	.5	.3	1.9	.6	10.1	2.9	**	.6	.3	**	2.3	.7	**
GENDER															**			**			**
Female	12.27	1..8	.79	.17	2.91	.49	8.1	2.5	.44	.26	1.79	.56	9.59	3.02		.56	.29		2.16	.75	
Male	11.78	2.14	.79	.19	2.67	.62	8.7	2.3	.49	.25	1.93	.56	10.31	2.71		.65	.27		2.32	.69	
EDUCATION															*			*			*
No school	12.08	1.33	.77	.11	2.85	.39	10.24	2.84	.62	.29	2.28	.74	11.35	2.21		.72	.21		2.62	.62	
0-12 years	11.99	2.23	.80	.20	2.76	.63	8.51	2.38	.48	.25	1.89	.55	10.01	2.88		.62	.28		2.25	.73	
>12 years school	11.75	1.88	.78	.18	2.69	.56	8.02	2.39	.43	.25	1.77	.54	9.81	2.85		.6	.28		2.19	.71	
MAIN ACTIVITY															**			**			**
No activity	12.35	1.90	.81	.18	2.91	.51	8.90	2.29	.51	.24	2.00	.55	11.44	2.52		.73	.24		2.65	.66	
Employment/Training	11.41	2.18	.76	.20	2.57	.64	8.32	2.42	.46	.26	1.84	.56	9.26	2.74		.55	.28		2.06	.67	
FAMILY IN NORWAY															**			**			**
Only family	11.91	2.25	.79	.19	2.74	.64	8.49	2.38	.47	.25	1.89	.56	9.47	2.81		.56	.27		2.11	.69	
No family	11.91	2.02	.79	.19	2.73	.59	7.74	2.34	.42	.26	1.73	.52	10.68	2.82		.68	.27		2.41	.73	
TRAUM.EXPOSURES																					
A Torture	12.18	1.95	.82	.17	2.8	.58	9.42	2.54	.57	.25	2.09	.63	11.53	2.41	**	.76	.22	**	2.62	.67	**
B Other extreme *	11.92	2.06	.79	.19	2.74	.59	8.78	2.46	.50	.25	1.95	.58	10.69	2.71	**	.68	.26	**	2.42	.71	**
C Concentration camp	12.23	2.15	.83	.18	2.83	.56	8.84	2.43	.51	.24	1.97	.60	10.26	2.85	ns	.64	.27	ns	2.32	.72	ns
D Prison	12.01	1.99	.81	.18	2.75	.59	8.62	2.49	.51	.27	1.87	.56	11.23	2.55	**	.74	.24	**	2.53	.68	**
E Sep. from family	11.9	2.1	.79	.19	2.73	.61	8.52	2.44	.48	.26	1.89	.57	10.01	2.84	ns	.62	.27	ns	2.25	.72	ns
F Exposed to war	12.15	2.86	.81	.17	2.8	.55	8.45	2.35	.48	.25	1.87	.55	9.96	2.82	ns	.61	.27	ns	2.23	.71	ns
G In danger of life	12.26	1.95	.82	.18	2.83	.58	8.54	2.46	.72	.25	1.90	.58	9.39	2.82	**	.56	.28	**	2.11	.70	**
H Lived in hiding	12.14	2.04	.82	.17	2.8	.59	8.55	2.47	.48	.26	1.9	.59	9.78	2.89	*	.60	.28	ns	2.20	.72	ns

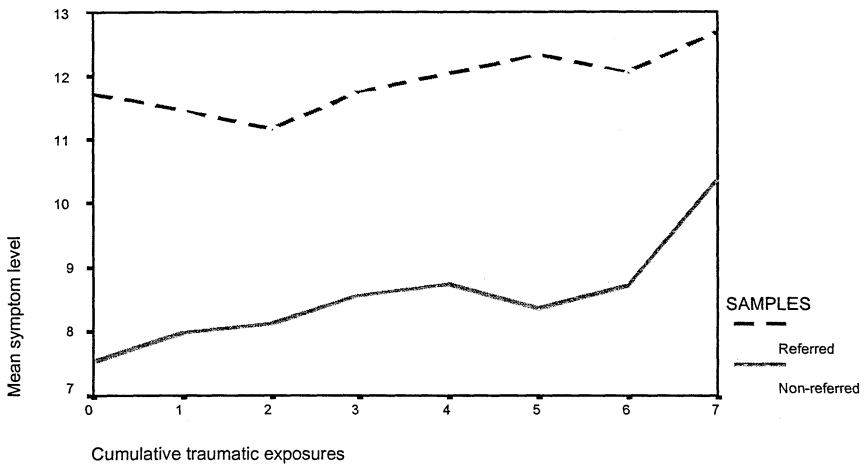
Significant difference between the groups referred and non-referred analyzed with ANOVA * p<.05, ** p<.001, ns non significant.

Relationship between traumatic experiences and posttraumatic reactions expressed by psychological symptoms.

A correlation analyses was made in order to study the relation between the exposure variables stress1, 2 and 3 with the symptom variables HSCL-25, PTSS-10 and Symptom Analysing the sub samples separately, the following picture emerged. In the referred group the variable 'Stress 1' and 'Stress2' showed significant correlation to all symptom variables (HSCL-25= .168**, PTSS-10= .138**, Symptom= .164 **) In the non-referred group only 'Stress 2' correlated significantly with PTSS-10 (.143 **) and Symptom=115*.

An increase of symptom level with increasing level of pre-flight traumatic exposure was seen in both groups. Graph 1 displays the "Symptom" level in relation to increasing level of pre-flight traumatic exposure for the two sub-samples. The patterns of symptom load were similar in both sub-samples but the starting point was higher in the referred compared to the non-referred group.

Graph 1 Mean symptom level in relation to cumulative traumatic exposures



Influence of psychosocial factors on symptom level

To assess the relationship between psychological distress, and the influence of different psychosocial factors in exile, a multiple regression analysis was carried out with HSCL-25, PTSS-10 and "Symptom" as the dependent variables.

The following predictors were included gender, time in Norway, refugee status, education in country of origin, activity outside home, close family in Norway and traumatic exposure expressed by Stress1 and Stress2.

Table 4. Multiple regression analyses with symptom load (expressed by HSCL-25, PTSS-10 and the combined measure Symptom) as the dependent variables and gender, time in Norway, refugee status, education from country of origin, Activity outside home, Family in Norway and traumatic exposures expressed by (stress 1 and2) as predictor variables. Relations expressed by standardized coefficient – β.

	Gender	Time in Norway	Refugee Status	Education from country of origin	Activity outside home	Close family in Norway	Stress 1	Stress 2	R^2 %
HSCL-25	.08**	.12**	-.02	-.05	-.28**	-.05	.28**	-.03	27
PTSS-10	.13 **	.08 *	-.09 **	-.05	-.18 **	-.05	.3**	-.02	23
SYMPTOM	.1**	.1**	-.06	-.05	-.24**	-.05	.30**	-.04	26

* Indicates relationship at significance level 0.05.

** Indicates relationship at significance level 0.01.

Stress1 were traumatic events grouped as *intrusive*: a. torture, b. other extreme, c. concentration camp, d. prison. **Stress2** were traumatic events related to war experiences grouped as *external*: e. separated from family, f. exposed to war, g. in danger of loosing life, h. living in hiding.

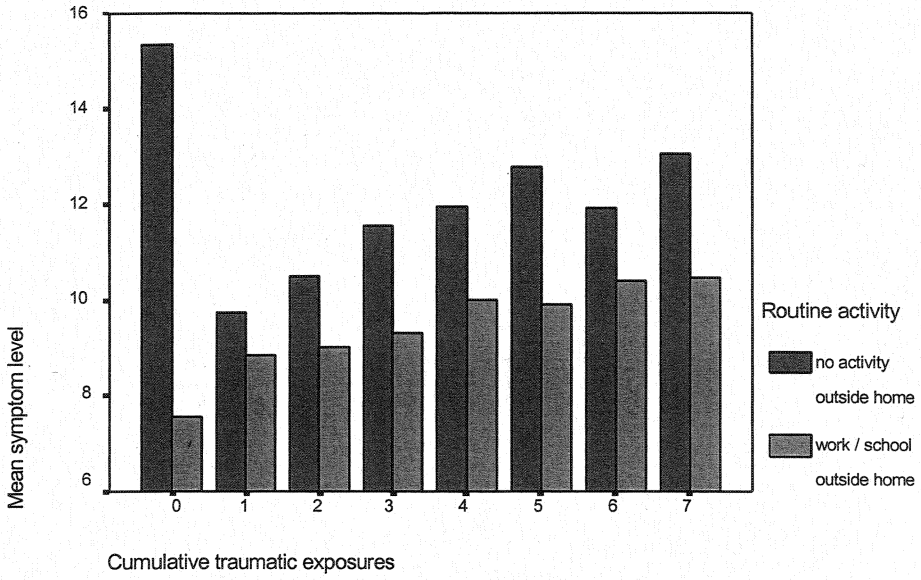
Table 4 displays the results of the analyses with an explained variance from 23% to 27%. The separate analyses for HSCL-25 and PTSS-10 showed some differences but the pattern was similar in the sub samples. Gender, Time in Norway and Activity were found to have a significant influence on all the symptom variables. Refugee status came out as significant in relation to psychological distress only in the PTSS-10. 'Stress 1', the trauma-variable with intrusive character, had significant influence on all symptom variables.

Differential influence of psychosocial factors on symptom level, depending on level of traumatic exposure.

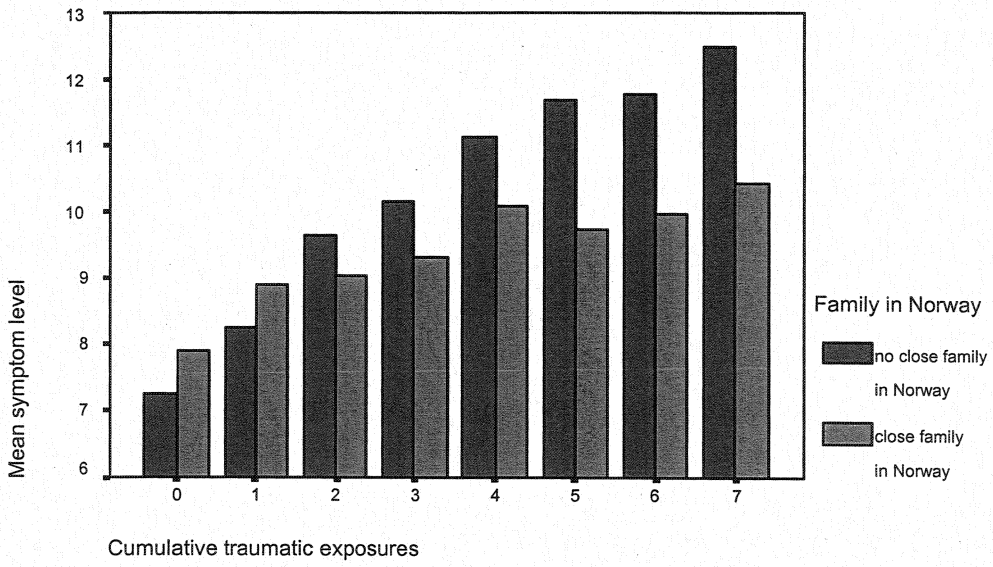
All analyses were performed with the separate symptom variables HSCL-25 and PTSS-10 as well as with the combined Symptom. The pattern was similar for the preceding results.

We found a rather weak but far from significant - traumatic exposure by activity interaction. The influence of activity on "Symptom" level is seen in Graph 2.

Graph 2 Impact of activity on mean symptom level in relation to cumulative traumatic exposures

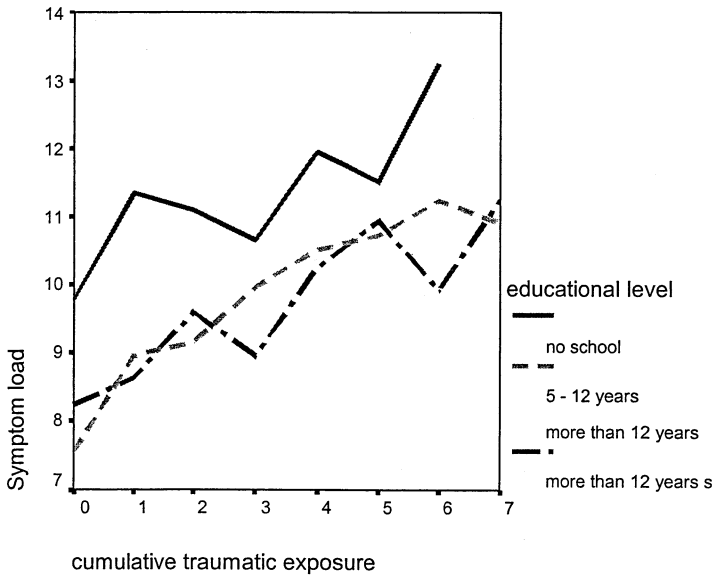


Graph 3 Impact of Family in Norway on mean symptom level in relation to cumulative traumatic exposures



We found a significant traumatic exposure by family interaction on "Symptom" level. The effect of presence of family increases by increasing level of traumatic exposure. This pattern was consistent in the analyses of the sub-samples as well as for the total group. Graph 3 displays the pattern for the total group. The mean "Symptom" level for refugees with or without family, when the level of trauma exposure is low, is approximately identical for the two groups. But the differences in symptom level between those with and without family, were considerable at high exposure level, that is, at 6 and 7. Mean "Symptom" levels for respondents without family were 11.8 and 12.5 in the two sub-samples, and the corresponding figures for respondents with family were 10 and 10.4.

Graph 4 Relation between educational level, symptom load and cumulative traumatic exposure.



Duration of education was significantly correlated to 'Stress 1' Exploring the relation between level of education, symptom load and cumulative traumatic exposure (see graph 4) we found that the group with no education had higher symptom levels than those with both shorter and longer duration of education.

DISCUSSION

The findings in this study emphasize the importance of psychosocial factors and their influence on level of psychological distress in a traumatized refugee population. The study has investigated the relation between presence of close family and activity on trauma related symptoms. The question whether there is a differential impact on level of traumatic exposure on distress has been raised. The results as described above do not offer definite comments on causality but may contribute to the awareness related to the importance of certain psychosocial factors in exile for people that have been exposed to traumatic incidents prior to or in relation to their flight.

The study was a cross sectional study with results based on observations at one point of time. Thus it is difficult to see whether the possibly moderating influence of family and activity on symptoms, changes from one point of time to another. Despite the rather clear results describing the differences in symptom level with and without family as well as with and without activity, we are not able to conclude whether this is stable over time.

The general symptom level of the refugee population studied.

The study revealed a considerable difference between the two groups studied with regard to symptom level. Others had referred all the participants in the referred group to an outpatient clinic in the health care system because of reported distress or high level of trauma exposure, whereas the participants in the other group had undergone a routine health check. Thus it is not surprising that symptom levels in the referred group were higher – this is why they had been referred in this last phase. The symptom level in the referred group cannot be regarded as a general symptom level indicator in a refugee population, but the symptom level in the non-referred group may do. The different results in two sub-samples were expected and are similar to reports in other studies (for example Johanson *et al.,* 1997).

Exposure to traumatic events related to symptom level

Trauma events may be regarded as attacks on the individual's sense of self and predictability of the world. Central to the experience of traumatic stress are the dimensions of helplessness, powerlessness, and threat to one's life (Mc Farlane & De Girolamo, 1996). Cultural values may affect psychological responses and adaptations to trauma.

A high level of exposure to traumatic events was similar for the two groups studied in this work. The types of exposures varied due to the differences in the social, historical and political context in which they had sought asylum either as individuals or as families.

The majority of the non-referred group consisted of people coming in larger groups, often from the same places and with a much higher level of shared experiences. Shared and collective experiences may function as a way of lessening the impact of direct trauma (Holtz, 1998). In addition, the reception climate may have been different as the non-referred group to a large extent were refugees from a war in Europe, better known to the public and leading to more engagement and empathy than many of the other political conflicts producing refugees. The majority of the members of the referred group however, had come from the Middle East, at a time when public information was poor. They had not come in large groups and the reception climate was relatively hostile.

Activity

A limitation of this study is the difference in the time spent in Norway between the two groups. The non-referred group did, due to the short time they had been in Norway, attend compulsory language training and employment training courses to a larger extent than the referred group who normally had stayed longer in Norway. This may have contributed to the lower symptom level in the non-referred group compared to the referred. The influence of activity described in this study raises several questions. It may be explained by the fact that those with the highest symptom level are incapable of regular activity outside their homes, indicating that high symptom level leads to inactivity rather than being caused by it. Again the study does not supply conclusive evidence, but based on the studies indicating decline in health related to inactivity and unemployment, it seems plausible to argue that inactivity in itself seem to contribute to increased distress. Reasons for inactivity would be worthy of exploration. There may be implications for the long-term support of refugees, for example if it is found that activity decreases after the initial, well supported time of settlement.
The present study does not provide the data necessary to conclude what aspects of activity seem to be the most effective ones. For this further studies are needed.

Nevertheless the findings in this study demonstrate that regular activity outside the home has a beneficial impact on symptom level in exile. This impact is clear regardless of traumatic events in the past. Those who have been exposed to a large number of traumatic events as well as those with less exposure seem to benefit from having a regular daily activity outside their home. The benefits of activity can be related to various essential aspects in the lives of the refugees. Almost certainly, time and activity spent in the home will differ for men and women and the gendered nature of settlement experience will be important to explore.

Taking part in the new society and being included in contexts where capability and agency may be confirmed may counteract some of the destructive effects of exile and serve as important resources in the reconstruction of lives, both psychologically and socially. The findings described in this study, where domestic activity does not seem to have this kind of effect on symptom level underline that the importance may lie in active social participation as part of an acculturation process as well as a rehabilitation process. A study by Ying & Akutsu (1997) investigated sense of coherence, defined according to Antonovsky (1987) as comprehensibility, manageability, and meaningfulness, in relation to psychological adjustment of Southeast Asian refugees. The study concluded that sense of coherence emerged as the most powerful predictor of the adjustment of refugees. They also found that being employed and living in ethnically dense areas predicted happiness in contrast to demoralization.

Considering the described impact of regular activity on posttraumatic reactions, the large number of persons in the study without any kind of activity is alarming, and has implications for the support of refugees.

To engage refugees in a host society in a way that makes use of former education and qualification is important in all plans for integration (Hauff & Vaglum 1993; Djuve & Hagen, 1995). Refugees are often strongly underrepresented in the labour market, especially those with a lower level of education. Hauff & Vaglum (1998) and Djuve & Hagen (1995) argued that providing better educational opportunities is one of the most important measures in relation to the integration of refugees. As in other studies (Engdahl *et al.*, 1991), we found a significant relationship between education in country of origin and symptom level. But the present study does not provide the information needed for expanding any further on this issue.

The study by Beiser *et al.,* 1993, referred to in the introduction, may suggest that activity as such seems beneficial to refugees and that the problem of underemployment may seem secondary to the benefit of being engaged in an activity. Although this conclusion will be disputed by other studies, for instance Sheran & Abraham, (1994) there seems to be sufficient evidence from this study and others, to point at this possibility. This is emphasised by the observation that for most refugees, the situation of not being economically self-sufficient is a serious threat to adjustment and well-being. But whether it is activity in general, being busy in a structured and social context, employment versus training or education, or aspects like income, prospects for mobility and integration that are the most salient elements will have to be studied further.

Whereas employment may provide a stronger economic basis and integration within a formalized system, training or education may represent both a challenge and a setback, depending on former levels of education. For some people, required courses in language, skills training or certification courses to be able to exercise former professional work, may be another disqualifying event and sign of disrespect from the host society. To others it may provide new opportunities like the prospect of having income and easier integration, along with the social aspects of attending such training. Such differential impacts should also be the subjects of further investigations.

Family in Norway

Whereas no differential impact of trauma exposure was found in relation to activity, the study indicates that effect of family interacts with level of trauma exposure. Presence of family seemed beneficial to almost everybody, regardless of exposure level, but the moderating or buffering effects of family increased with the number of traumatic events experienced. This implies that there is a potentially strong health gain in helping families get together and supporting them so that they are able to stay together. This seems especially important in families that have been exposed to severe traumatic events.

The study gives an indication of the importance of family. It does not provide conclusive evidence of specific qualities in the family structure or presence of family as such, acting as protective factors. The distant family seems less important, even though they may represent a potential, supportive, social network for the individual. It may be, therefore, that it is the proximity of the other persons (that is, having them at a close distance) that represents the salient point. Living in families may imply having some available space for expressing and receiving emotional reactions, a possibility that may become even more important when severe trauma exposure is part of the history. The presence of family represents a known context, the possibility of keeping up traditions from the life formerly lived; it provides a minimum of safety and continuity in life. Families may function as a resource through shared history, meaning and roles. They may know each other from a life prior to trauma, and may thereby be in a position to confirm sense of identity and coherence.

Although the presence of family in most studies is considered an important factor in the process of coping after stressful events (Figley, 1986), there is also evidence that families do not necessarily have an ameliorating or moderating effect on stress. Qualities such as supportiveness and acceptance of emotional reactions seem important in this respect. A study of the impact of family on the development of Post traumatic stress disorder (PTSD) in

homecoming soldiers showed that the incidences of PTSD was higher in soldiers reunited with families – that is spouse and children - compared with those who returned to unmarried lives. But when the emotional qualities of the networks to which the soldiers returned were evaluated, this showed that returning to supportive networks permitting expression of emotional reactions was the salient element, regardless of family relation. Those in highest risk of developing PTSD were the soldiers returning to environments less supportive and less tolerant of combat related reactions, and where full normalization was expected (Rosenck & Thomson, 1987). Whilst it is problematic to compare returning war veterans with refugees to settle in exile, there may be some useful points of similarity. For example, similarities are reported by Gorst-Unsworth & Goldberg (1998) where the impact of nurturing and close social relationships in the lives of refugees was described, regardless of family relation.

There are studies that have provided examples of instances where no clear effect of social support after disaster was demonstrated (Hodgkinson & Stewart 1991). But generally, in times of disaster, like accidents, natural catastrophes etc., the mobilization of the existing social networks are practiced as a way of securing support and security (see Figley 1989; Solomon, 1986; McFarlane & van der Kolk 1996).

Refugees find themselves in a special situation with regard to potential social support systems. In contrast to homecoming soldiers and others returning to contexts following traumatic events. The refugees have to cope with posttraumatic reactions in circumstances that are new to them and often experienced as alien and even hostile. A study by Basoglu & Mineka (1992) describes the differences in trauma reactions, depending on whether the person is living in his or her country of origin or in exile. The importance of a shared and collective understanding of traumatic events in relation to how to deal with them is also discussed by Sveaass & Castillo (2000; see also Jerusalem *et al*, 1995). The special importance of family for refugees may lay in its capacity of representing a social unit that takes care of the common history, of shared experiences and a shared value and meaning system. All of these elements may prove important for the traumatized refugee, but at the same time, these aspects of family life, as a shared cultural and emotional unit, may be jeopardized by a life in exile (Sundquist *et al.*, 1995; Ying & Akutsu, 1997).

CONCLUDING COMMENTS

The findings in this study are consistent with findings based on studies of traumatic events and posttraumatic stress, showing the importance of context and support for the reactions in the aftermath. But the special situation in which refugees find themselves, as victims of

socially and politically constructed disasters, with consequences related to changes in confidence, human relationships and self assessment makes it especially mandatory to find ways to assist and support on many different levels. On one level this includes providing opportunities for meaningful activity (including work) and social integration into local communities, which may imply educational as well as health measures.

The study has pointed to some psychosocial factors that seem vitally important with regard to this process. The role of social support, here only studied through presence of family, and regular activity in the host society seem to have an impact on posttraumatic reactions in individuals who have suffered extreme traumatisation.

The reconstruction of meaningful lives and the general process of rehabilitation take place in environments alien to the refugee, making the presence of family and the creating of structured lives even more important.

This study was essentially a descriptive one that was unable to identify causal links between level of activity and support, pre-exile trauma and current symptoms of distress. Whilst it would be perverse to support that pre-exile trauma had little effect on post-settlement function more detailed research on the role of post-settlement experience and its contribution to the exacerbating of psychological distress could be valuable. Nevertheless in the basis of this study some recommendations stand out more clearly than others:

- Policy and implementation of programs of family reunification in refugee receiving countries should provide easier access to reunion. Families, and especially families that have lived apart for a long time and undergone severe hardships, should be provided with substantial assistance both emotionally and socially (Sveaass & Reichelt, 2000).
- Initiatives to develop social support systems also outside of the family context should be systematically stimulated and implemented (Barudy, 1989).
- Finally conditions to favour refugees both in the labour market and in the educational systems should be given priority, requiring some flexibility in the systems as well as methods to evaluate qualifications in those who arrive as refugees.

These measures must be developed within a socio-political context, but their general importance both at the health level and from a human rights perspective, cannot be underestimated. Targeted research, socio-political planning and determination, and finally well-founded psychosocial interventions must go hand in hand to reach these goals.

References

ANTONOVSKY, A. (1987). **Unraveling the Mystery of Health**. San Francisco: Jossey-Bass Publishers.

BARUDY, J. (1989) A programme of mental health for political refugees: Dealing with the invisible pain of political exile. **Social Science and Medicine**, 28, 715-727.

BASOGLU, M & MINEKA, S. (1992) Uncontrollable and unpredictable stress in torture. In: BASOGLU, M. (Ed.) **Torture and its Consequences. Current Treatment Approaches**. Cambridge, Cambridge University Press.

BEISER, M. (1988) Influence of time, ethnicity, and attachment on depression in South Asian refugees. **American Journal of Psychiatry**, *145:* 183-195.

BEISER, M., JOHNSON, P.J. & TURNER R.J. (1993) Unemployment, underemployment and depressive affect among Southeast Asian refugees. **Psychological Medicine** 23: 731-743.

COHEN, S. & WILLS, TH.A. (1985) Stress, social support, and the buffering hypothesis. **Psychological Bulletin** 2: 310-357.

DALGARD, O.S., BJØRK, S. & TAMBS, K. (1995). Social support, negative life events and mental health. **British Journal of Psychiatry**, *166,* 29-34.

DJUVE, A.B. & HAGEN, K. (1995) **'Skaff meg en jobb!»Levekår blant flyktninger i Oslo'**. ('Get me a Job!' Life-Conditions among Refugees in Oslo) Oslo, Fafo Rapport.

EID, J., THAYE, J.F.& JOHNSEN, B.H. (1999) Measuring post traumatic stress:A psychometric evaluation of symptom and coping questionnaires based on a Norwegian sample. **Scandinavian Journal of Psychology** 40, 101-108.

ENGDAHL, B.E., PAGE, W.F. & MILLER, T.W. (1991) Age, education, maltreatment, and social support as predictors of chronic depression in former prisoners of war. **Social Psychiatry and Psychiatric Epidemiology** 26: 63-67.

FIGLEY, C.R. (1986) Traumatic stress. The role of the family and social support system. In Figley C.R. (ed.) **Trauma and its Wake. Volume II: Traumatic Stress - Theory, Research and Intervention**, pp 39 - 54, New York, Brunner/Mazel.

FIGLEY, C.R (1989) **Helping traumatized families**. London, Jossey-Bass.

FLANNERY, R.B. (1989) Social support, life stress, and psychological distress: An empirical assessment. **Journal of Clinical Psychology** *45*: 867-872.

GORST-UNSWORTH, C. & GOLDENBERG, E. (1998) Psychological sequelae of torture and organised violence suffered by refugees from Iraq. **British Journal of Psychiatry** 172: 90-94.

HAUFF, E. & VAGLUM, P. (1993) Integration of Vietnamese refugees into the Norwegian labour market. **International Migration Review** 27: 388-405.

HAUFF, E. & VAGLUM, P. (1995) Organized violence and the stress of exile. Predictors of mental health in a community cohort of Vietnamese refugees 3 years after resettlement. **British Journal of Psychiatry** 166: 360-67.

HAUFF, E. (1998) **The Stresses of War, Organised Violence and Exile.** A Prospective Community Cohort Study of the Mental Health of Vietnamese Refugees in Norway. Oslo, University of Oslo.

HODGKINSON, P.E. & STEWART, M. (1991) **Coping with Catastrophe**. London: Routledge.

HOLLIFIELD M., WARNER T.D., LIAN N., DOM, KRAKOW B., JENKINS J.H., KESLER J., STEVENSON J., WETSTERMEYER J. (2002). Measuring Trauma and Health Status in Refugees. A Critical Review. **Journal of American Association.** 288, 611 621.

HOLTZ T. H. (1998) Refugee trauma versus Torture trauma: a retrospective controlled cohort study of Tibetan refugees. **Journal of Nervous and Mental Disease** 186 (1): 24-34.

JERUSALEM, M., KANIASTY, K., LEHMAN, D.R., RITTER, C. & TURNBULL, G.J. (1995). Individual and community stress: Integration of approaches at different levels. In: HOBFOLL, S.E. & DE VRIES, M.W. (Eds) **Extreme stress and communities: Impact and intervention**, pp 105-129, Dordrecht: Kluwer Academic Publishers.

JOHANSSON, L.M., SUNDQUIST, J., JOHANSSON, S-E. BERGMAN, B. (1997) Ethnicity, social factors, illness and suicide: a follow-up study of a random sample of the Swedish population. **Acta Psychiatrica Scandinavica**, 95, 125-131.

JOSEPH, S., DALGLIESH, T., THRASHER, S. & YULE, W. (1995) Crisis support and emotional reactions following trauma. **Crisis intervention** 3: 203-208.

KAWASHI,I & BERKMAN, L.F. (2001) Social Ties and Mental Health Journal of Urban Health: Bulletin of the New York Academy of Medicine. Vol 73: 458-467.

KLEIJN WC, HOVENS JE & RODENBERG.(2001) Posttraumatic stress symptoms in refugees: Assessments with the Harvard Trauma Questionnaire and the Hopkins Symptom Checklist-25 in different languages. **Psychology Report. 88** (2): 527-532.

KRUPINSKI, J. & BURROWS, G. (Eds) (1986) **The Price of Freedom: Young Indochinese Refugees in Australia**. Rushcutters Bay (N.S.W. Australia): Pergamon Press.

LAVIK, N.J., HAUFF, E., SKRONDAHL, A. & SOLBERG, Ø. (1996) Mental disorder among refugees and the impact of persecution and exile, Some findings from an out-patient population. **British Journal of Psychiatry** 169: 726-732.

LAVIK, N.J., LAAKE, P., HAUFF, E. & SOLBERG, Ø. (1999). The use of self-reports in psychiatric studies of traumatized refugees: Validation and analysis of HSCL-25. **Nordic Journal of Psychiatry**, 53, *17-20.*

LIE,B. (accepted for publication 2002) A 3-year follow-up study of psychososcial functioning and general symptoms in settled refugees. **Acta Psychiatrica Scandinavica.**

LIE,B., LAVIK N.J. & LAAKE, P. (2001) Traumatic events and Psychological symptoms in a Non-clinical Refugee Population in Norway **Journal of Refugee Studies ,*14, 276-294.***

LIN,K-M, TAZUMA, L. & MASUDA, M. (1979) Adaptational problems of Vietnamese refugees. **Archives of General Psychiatry** 36: 988-961.

LLABRE, M.M. & HADI, F. (1997) Social support and psychological distress in Kuwaiti boys and girls exposed to the Gulf Crisis. **Journal of Clinical Child Psychology** 26: 247-255.

MC FARLANE, A. & VAN DER KOLK, B.(1996) Trauma and its challenge to society. In: VAN DER KOLK, B.A., MC FARLANE, A. & WEISEATH, L. (Eds.) **Traumatic Stress. The Effects of overwhelming Experience on Mind, Body, and Society**, pp 24 – 46, New York, Guilford Press.

MC FARLANE A & DE GIROLAMO G. (1996)The nature of traumatic stressors and the epidemiology of posttraumatic reactions. In: VAN DER KOLK B, MC FARLANE A, WEISAETH L (Eds.) **Traumatic stress. The effects of overwhelming experience on Mind, Body and Society,** pp 129-155, New York: The Guildford Press.

MOLLICA, R.F., WYSHAK, G., de MARNEFFE D., KHOUN, F. & LAVELLE, J.(1987) Indochinese versions of the Hopkins Symptom Checklist-25. **American Journal of Psychiatry** 148: 497-500.

MOLLICA, R.F, CASPI-YAVIN, Y., BOLLINI, P., TRUONG,T., TOR,T. & LAVELLE, J. (1992). The Harvard Trauma Questionnaire. Validating a Cross-Cultural Instrument for measuring Torture, Trauma and Post traumatic Stress Disorder in Indochinese Refugees. Journal of Nervous and Mental Disease, 180, (2): 111- 116.RACK, P. (1982) **Race, Culture, and Mental Disorder**. London: Tavistock Publication.

RANTAKEISU, U., STARRIN, B. & HAGQUIST, C. (1999) Financial hardship and shame: a tentative model to understand the social and health effect of unemployment. **British Journal of Social Work** 29: 877 – 901.

RAPHAEL, B., LUNDIN, T. & WEISAETH, L. (1989) A research method for the study of psychological and psychiatric aspects of disaster. **Acta Psychiatrica Scandinavia Supplementum** 353: 1-75.

ROSENCK, R. & THOMSON, J. (1987) "Detoxification" of Vietnam War trauma: A combined family-individual approach. **Family Process**, 1986, 559-570.

SARASON, I.G., SARASON, B.R. & PIERCE, G.R. (1995) Stress and social support. In: HOBFOLL, S.E. & DE VRIES, M.W. (eds) **Extreme Stress and Communities: Impact and Intervention**, pp179 - 197, Dordrecht, Kluwer Academic Publishers.

SCHWARZER, R., JERUSALEM, M. & HAHN, A. (1994) Unemployment, social support and health complaints. A longitudinal study of stress in East German refugees. **Journal of Community and Applied Social Psychology** 4: 31-45.

SHERAN, P. & ABRAHAM, C. (1994) Unemployment and self-conception: A symbolic interactionist analysis. **Journal of Community and Applied Social Psychology** 4: 115 – 129.

SILOVE, D. (1999) The psychological effects of torture, mass human rights violations, and refugee trauma. Toward an integrated conceptual framework. **Journal of Nervous and Mental Disease** 187: 200-207.

SOLOMON, S. (1986) Mobilizing social support networks in time of disaster. In: Figley C.R. (ed). **Trauma and its Wake. Volume II: Traumatic Stress - Theory, Research and Intervention** New York, Brunner/Mazel.

SOLOMON, S. & BLUMENFIELD A. (1995) Selected characteristics of delayed and immediate-onset combat-induced post-traumatic stress disorder. **Military Medicine** 160: 425-430.

SUNDQUIST, J., IGLESIAS, E. & ISACSSON, Å. (1995) A study of Latin American refugees, their exile in Sweden and repatriation. **Scandinavian Journal of Primary Health Care** 12: 135-140.

SVEAASSS, N. & CASTILLO, M. (2000). From war hero to cripple: An interview study on psychosocial intervention and social reconstruction in Nicaragua. **Peace and Conflict: Journal of Peace Psychology** 6:113 - 133.

SVEAASS, N. & REICHELT, S. (2000) Refugee families in therapy: From referrals to therapeutic conversations. **Journal of Family Therapy**, in press.

UBA, L. & CHUNG, R.C. (1991) The relationship between trauma and financial and physical well-being among Cambodians in the United States. **The Journal of General Psychology**, 118: 215-225.

ULLMAN, S.E. & SIEGEL, J.M. (1994) Predictors of exposure to traumatic events and posttraumatic stress sequelae. **Journal of Community Psychology** 22: 328-338.

VAN DER VEER, G. (1992) Counselling and therapy with refugees. **Psychological problems of victims of war, torture and repression.** New York, John Wiley.

WESTERMEYER, J. (1991) Special considerations. In: Westermeyer J., Williams C.L. and Nguyen A.N. (eds.)
Mental Health Services for Refugees (DHHS Publication No. (ADM) 91-1824), pp 56 – 72. Washington, DC, U.S. Government Printing Office.

WESTERMEYER, J. (1996) English fluency and social adjustment among Hmong refugees in Minnesota. **Journal of Nervous and Mental Disease** 184: 130-132.

YING, Y-W. & AKUTSU,P.D. (1997) Psychological adjustment of Southeast Asian refugees: The contribution of sense of coherence. **Journal of Community Psychology** 25: 125-139.

PAPER 3

III

Acta Psychiatr Scand 2002: 106: 415–425
Printed in UK. All rights reserved

ACTA PSYCHIATRICA SCANDINAVICA
ISSN 0001-690X

A 3-year follow-up study of psychosocial functioning and general symptoms in settled refugees

Lie B. A 3-year follow-up study of psychosocial functioning and general symptoms in settled refugees.
Acta Psychiatr Scand 2002: 106: 415–425. © Blackwell Munksgaard 2002.

Objective: Few community studies have addressed the longitudinal course of post-traumatic stress disorder (PTSD) in traumatized refugees in early resettlement. This longitudinal study investigated changes from the first (T1) to the second interview (T2), 3 years later. The relationship between traumatic exposures and psychosocial factors/psychological symptom load were examined.
Method: Local health professionals performed the interviews, using rating scales and a structured questionnaire. A total of 240 (52%) refugees attended.
Results: Unchanged Hopkins Symptom Checklist-25 and increase in Harvard Trauma Questionnaire and post-traumatic stress symptoms-16 between T1 and T2 were found, indicating the severity and chronicity of problems. Mean post-traumatic stress score was 15% above cut-off. Severe life-threatening trauma and present life in exile with unemployment and unresolved family reunion were risk factors.
Conclusion: Early diagnostic interview should be followed by targeted approach. Pinpointing those in need of specialist services is essential. An interdisciplinary approach is necessary in this work.

B. Lie

Psychosocial Centre for Refugees, University of Oslo, Oslo, Norway

Key words: refugees; torture; war; stress; post-traumatic stress disorder; family; social support; unemployment

Birgit Lie, Enrum 11, 4616 Kristiansand, Norway
E-mail: birgit_lie@c2i.net

Accepted for publication August 21, 2002

Introduction

This follow-up study consists of a cohort of 240 refugees interviewed 3 years after settling in various municipalities. Systematic research into the mental health of refugees is a young discipline, and methods are limited by sampling difficulties. A restricted number of community studies have addressed the longitudinal course of post-traumatic stress disorder (PTSD) in traumatized refugees in the early phase of resettlement. Trauma is a significant factor in the refugee experience of war and resettlement and will have an impact on successful adaptation. Epidemiological studies across diverse cultures and contexts have documented high levels of trauma exposure in displaced populations giving strong evidence that trauma exposure is a predictor for long-term mental health problems among refugees (1–3). Torture played a significant role in the development of PTSD symptoms among tortured Bhutan refugees living in UN refugee camps in Nepal (4). Research on World War II survivors has shown that disturbances are still present 50 years later. Comorbidity of PTSD and depression may be particularly disabling and the intrusive symptoms of PTSD may be the strongest predictor of health service utilization over time (5). In Mollica et al.'s follow-up study of Bosnian refugees remaining in a neighbouring country in the conflict region, the chronicity of baseline psychiatric disorders was a major finding (6). The influence of exile and repatriation on mental and physical health was studied in a population-based cross-sectional study by Sundquist and Johansson (7). Torture, discrimination and not feeling secure in everyday life were significant risk indicators for poor health. The fact that every third refugee in the study was poorly integrated in the Swedish society was alarming, and might be associated with an increased risk of poor health. War and ongoing conflicts in the country of origin, jeopardizing family and friends back home, put additional stress on the refugees in exile already forced into a passive position. Retraumatization in exile, including lack of recognition of previously

acquired work skills and personal abilities, adds to the existing challenges. Building of work relations and a new social network is difficult in exile. Weine et al. (8) found that a marked decrease in reported PTSD among Bosnian refugees 1 year after arrival to the United States was associated with increased social stability, acculturation processes and participation in therapeutic activities. These refugees used less of the defence functions – avoidance, numbing, splitting and denial. There is growing evidence that salient post-migratory stress facing asylum seekers and refugees adds to the effect of previous trauma in creating a risk of ongoing post-traumatic stress disorder and other psychiatric symptoms (9). Early intervention and treatment with a multidisciplinary approach, as well as a rise in awareness and education about risk factors is warranted. The challenge that patients with refugee histories present the health professions is evident and demanding.

Aim of study

The study investigated the impact of risk factors such as torture, trauma events and demographic status on psychological distress and social functioning. This paper investigates changes in psychological symptoms and general health conditions over time. It explores the potential influence of new traumatic exposures and psychosocial factors such as family, daily activity, network building and social contacts with own culture and Norwegian persons on post-traumatic symptoms in traumatized refugees living in a host society.

Material and methods

Sampling procedures

The first interviews (T1) were conducted between May 1994 and December 1995. All 58 municipalities accepting refugees to be settled in four counties in Southern Norway were invited to cooperate. This included three larger (population > 50 000), seven medium (20 000–49 999) and 25 smaller sized (5000–19 999) urban municipalities as well as 23 non-urban municipalities (< 4.999). Twenty of the 58 municipalities (34.4%), decided to let their personnel assist in the compilation of this study; of these municipalities two were from group 1, three from group 2, eight from group 3 and seven from group 4. A total of 1365 refugees settled in these 20 municipalities between May 1994 and December 1995. All refugees over the age of 16 ($n = 791$, or 58% of the total population) were invited to participate. Of these, 462 refugees, or 58% of those over 16, were willing to participate in the study. Forty-seven per cent of the participants were women and the mean time between resettlement in the municipality and the first interview was 10 months (SD 5 months, range 1–32 months). Three years after the study started health care personnel in the 20 municipalities were able to trace the 462 participating refugees. A total of 240 (52%) refugees were interviewed at T2 during the years 1997–99, mean time between the interviews was 28 months (SD 9.5, range 1–57).

All subjects were interviewed according to a structured interview questionnaire specifically developed for the study. The interview, with duration of approximately 1 h, supplemented the general health check offered to refugees when settling in the municipalities (T1), and was repeated with a modified structure at T2. Prior to both interviews seminars were held in order to train the interviewers in using the interview guide. The interview guide, a structured questionnaire was translated into Albanian, Arabic, Bosnian/Serbo-Croatian, Somali, Spanish and Vietnamese. As a validity check, qualified interpreters back translated the interview guide. The ongoing war in former Yugoslavia at the time of the study made minor dialectal differences between Croatian, Bosnian and Serbo-Croatian into major issues at some points. Professional interpreters used the translated questionnaire during the clinical interview, in order to make the oral translation consistent.

Measures

The follow-up interview at T2 covered data on sociodemographic background, present exile situation, self-perception of health and general health problems, new traumatic events in the host country or losses caused by ongoing atrocities in their native country and psychiatric symptoms, or 'psychological symptom load'.

The background data included geographical origin, ethnicity, gender, religion, age and education.

Present exile situation was described by presence of family in Norway, current work status, social network in the sense of close friends and Norwegian contacts.

Health situations was illustrated by: self-perception of global health with the categories 'very bad', 'bad', 'neither bad nor good' 'good' and 'very good' and perception of life and health situation (this week) on a scale from 1 to 10. Usage of alcohol and smoking with the categories 'daily' sometimes and never was asked for. Items of bodily symptoms (the last 4 weeks) were 'head ache', 'heart-symptoms', 'breathing-problems', 'gastrointestinal problems',

'symptoms from urinary tract', 'irregular menses' and 'aching in the body'.

Psychological symptom load was measured at T1 and T2 using the following:

The Hopkins Symptom Checklist-25 (HSCL-25)[1] includes 10 items from the anxiety cluster and 15 items from the depression cluster, including two questions relating to somatic symptoms, with scores ranging from 1 (little) through 4 (very much). Adding all responses and dividing by the number of items derived a summary score. Scores above cut-off of 1.75 indicate 'clinically significant distress'. The HSCL-25 has been used in cross-cultural research (10, 11) and has proved reliable and valid for measuring depression and anxiety in cross-cultural studies.

The Harvard Trauma Questionnaire (HTQ)[1] is an instrument designed for the assessment of trauma and torture relating to mass violence and their consequences. HTQ has been used in both clinical and research settings with patients and community-based populations of diverse cultural backgrounds. The instrument is based on the Western perspective of trauma-related illness as described in DSM-II-R and later in DSM-IV (12).

The Post-traumatic Symptom Scale, a 16 criteria checklist covering post-traumatic stress symptoms (PTSS-16) is described in the DSM-III-R and DSM-IV. PTSS-16 indicated whether participants had experienced each of the noted symptoms within the last 7 days. The items were covering sleep disturbances, dreams/nightmares about imprisonment/torture, depression, startle reactions, tendency to isolation from others, irritability, emotional lability, guilt/self accusations, fear of the trauma scene or situations resembling it and bodily tension. For each item a yes response was coded 1 and a no response was coded 0 (13, 14).

Kleijn et al. conclude, in a study of the psychometric properties of new translations of PTSS-16 derived from HTQ and HSCL-25, that the tests are adequate across different cultures and are in general, applicable to measure symptoms of depression, anxiety and post-traumatic stress disorder (15).

Global Assessment Functioning Scale (GAF). Luborsky in 1962, in the Health-Sickness Rating Scale, operationalized the rating of overall psychological functioning on a scale of 1–100. Spitzer and colleagues developed a revision of this scale called Global Assessment Scale (GAS) in 1979. A modified version of the GAS was included in the DSM-III-R as the GAF Scale (DSM-IV, 1994). The intention of the use of GAF in the present study was to get a remedy to compare the patient's self-evaluation in the interview with the health worker evaluation of the patient based upon the impression given during the interview.

The trauma history items were derived from HTQ. The nature of the preflight events (Ta-To) was categorized as war related events and torture related events. War related events indicate situations that might have been potentially traumatizing but where the traumatic experiences often have been experienced in a collective context. The other events indicate experiences with a clearer individual involvement with an intrusive impact such as torture.

Post-flight stressful events experienced as traumatizing were grouped as indirect – hearing about events at home and receiving news of getting to know about losses, either human or material, as well as reported daily life events in exile experienced as stress-full or traumatizing. The categories were open.

Statistics

Statistical Package for the Social Sciences (SPSS) was applied for data analyses.

In the first analysis, bivariate analyses were carried out with a merged material from T1 and T2 in order to be able to compare the changes from T1 to T2. Only those responding both at T1 and T2 were included in the analyses. Testing the difference between groups we used one-way ANOVA and *t*-test. In the secondary analysis, all symptom scales were used as dependent variables. Symptom load at T2 and change in symptom load, from T1 to T2, were examined with respect to correlation with psychosocial factors and traumatic exposures using Pearson's bivariate correlation analyses and logistic regression. Data on sociodemographic background (such as gender, age, groups of nations and education), social life in exile expressed by presence of close friends and family, work status and leisure time activity in Norway as well as self-perception of health and traumatic life experiences in exile, were used as explanatory variables. Possible relation of symptoms to reported traumatic exposure at T1 was explored. Based on the correlation analysis the following subgroups were made: activity was grouped into two subgroups, one with activity outside home and another with no activity outside home. Social network was expressed in one group including information about close friends or Norwegian friends.

[1] Permission to use HSCL-25 and HTQ had previously been obtained from Mollica et al.

The traumatic events at T1 were grouped into two factors using principal component analysis with varimax rotation. The sum-score of the two traumatic factors were used along with post-flight stress variables and psychosocial variables as explanatory variables and the psychological symptom load as dependent variables.

Correlation analysis and regression analyses were performed in order to analyse further the relationship between symptom load at T2 and change in symptom load over time with the grouped explanatory variables.

Factor analysis. In order to reduce the complexity of the different trauma variables we carried out a factor analysis with principal component extraction and varimax rotation. The component analysis revealed two meaningful factors above the elbow of the scree plot. Cumulative explained variance found was 51.7%, 27.1% by the first component after rotation. All items loaded higher than 0.45 on the respective components. One of the factors comprised items related to stressors with an intrusive nature, loading prison and torture related variables. The prison and torture related events indicate experiences with a clearer individual involvement and with an intrusive impact (B, C, F, G, I, J, O). The other factor consisted of items related to external stressors, loading war related variables. War related events indicated situations that may be potentially traumatizing but where the traumatic experiences often have been experienced in a collective context (A, D, E, H). Based upon the factor analysis two new variables (TRAUM1 and TRAUM2) were constructed by an equally weighted sum-score of chosen items. Post-flight stress was grouped into two variables, one for stressful events in home country and one for stressful events in Norway.

Results

Attrition

During the study period 1365 refugees settled in all the refugee-receiving municipalities (58) in four counties in southern Norway. All refugees over the age of 16 ($n = 791$, or 58% of the total refugee population) in 20 attending municipalities in Southern Norway were invited to participate in the first interview (T1). Of these, 462 refugees (61%) were willing to participate in the study. The only difference found, using one-way ANOVA, between the attrition group and the interviewed group at T1 was on distribution of nationality. A larger share of Kosovo-Albanian and African individuals had dropped out. Age and other data beyond gender and nationality on the individual level were not available for the attrition group. Attrition at municipality level was examined. The most common reasons given at municipality level for not attending were practical problems in obtaining interpreters because of a lack of local interpreters, fear of finding problems which they did not have the capacity to follow up and difficulties in obtaining psychiatric treatment for referred patients.

All 462-baseline respondents were traced at T2. The attrition group was 222 (48%). The reasons for not attending the follow-up assessment were: 'did not want to' ($n = 103$, 22.23%), 'migration' ($n = 26$, 5.6%), 'repatriation' ($n = 29$, 6.3%), 'other reasons' ($n = 63$, 13.6%) and one individual deceased (0.2%). Possible differences in the attrition group from T1 compared with the study sample at T2 were examined. The only significant difference between the follow-up group and the attrition group as measured at T1, was that the follow-up group included a majority of participants who reported the traumatic exposure 'Having been in concentration camp' ($P = 0.004$, see Table 1). The study group at T2 was nevertheless considered to be representative of the larger sample of 462 (16).

Demographics at T2

The follow-up interview (T2) took place after a mean time of 28 months (SD 9 months, range 12–70 months). The mean age for the whole sample was 41 years (SD 13, range 19–83) and 51% were female of 240 attending refugees in the follow-up study, 35% used interpreters. A three-fourth proportion (76%) was married and three-fourth (75%) had more education than primary school. The geographical distribution showed that three-fourth of the group was from Bosnia (75%), 10% from Kosovo and the rest from Middle East, Asia, Africa and Latin America. The groups of nations apart from Bosnia and Kosovo were too few in number for separate analyses on geographical level.

Social factors at T2. Three years after settling in the municipality a significant increase in number of unemployed (55%) and in the group with a paid job (39% of whom 55% were men) was seen. Fourteen per cent reported not knowing any families well enough to visit them regularly. Twenty-five per cent found it difficult to make Norwegian friends and 77% wished to have more contact with Norwegians.

Self-perception of general health, bodily symptoms, use of antidepressants and sleeping drugs, alcohol and smoking habits at T2. Approximately half (47%) of

Table 1. Traumatic exposures registered at T1: attrition group and study population T2

Traumatic exposures (T)*	Attrition group (n = 222) %	Attending group (n = 240) %	Significant difference between groups†
(a) Have been living in hiding	61	57	NS
(b) Have been in prison	30	36	NS
(c) Have been in concentration camp	27	54	$P < 0.005$
(d) Have experienced war	73	74	NS
(e) Have been in mortal danger	76	81	NS
(f) Have witnessed torture	39	45	NS
(g) Have witnessed killing	30	33	NS
(h) Have been separated from family	76	74	NS
(i) Have experienced physical violence	20	25	NS
(j) Have experienced torture	14	15	NS
(k) Have been beaten unconscious	9	8	NS
(l) Have been unconscious without having been beaten	8	7	NS
(m) Have been near drowning	2	4	NS
(n) Have been nearly suffocated	5	7	NS
(o) Have had other extreme experiences	47	51	NS

* Derived from HTQ.
† One-way ANOVA. NS = no significant difference between attending and attrition groups.

Table 2. Post-flight stressful events in Norway and in home country as well as positive events

	%
Stressful events in Norway	38
Unemployment	14
Own sickness	11
Divorce and marital problems	4
Racism and ethnic conflicts	4
Stressful events in home country	60
War	20
Death of family and close friends	21
Missing of family members	19
Missing of close friends	7
Sickness among family left behind	15
Uncertain life conditions for family and friends	13
Political changes in home-country	23
Positive events in exile	72
Positive residency permit	*34*
Family reunion	32
Getting a job	26

the group considered their general health to be either good or very good. Nevertheless more than half of the group had heart symptoms (56%) and bodily aches and pain (40%). Seven per cent used antidepressive medication and 12% sleeping medicine and relaxing drugs. On perception of overall life and health situation a mean of 4.8 (SD 2.1, range 1–10) on a scale from 1 to 10, was found.

Stressful events experienced and described as traumatic. Pre-flight traumatization. Table 1 displays the number of traumatic experiences before the flight. Eighty-one per cent had been in mortal danger, 74% had experienced war, 54% had been in concentration camp and 45% had witnessed torture (for further details see Table 1).

Post-flight traumatization. In Table 2 details of stressful events experienced as traumatic while living in Norway are displayed. Sixty per cent had experienced indirect traumatic events, which took place in their home country while they were in exile. Thirty-eight per cent reported stressful events that happened in Norway as traumatic. On the other hand, 72% reported positive events in life in exile since last interview such as change in residency permit (34%), family reunion (32%) and getting a job (26%).

Change in symptom load over time

Table 3 displays the psychological symptom load at T1 and T2, expressed by HSCL-25, PTSS-16, HTQ and GAF. Forty-six per cent were above the normative threshold (1.75) for 'clinically significant distress' at T2, with HSCL-25 mean 1.80 (SD = 0.5, range 1–3.29), compared with 52% at T1. No changes were found in either HSCL-25 total values or in the subscales measuring anxiety and depression using one sample t-test for testing the differences in psychological distress from T1 to T2.

A statistically significant positive change in PTSD symptoms was found, with an increase in symptoms ($P < 0.05$) in PTSS-16 from T1 to T2. The mean PTSS-16 score at T2 was 1.87 (SD = 0.56, range 1–3.63) with 15% were above the normative threshold (2.5) for 'clinically significant distress' at T2, with compared with 14.8% at T1.

A significant increase in HTQ symptoms was found from T1 to T2, with a T2 mean 1.76.

Psychological symptoms and signs	T2 study population at T1	T2 study population at T2	Difference from T1 to T2*
HSCL-25 tot			$P = 0.08$
Mean	1.87	1.80	0.006
SD	0.52	0.54	0.49
Range	1.0–3.58	1.0–3.29	
>1.75, clinical distress	52%	54%	
HSCL-25 anx			$P = 0.84$
Mean	1.85	1.82	0.008
SD	0.60	0.63	0.57
Range	1.0–3.5	1.0–3.7	
HSCL-25 depr			$P = 0.090$
Mean	1.86	1.80	0.006
SD	0.53	0.54	0.51
Range	1–3.67	1.0–3.5	
PTSS-16			$P = 0.032$
Mean	1.07	1.87	0.008
SD	0.53	0.56	0.55
Range	1.06–3.5	1.0–3.63	
> 2.5, clinical distress	14.8%	15%	
HTQ			$P = 0.000$
Mean	1.07	1.75	−0.68
SD	0.43	0.49	0.42
Range	0.65–2.1	1.0–3.59	
GAF			$P = 0.822$
Mean	71.28	70.29	0.21
SD	11.7	11.58	12.96
Range	31–90	32–95	

Table 3. Symptom load of the T2 study population, at T1 and T2, and difference of symptom load from T1 to T2

* One-sample *t*-test.

Gender, age, family and region of origin

No differences were found between the two sexes or between the age groups with regard to changes in symptoms from T1 to T2 or in the symptom load at T2. Significant difference between the marital groups at 0.05 levels was found with regard to GAF scores. There was a significant difference ($P < 0.05$) in PTSS-16 score from T1 to T2 for the individuals from Bosnia (a decrease) and Kosovo (an increase). The other nationality groups were too small to make any conclusions possible.

Correlation analysis. Table 4 displays the relation of symptom load expressed by HSCL-25, PTSS-16, HTQ and GAF at T2 and the change from T1 to T2 to the chosen explanatory variables.

Pre-flight traumatic exposures. The preflight trauma exposure component (TRAUM1 and TRAUM2) correlated positively to all symptom variables except TRAUM2 to HSCL-25.

Post-flight traumatic exposure in Norway and in the country of origin. The post-flight stress was grouped into two components: one for events in home country (STRESS1) and one for events in Norway (STRESS2) and both factors correlated significantly to the symptom variables.

Work status and leisure time activity

Social activity outside home and integration correlated significantly to the symptom variables HSCL-25, PTSS-16, HTQ and GAF. Social network, expressed by the component friends had a significantly negative correlation to all symptom variables.

Change in psychological symptom load from T1 to T2 in relation to sociodemographic factors and traumatic exposures

A correlation analysis was made of the relationship between the changes in symptom load and the chosen explanatory variables. The post-flight stress (STRESS1) was significantly correlated to changes in PTSS-16 and in HTQ and STRESS2 was significantly correlated to changes in HTQ.

The relation of self-perception of life and health situation as well as the general feeling of present health at T2 correlated to stressful psychosocial factors in exile (STRESS2) and intrusive preflight traumatic events (TRAUM1).

Table 4. Correlation between T2-symptom load (expressed by HSCL-25, PTSS-16, HTQ, GAF) and difference in symptom load (T1–T2) to pre- and post-flight traumatic events and the psychosocial factors, activity and social network

	TRAUM1	TRAUM2	STRESS1	STRESS2	ACT1	ACT2	SOCIAL
HSCL-25							
T2	0.205†	0.112	0.229†	0.454†	−0.156*	0.135	−0.150*
T1–T2	0.047	0.038	0.116	0.161*	−0.007	0.003	−0.127
PTSS-16							
T2	0.204†	0.197†	0.211†	0.374†	−0.158*	0.146*	−0.164*
T1–T2	0.052	0.104	0.159*	0.133	−0.016	0.034	−0.103
HTQ							
T2	0.207†	0.197†	0.227†	0.395†	−0.124	0.095	−0.133
T1–T2	0.079	0.138	0.239†	0.289†	−0.032	−0.004	−0.083
GAF							
T2	−0.256†	−0.175*	−0.272†	−0.254†	0.200†	−0.145*	0.135*
T1–T2	−0.021	−0.085	−0.012	0.017	0.066	−0.048	0.125

* Significant relationship with significance level 0.05.

† Significant relationship with significance level 0.01.

Activity was grouped into two subgroups, one outside home (ACT1) and another with no activity outside home (ACT2). Social network was expressed in one group including information about close friends or Norwegian friends (SOCIAL). Traumatic events: preflight traumatic events were grouped as intrusive (TRAUM1) were: prison, concentration camp, witnessing torture or killing, exposed to physical violence or torture. Traumatic events related to war experiences were grouped as external (TRAUM2): living in hiding, exposed to war, danger of loosing life, separated from family.

Post-flight stress was grouped into two variables, one for events in home country (STRESS1) and one for events in Norway (STRESS2).

Multiple regression analysis

Table 5 displays the results of the multiple regression analysis. We used the sum-score of the intrusive and war related traumatic events along with the two post-flight stress variables, the two activity variables and the social network variable as explanatory variables. The psychological symptom load variables at T2 were dependent variables. The explained variance (the adjusted R^2) for the T2 measures of psychological symptom load was: HSCL-25 27%, PTSS-16 27%, HTQ 26% and GAF 21%. Intrusive preflight traumas as well as post-flight events were found to have significant influence on all the dependent variables with a stronger influence of events in exile than in the home country on the outcome. Social contact had a significant relationship to all symptom variables in the opposite direction of trauma variables (for further details see Table 5).

In the multiple regression analysis of the change in symptom load from T1 to T2 we used the same set of explanatory variables as in T2. The explained variance (R^2 – the adjusted R^2) for the change in psychological symptom load was: HSCL-25-diff 1%, PTSS-diff 12%, HTQ-diff 12% and GAF-diff −2%. The results were not contradictory to the findings at T2 but the strength of the analysis was reduced. Traumatic events taking place in Norway were the only variables with significant influence on change in PTSS-16 and HTQ (for further details see Table 5).

Discussion

This longitudinal study examined the change of psychological symptoms in a group of refugees fleeing from war and persecution, 3 years after settling in the municipality. The persistence of symptoms indicated the long-standing problems. A background of severe life-threatening trauma and a present post-migration life with stressful events such as unemployment and lack of social contacts were seen as important factors in the multifactorial explanation of long-term conditions of traumatized refugees in exile. Our findings are supported by other reports from different parts of the world including many different nationalities (1–4, 8, 17).

Methodological challenges

It is important to emphasize the model's limitation. In this community-based study, indications of psychiatric disability and suffering are based upon symptom scales alone. The results are not diagnoses but degrees of symptoms giving a limitation to the interpretation of data (18). The applicability of Western diagnostic measures in non-western populations is the subject of ongoing debate in psychiatric research. Kleijn et al. examined translated versions of HTQ and HSCL-25. They concluded that the psychometric properties for the tests were adequate across different cultures, the more so in relatively extreme cases and more moderately in less severe cases where the

Table 5. Multiple regression analyses with T2-symptom load (expressed by HSCL-25, PTSS-16, HTQ, GAF) and difference in symptom load (T1–T2) as the dependent variables and traumatic exposures, activity and social network as predictor variables

T2	TRAUM1	TRAUM2	STRESS1	STRESS2	ACT1	ACT2	SOCIAL	R^2
HSCL-25								
T2	0.223†	0.014	0.152*	0.356†	−0.151	−0.013	−0.170*	0.30
T1–T2	−0.091	0.000	−0.179	−0.114	074	0.079	0.008	0.04
PTSS-16								
T2	0.203†	0.108	0.182*	0.320†	−0.097	0.045	−0.160*	0.31
T1–T2	−0.009	−0.048	−0.139	−0.207*	−0.063	−0.061	0.023	0.08
HTQ								
T2	0.203†	0.065	0.166*	0.356†	−0.080	0.008	−0.152*	0.29
T1–T2	−0.102	−0.035	−0.144	−0.324	0.037	0.23	0.081	0.17
GAF								
T2	−0.186*	−0.166	−0.221†	−0.194*	0.157	−0.067	0.103	0.24
T1–T2	0.044	0.132	0.042	−0.029	−0.045	0.043	−0.062	0.03

* Significant relationship with significance level 0.05.

† Significant relationship with significance level 0.01.

Activity was grouped into two subgroups, one outside home (ACT1) and another with no activity outside home (ACT2). Social network was expressed in one group including information about close friends or Norwegian friends (SOCIAL). Traumatic events: preflight traumatic events were grouped as intrusive (TRAUM1) were: prison, concentration camp, witnessing torture or killing, exposed to physical violence or torture. Traumatic events related to war experiences were grouped as external (TRAUM2): living in hiding, exposed to war, danger of loosing life, separated from family.

Post-flight stress was grouped into two variables, one for events in home country (STRESS1) and one for events in Norway (STRESS2).

cultural phenomena may have more subtle influences (15). Terheggen et al. concluded in a survey of the nature and impact of traumatic experiences among Tibetan refugees in India that western conceptualizations of trauma and distress provide a useful basis for starting investigations in non-western cultures.

Investigations need to be culturally sensitive to the identification of experiences that are to be classified as traumatic (19).

As a control group was not available in this situation, comparisons are made between the results from this study and findings published in other surveys.

The research was performed in a political and social context and was coloured by the situation at the time of performance. The refugee groups arriving and included in this kind of study will change according to ongoing conflicts resulting in an influx of refugees over the borders, as well as changes in policy towards asylum seekers. Because of the study's historical placement in the second half of the 1990s, the investigated group was predominantly from former Yugoslavia, Bosnia and Kosovo.

The drop-out rate was 49%, which is substantial but not alarming in longitudinal studies according to the work of van der Kamp and Biljeveld (20) who mentioned drop-out rates of 40–60% as not uncommon in longitudinal studies. In a population of refugees one must also foresee the likelihood of continued migration. One-third of the drop-out rate was because of a lack of health workers and sudden changes in routines in some municipalities. Investigating the presence of characteristic differences in the attrition group from T1, especially in relation to traumatic experiences and symptom load, revealed no major systematic deviation except for the traumatic exposure 'having been in concentration camp' and the attrition was considered random.

Pattern of change in symptoms over time

The present study reflects the relative chronicity of psychiatric symptoms and sufferings. PTSS-16 and HTQ increased significantly whereas the other measures had a slight non-significant decrease after 3 years. Similar findings of persistent high symptom level have been reported by several authors: in a longitudinal mental health study of refugees remaining in the conflict area by Mollica et al. (6), after 3.5 years in refugee-camp in Italy by Favaro et al. (21) and 1 year after their resettlement in USA by Weine et al. (8).

Symptom predictors – traumatic experiences

Trauma attacks the individual's sense of self and predictability of the world. The cultural values may affect psychological responses and adaptations to trauma. The nature of and the degree of traumatic exposures experienced before flight put refugees in high risk group in terms of future mental and physical health problems. Central to the experience of traumatic stress are the dimensions of helplessness, powerlessness, and threat to one's life (22).

Traumatic exposures with a high physical component and war related events had a strong impact on psychological findings at both T1 and T2. The larger proportion of a severe trauma exposure as concentration camp detention in the T2 population may have influenced the high measure level at follow-up. When exploring the change of symptoms from T1 to T2 and the relation to preflight traumatic exposures, physically intrusive and psychologically traumatic variables with a destructive effect on personal integrity were left as significant explanatory variables over time, indicating the persistence of the contribution of these factors to the vulnerability of the population.

This is consistent with other studies on the relation between the nature and the degree of traumatic exposures and the severity of the psychological symptoms. In a case control survey Shrestna et al. described an influence of torture and physical violence similar to that of the present study. Torture was demonstrated to play a significant role in the development of PTSD among Bhutanese refugees (23). Holz points out that the long-term consequences of torture on mental health are far exceeding the effects of being uprooted in a study of Tibetan refugees. Social support in exile was among factors that seemed to foster resilience against psychological sequelae (24).

Symptom predictors – post-migration environment

The longitudinal impact of trauma is complex. The explained variance as a result of stressful events in exile indicate how life in exile may reduce the ability to cope and the resilience instead of working towards a healing process.

The emergence of symptoms represents both the onset of new symptoms and the reactivation of prior affective distress and hyper arousal. PTSD appears to have a variable course, affected by the nature of precipitating events, the characteristics of the traumatized individual, and the nature of the recovery environment (8). The individual's response is a complex matrix of biological, social, temperamental and experiential issues. The neurobiology of an individual's stress response, the capacity for self-modulation, the ability to tolerate fear and threat and the ability to cope with any losses will influence the 'vulnerability' that places the individual at risk of a negative outcome. The intraindividual changes may be large for some, smaller for others. Individual protective variables, resilience factors, as well as unknown genetic, pretrauma conditions and premorbid psychological status, add to the explanatory variables.

This study points to the fact that post-migration environment, social factors in exile, tend to have a noteworthy influence regardless of prior traumatic exposures. The level of affective social support in exile was an important determinant of the severity both of post-traumatic stress disorder and depressive reactions, particularly when combined with a severe level of traumatic exposures, such as torture and life-threatening events. In a group of Iraqi refugees, trauma-related factors were compared with social factors in exile and low level of social support in exile seemed to be a stronger predictor of depressive morbidity than trauma factors (25). The additional concerns with the situation in the home-country and traumatic as well as dramatic events in the home country because of continued war and persecutions after arriving in the third country may have had a precipitating and perpetuating influence on the symptoms and development of illnesses (26).

Treatment and intervention implications

The findings in the study illustrate the nature of the social needs that should be considered as preventive measures in addition to psychological and psychiatric treatment. We found a clear indication of the importance of having a job on the symptom load, as well as on self-reported general health. The same pattern was seen with the additional contact to the Norwegian society through friends and involvement in the exile society. A limitation here is the fact that the distress has a multifactorial explanation. Schwarzer, Jerusalem and Hahn described similar results in a study documenting a longitudinal buffer effect, a remarkable decline of ill health in migrants who received social support while being continuously jobless (27). Sveaass and Castilllo suggest that the process of healing trauma must have a holistic perspective, where life projects, networks, meaningful action, and social reconstruction are seen as integral aspects of the process (28). This may imply that psychological work with trauma should not take place as an isolated kind of help, but rather be a part of a broader rehabilitation process, where work, training, and reconstruction of meaning are parallel sources of help.

An early diagnostic interview should be followed by targeted approach in the treatment taking into consideration the long-standing effects of pain and stress on the adaptation capability in order to prevent a worsening of the situation. An interdisciplinary approach is necessary in providing jobs as well as facilitating social network building.

Health policy implications

An important aspect of the present study was the element of action research achieved by including local health professionals as interviewers. The educative aspect in using local health workers was considered essential in the study-design along with the epidemiological research aspect. The method we used was regarded as useful by the interviewers, as it was not very time-consuming and well accepted by the patients. At a municipality level the contribution of epidemiology from the study served as a contribution to policymaking and facilitating an adjusted psychosocial service towards this group (29). The drop-out rates at municipality level revealed a weakness in the reception of traumatized refugees in the municipalities and information was provided to policymakers. Information provided by this study on refugee health and service provision have been used in advising the planning of a purpose-built health service (30). Skills and tools to evaluate the psychological symptoms and the need for treatment have to be improved. Differentiating those in need of specialist services and receivers of services in the primary health care setting is essential.

References

1. Mollica RF, Donelan K, Svang T et al. The effect of trauma and confinement on functional health and mental health status of Cambodians living in Thailand-Cambodia border camps. J Am Med Assoc 1993;**270**: 581–586.
2. Hauff E, Vaglum P. Organised violence and the stress of exile. Predictors of mental health in a community cohort of Vietnamese refugees three years after resettlement. Br J Psychiatry 1995;**166**:360–367.
3. Mollica RF, McInnes K, Sarajlic N, Lavelle J, Srajlic I, Massagli MP. Disability associated with psychiatric co morbidity and health status in Bosnian refugees living in Croatia. JAMA 1999;**282**:433–439.
4. Shrestna NM, Sharma B, Van Ommeren M, Regmi S, Makaju R, Komproe I. Impact of torture on refugees displaced within the developing world. JAMA 1998;**280**: 443–448.
5. Bramsen I, Van Der Ploeg HM. Use of medical and mental heath care by world war II survivors in The Netherlands. J Trauma Stress 1999;**12**:243–261.
6. Mollica RF, Sarajlic N, Chernoff M, Lavelle J, Vukovic IS, Massagli MP. Longitudinal study of psychiatric symptoms, disability, mortality and emigration among Bosnian refugees. JAMA 2001;**286**:546–555.
7. Sundquist J, Johansson SE. The influence of exile and repatriation on mental and physical health. A population based study. Soc Psychiatry Psychiatric Epidemiol 1996;**31**:21–28.
8. Weine S et al. PTSD symptoms in Bosnian refugees 1 year after resettlement in the United States. Am J Psychiatry 1998;**155**:562–564.
9. Silove D. Trauma and forced relocation. Curr Opin Psychiatry 2000;**13**:231–236.
10. Mollica RF, Wyshak G, de Marneffe D, Khuon F, Lavelle J. Indochinese version of the Hopkins Symptom Checklist-25: a screening instrument for the psychiatric care for refugees. Am J Psychiatry 1987;**144**:497–500.
11. Lavik NJ, Laake P, Hauff E, Solberg Ø. The use of self-reports in psychiatric studies of traumatized refugees: validation and analysis of HSCL-25. Nord J Psychiatry 1999;**53**:17–20.
12. Mollica RF, Caspi-Yavin Y, Bollini P, Truong T, Tor S, Lavelle J. The Harvard Trauma questionnaire. Validating a cross-cultural instrument for measuring torture, trauma and posttraumatic stress disorder in Indochinese refugees. J Nervous Mental Dis 1992;**180**:111–116.
13. Raphael B, Lundin T, Weisaeth L. A research method for the study of psychological and psychiatric aspects of disaster. Acta Psychiatr Scand 1989;**80(Suppl 353)**: 1–75.
14. Lavik NJ, Hauff E, Skrondahl A, Solberg Ø. Mental disorder among refugees and the impact of persecution and exile, some findings from an out-patient population. Br J Psychiatry 1996;**169**:726–732.
15. Kleijn WC, Hovens JE, Rodenburg JJ. Posttraumatic stress symptoms in refugees: assessments with the Harvard Trauma Questionnaire and the Hopkins symptom Checklist-25 in different languages. Psychol Rep 2001;**88**: 527–532.
16. Lie B, Lavik NJ, Laake P. Traumatic events and psychological symptoms in a non-clinical refugee population: the situation among 462 newly arrived refugees in Norway. J Refugee Studies 2001;**14**:276–294.
17. Silove D, Steel Z, Watters C. Policies of deterrence and the mental health of asylum seekers. JAMA 2000;**284**: 604–610.
18. North C. The toll of refugee status and the state of trauma research. Arch Gen Psychiatry 2001;**58**:483–484.
19. Terheggen MA, Stroebe MS, Kleber RJ. Western conceptualizations and eastern experience: a cross-cultural study of traumatic stress reactions among Tibeta refugees in India. J Traum Stress 2001;**14**:391–403.
20. Van Der Kamp LJT, Biljeveld CCJH. Methodological issues in longitudinal research. In: Biljeveld CCJH, Van Der Kamp Ljth, eds. Longitudinal data analysis: designs, models and methods. London: Sage, 1998:1–45.
21. Mollica RF, Favaro A, Maiorani M, Colombo G, Santonastaso P. Traumatic experiences, posttraumatic stress disorder and dissociative symptoms in a group of refugees from former Yugoslavia. J Nerv Ment Dis 1999;**187**: 306–308.
22. McFarlane A, De Girolamo G. The nature of traumatic stressors and the epidemiology of posttraumatic reactions. In: Van Der Kolk B, McFarlane A, Weisaeth L, eds. Traumatic stress. The effects of overwhelming experience on mind, body and society. New York: The Guildford Press, 1996: 129–155.
23. Van Ommeren M, De Jong JTVM, Sharma B, Komproe I, Thapa SB, Cardena E. Psychiatric disorders among tortured Bhutanese Refugees in Nepal. Arch Gen Psychiatry 2001;**56**:475–482.
24. Holz TH. Refugee trauma versus Torture trauma: a retrospective controlled cohort study of Tibetan refugees. J Nerv Ment Dis 1998;**186**:24–34.
25. Gorst-Unsworth C, Goldberg E. Psychological sequelae of torture and organised violence suffered by refugees from Iraq. Br J Psychiatry 1998;**172**:90–94.
26. McFarlane A. The aetiology of posttraumatic morbidity: predisposing, precipitating and perpetuating factors. Br J Psychiatry 1989;**154**:221–228.

27. Jerusalem M, Kaniasty K, Lehman DR et al. Individual and community stress: integration of approaches at different levels. In: Hobfoll SE, de Vries MW, eds. Extreme stress and communities: impact and intervention. Dordrecht: Kluwer Academic Publishers, 1995;105–129.
28. Sveaass N, Castillo M. From war hero to cripple: an interview study on psychosocial intervention and social reconstruction in Nicaragua. Peace Conflict: J Peace Psychol 2000;**6**:113–133.
29. Jenkins R. Making psychiatric epidemiology useful: the contribution of epidemiology to government policy. Acta Psychiatr Scand 2001;**103**:2–14.
30. Stortingsmelding NO 17 (2000–2001) Asyl og flyktning-politikken I Noreg. Det Kongelege kommunal-og region-aldepartement, p. 58. (White Paper no. 17, 2000–2001 on Norwegian refugee policy to the Norwegian Parliament (Storting).

PAPER 4

IV

The psychological and social situation of repatriated and exiled refugees - a longitudinal, comparative study.

Lie, B., Psychosocial Centre for Refugees, University of Oslo / Psychosocial team for refugees in Southern Norway, SSHF [1]

Accepted for publication; Scand J Pub Health, April 2003.

Abstract

Aims:

The aim of the study is to explore possible differences in the longitudinal course of psychological symptoms and somatic symptoms between one group of Bosnian refugees returning to their home country (B) and one group remaining in the host country (N). The aim is also to look for possible differences in pre-flight traumatic experiences and psychological symptom load within the groups. In addition we studied the experiences of returning home after a period in exile based upon quantitative and qualitative data.

Methods:

The study is a non-clinical follow up study of 21 Bosnian refugees returning to Bosnia compared to 175 refugees remaining in exile Norway. Quantitative results are supplemented with qualitative information.

Results:

Both groups demonstrated persistence of psychological symptoms indicating severity and chronicity of the problems. The main findings were that refugees with a former history of traumatic experiences of a physical character were less willing to return. A decrease in all parameters was however found in the repatriated group from T1 to T2 with a statistically significant decline for the PTSS-16 and HTQ scores ($p < 0.05$)

[1] Request for reprints or queeries regarding th questionnaires used in the study can be directed to Birgit Lie, Enrum 11, 4616 Kristiansand, Norway e-mail: birgit_lie@c2i.net

Conclusions:

Our results indicate that the decision of returning home may be closely connected to pre-flight traumatic experiences as well as being influenced by psychological symptom load and post-flight conditions.

Key words:

Refugee, repatriation, trauma, longitudinal, psychosocial, torture, PTSD, stress, Bosnia, healthcare

Background

Repatriated refugees have so far received moderate attention. A number of community studies have addressed the longitudinal course of Post Traumatic Stress Disorder (PTSD) in traumatised refugees in the early phase of resettlement (1). Persistence of high psychiatric symptom levels is reported in several longitudinal studies (2). Some researchers have studied refugees returning from neighbouring countries, but studies comparing symptoms of repatriated refugees from host countries to those of refugees remaining in exile, seem to be lacking.

In 1995 approximately 1.200.000 Bosnians were refugees in foreign countries and about 1.000.000 were internally displaced (3). The decision process for refugees choosing to return home, one of the long-term strategies of UNHCR, may be influenced by several factors. First, pre-flight experiences and conditions, the situation in the home country as well as the situation in exile may influence the decision to repatriate. Second, the reluctance to go back may also be due to continuing political and military instability.

Trauma as a significant factor in the refugee experience of war and resettlement has an impact on successful adaptation (4,5). Displacement in exile affects the health situation by threatening psychological processes such as attachment, familiarity and identity, and may lead to a development of nostalgia, disorientation and alienation (6). Ongoing conflicts in the country of origin may put additional stress on refugees in exile, already forced into a passive position. Lack of recognition of previously acquired work skills and personal abilities including re-traumatisation in exile may also add to the existing challenges.

This study is a non-clinical follow up study of a group of repatriated refugees compared to refugees remaining in exile. Reception routines and health care with adequate treatment to

traumatised refugees may contribute to diminish the symptom load and be decisive for future well-being.

Aim of study

This paper will explore differences between two populations of refugees, one group returning to their home country (B) and one group remaining in the host country (N).

The following research questions will be dealt with in comparing the two groups:

- Are there any differences in pre-flight traumatic experiences?
- Are there any differences in the longitudinal course of psychological and somatic symptoms?
- Are there any differences in the wish to return home early during the exile period and the de facto return later?
- How is the relation between pre-flight traumatic experiences and psychological symptom load early in the early exile period within the group of refugees wishing to repatriate?

The experience of returning home after a period in exile based upon quantitative and qualitative data is studied.

Material and Methods

Sampling procedures

The first interviews (T1) were conducted between May 1994 and December 1995. Refugees from different nationalities over the age of 16 (N= 58% of the total population) settled in 20 municipalities in Southern Norway were invited to participate. In this study only the sub sample of Bosnian refugees were investigated and 343 were interviewed at T1 (7). (See fig 1.) A structured questionnaire developed for the study was used in an interview, with duration of approximately 1 hour supplementing the general health check offered to refugees when settling in the municipalities. The questionnaire was translated into Bosnian/Serbo-Croatian. As a validity check, qualified interpreters back translated the interview guide. The interpreter

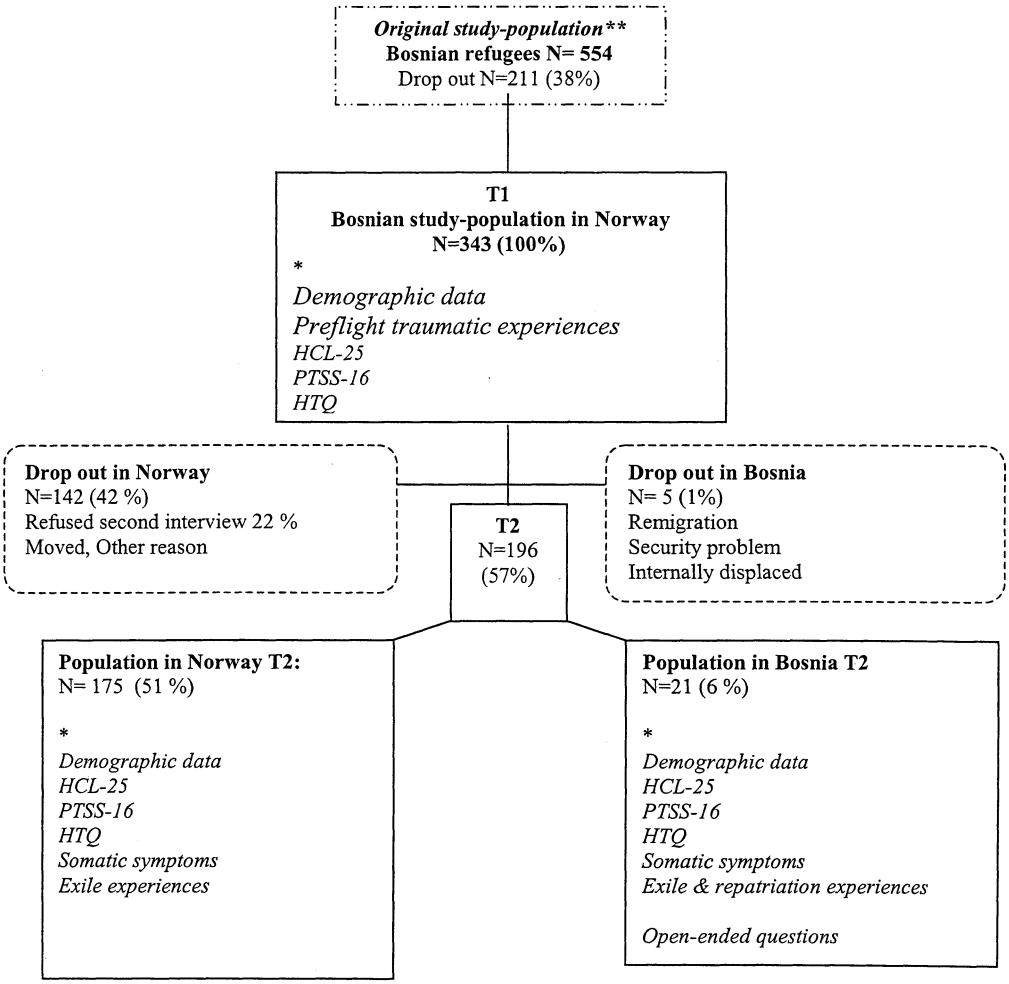
used the translated version during the clinical interviews, in order to make the oral translation consistent.

Follow-up interviews (T2) were performed after 38 months (SD 9 months). The interview was repeated with a modified structure at T2 (see fig 1). At the second interview in Norway ($T2_N$) 175 (51%) Bosnians were interviewed.

In order to get a complete picture of the group of Bosnian refugees we wanted to interview the returnees (N=26, 7.5 %). From 12- 28 June 1998, on a 1600 km journey in Bosnia Herzegovina, from the Mostar region in the south via Sarajevo up to Tuzla in the north, 21 (82%) of the 26 refugees were found and interviewed (8). A Bosnian colleague and the author conducted the interviews together. The Bosnian colleague was co-worker, interpreter and mediator of culture bound themes. The interviews, with a total duration of 2 to 3 hours, took place in the homes of the refugees. The refugees to be contacted had given written consent to be re-interviewed in the follow-up study.

Fig.1 Study design: Refugees in the study, drop outs and content of structured questionnaires (*) used at T1 and T2 in Norway ($T2_N$) and Bosnia ($T2_B$)

*(** All nationalities, N=795)*



Instruments (see fig 1)

Demographics, somatic health and health care services

The follow up interviews (T2) covered data on sociodemographic background including geographical origin, gender, religion, age, marital status and education.

Self-perception of global health was illustrated by with the categories 'very bad', 'bad', 'neither bad nor good' 'good' and 'very good'. Perception of life and health situation (last week) was indicated on a scale from 0 (worst) to ten (best). Presence of bodily symptoms (the last four weeks) were ticked off for 'yes' or 'no' regarding 'Head-ache', 'Heart-symptoms', 'Breathing-problems', 'Gastrointestinal problems', and 'Pain in the body'. Use of health care services, quality of health services and the need for psychologist were recorded.

Return experience to Bosnia

The return to Bosnia was explored with standard questions on quality of welcome and attitudes of friends and neighbours.

Traumatic exposures

Pre-flight trauma history items were derived from Harvard Trauma Questionnaire (HTQ) and recorded at T1 (See table 2). At T2 stressful events experienced as traumatizing in exile or in Bosnia, such as hearing about and receiving news of events at home, getting to know about losses, either human or material, as well as reported daily-life events experienced as stress-full or traumatizing were recorded. New traumatic events in the host country or losses of friends and relatives caused by ongoing atrocities in their native country were also a theme.

Psychological symptom load

Psychological symptom load was measured at T1 and T2, with scores ranging from 1 (little) through 4 (very much), using the following:

The Hopkins Symptom Checklist-25 (HSCL-25) The HSCL-25 has been used in cross-cultural research (9, 10) and has proved reliable and valid for measuring depression and anxiety in cross-cultural studies. It includes 10 items from the anxiety cluster and 15 items from the depression cluster, including 2 questions relating to somatic symptoms. Scores above cut-off of 1.75 indicate 'clinically significant distress'.

The Harvard Trauma Questionnaire (HTQ) has been used in both clinical and research settings with patients and community-based populations of diverse cultural backgrounds. HTQ is an instrument designed for the assessment of trauma and torture relating to mass violence and their consequences with a cut off of 2.5. (11).

The Posttraumatic Symptom Scale (PTSS-16) is a 16 criteria checklist covering posttraumatic stress symptoms, within the last 7 days, as described in the DSM-III-R and DSM-IV. The items covered were sleep disturbances, dreams/nightmares about imprisonment / torture, depression, startle reactions, tendency to isolation from others, irritability, emotional lability, guilt/self accusations, fear of the trauma scene or situations resembling it and bodily tension. Scores above cut-off of 2.5 indicate "clinically significant distress". (12, 13).

A study of the psychometric properties of new translations of PTSS-16 derived from HTQ and HSCL-25 by Kleijn *et al* (14) concludes that the tests are adequate across different cultures and are in general, applicable to measure symptoms of depression, anxiety and posttraumatic stress disorder.

Qualitative data

Information about the aspects of the repatriation process was supplemented with an open-ended question 'What would you like to add to this interview?'. After the structured interview, additional comments and viewpoints to open ended questions were noted in an open summation. The additional information was translated and written down after each interview session. Thematic entities emerged from the gathered information and were systematized into thematic groups. The meaning categorization technique was applied in this process (15).

Statistical methods

Statistical Package for the Social Sciences (SPSS) was applied. Chi-square test was applied for categorical data and Fischer's exact test when expected count was < 5. Block-wise multiple regression analyses were used.

Attrition

There were no major differences in the distribution with respect to age, gender and education between the groups. Attrition from T1 to T2 in the group was distributed as follows: 10% stated at T1 and 12% at T2 that they were not willing to be re-interviewed, 7% had moved and was not possible to reach by mail and 13% dropped out of other reasons (lack of health workers and sudden changes in routines in some municipalities).

Attrition among the returnees was 5 (19%) reflecting the situation in Bosnia for the returnee's, none declined to attend when contacted. One internally displaced woman was not found. Neither the local registration office in several possible municipalities nor the local Red Cross could provide any information about her. A woman who lived in an area inaccessible due to security reasons was contacted through International Organisation Of Migration (IOM) with no result. Three persons had after returning to Bosnia re-migrated, two to another European country and one back to Norway.

Results

1. Differences between the exiled and repatriated population

a. Demographics

The distribution of demographic data is listed in table 1. No major differences are seen between the groups concerning distribution of gender, age, marital status and education.

Table 1. Demographic data for the total population at T1, for non-attendees at T2 and for the remaining (T_N) and the returning group(T_B) at T2.

Demographic data	T1 Total population N=343 %	T2 Non-attendees N = 147 %	T2 Norway N=175 %	T2 Bosnia N=21 %	Diff. between groups
Gender - Male	49	44	53	48	ns
Age Mean SD Range	40 (14)	43 (15)	43(13)	42 (13)	ns
Marital status					ns
Married	73	67	77	81	
Single	14	18	11	19	
Living together	3	2	5	0	
Divorced	3	4	2	0	
Widowed	7	9	6	0	
Education					ns
No formal education	3	5	2	5	
Primary	15	15	16	10	
Vocational	19	16	21	29	
Secondary	32	34	31	29	
University	30	30	31	29	

b. Pre-flight traumatic exposure

Table 2 displays the distribution of pre-flight traumatic exposures in the total population. A statistically significant, lower incidence for some of trauma types with a jeopardizing character on the individuals' physical and mental boundaries were seen among the repatriated.

Table 2 Pre-flight traumatic exposures for the remaining (T_N) and the returning group(T_B).

Traumatic exposures	T1 Total group N=343 %	T2 Non-attending N=147 %	T2 T_N in Norway N=175 %	T2 T_B in Bosnia N=21 %	* Diff. Between T_N and T_B
1. Have been living in hiding	68	62	71	81	ns
2. Have been in prison	13	14	13	0	ns
3. Have been in concentration camp	22	15	29	10	< .05
4. Have experienced war	86	83	89	86	ns
5. Have been in danger of life	88	85	92	81	ns
6. Have witnessed torture	40	40	43	14	< .005
7. Have witnessed killing	31	30	31	29	ns
8. Have been separated from family	83	82	85	86	ns
9. Have experienced physical violence	21	19	24	0	< .05
10.Have experienced torture	14	14	16	0	< .05
11.Have had other extreme experiences	51	50	56	24	< .005

* Chi square tests, Fischer exact test when expected count <5
ns – non-significant

c. Psychological symptoms and change in symptom load

Table 3 illustrates the differences in psychological symptoms. The groups $T2_N$ and $T2_B$ remained high in symptom load with more than 40% above the normative threshold (1.75) for 'clinically significant distress' for HSCL-25 at T2.

A lower score in all parameters was found in the repatriated group from T1 to T2. This decline was statistically significant only for the PTSS-16 and HTQ scores ($p < 0.05$) (marked * in table 3).

Table 3. Differences in Psychological Symptom load and Somatic symptoms at T1 in Norway and T2 for the remaining and the returning groups.

Somatic and Psychological symptom load	**T1 in Norway**		**Diff. between groups at T1**	**T2 in Norway and Bosnia**		**Diff. between groups at T2**
	$T1_N$ (N=175)	**$T1_B$** (N=21)		**$T2_N$** (N=175)	**$T2_B$** (N=21)	
Psychological symptoms						
HSCL tot						
Mean	1.8	2.0	ns	1.8	1.7	ns
SD	.5	.6		.5	.4	
Range	1-3.6	1-3.4		1-3.2	1.2-2.8	
% Above cut-off	49 %	60 %	ns	46%	43%	ns
HSCL anx						
Mean	1.8	1.9	ns	1.8	1.8	ns
SD	.6	.6		.6	.4	
Range	1-3.5	1-3.3		1-3.7	1.2-3.1	
% Above cut-off	45 %	57 %	ns	49 %	38 %	ns
HSCL depr						
Mean	1.8	2.0	ns	1.8	1.7	ns
SD	.5	.6		.5	.5	
Range	1-3.7	1.2-3.5		1-3.2	1.1-2.8	
% Above cut-off	48 %	60 %	ns	56 %	30 %	ns
PTSS -16						
Mean	1.9	2.2 *	ns	1.9	1.6 *	ns
SD	.5	.5		.5	.4	
Range	1-3.5	1.6-3.3		1-3.5	1-2.7	
% Above cut-off	17 %	20 %	ns	17 %	10 %	ns
HTQ						
Mean	1.8	2.0 *	ns	1.8	1.7 *	ns
SD	.4	.5		.5	.4	
Range	1.1-3.5	1.4-3.1		1-3.5	1.1-2.7	
% Above cut-off	6 %	14 %	ns	7 %	10 %	ns
Somatic symptoms last 4 weeks	%	%		%	%	
Headache	41	38	ns	53	48	ns
Heart symptoms	17	14	ns	18	19	ns
Respiration problems	18	5	ns	21	5	ns
Gastro-intestinal symptoms	18	10	ns	31	10	< .05
Pain in the body	25	5	< .05	40	10	< .005

* $p < .05$; Statistically significant decline from T1 to T2

d. Somatic symptoms

The repatriated group reported less somatic symptoms compared to the group in exile. A statistically significant reduction from T1 with T2, in 'bodily pain' was found for both groups and in 'gastrointestinal symptom' for the returnees.

There were no differences between the remaining group and the repatriated group at T1 in the assumption of having received necessary health services in Norway or Bosnia. Half of the repatriated, 53%, and 23% of the exiled group judged their health to be good or very good at T1, and at T2 there was an increase for the repatriated group to 57%.

e. Repatriation

The relation between gender, traumatic exposures and psychological symptoms to level of repatriation wishes at T1 was explored. Women were more eager to go back as soon as possible compared to men, but the T2 group was too small to permit conclusions. Significant correlation ($p < 0.05$) was found between the attitude' *Want to stay in Norway'* at T1 to return home and the traumatic exposure: *'Having been in concentration camp'*. The same was true of the relationship *'Wants to go back but will wait for better conditions'* to the traumatic exposures: *'Have been in prison'*, and *'Have witnessed torture'*. Statistically significant correlation was found between PTSS-16 and HTQ to *'Wants to go back but wait for better conditions'*. The attitudes at T1 are reflected in the T2-results.

Table 4. Distribution of 'Wish to repatriate level A to level D' in relation to the Actual return at T2 and Relation between Traumatic exposure and Psychological symptoms at T1.

	As soon as possible *Level*	Wants to go back but wait *Level*	Wants to stay in Norway *Level*	Uncertain of choice *Level*
%	**A**	**B**	**C**	**D**
Total group T1	12	47	17	25
T2 in Bosnia	31	62	0	8
T2 in Norway	8	44	20	29
Non attending T2	13	48	16	23
Correlation	***A***	***B***	***C***	***D***
Have been in prison	-.027	-.143**	.085	.112*
Have been in concentration camp	-.019	.012	-.200**	.174*
Have witnessed torture	-.023	-.112*	.023	.128*
PTSS-16	.082	-.131*	.008	.083
HTQ	.051	-.156**	.052	.095

2. Returning experiences - obstacles and challenges

The repatriated group gave as major reasons for returning to Bosnia: *'the wish to participate in the rebuilding of the country'* (33%), *'responsibility towards family still living in Bosnia'* (38%), *'that some members of the family wanted to go back'* (38%) and *'a job to go back to'* (6%). Half of the group had family left in Norway. Eighteen considered returning to Norway because of the problems in Bosnia and mentioned economy 13 (62%), work 13 (62%), social problems 8 (38%), housing 6 (28%), security 2 (10%), the future of the children 2 (10%) and family left in Norway 1 (5%) as the underlying causes for this wish.

The qualitative data supplement and confirm the results of the quantitative data all presented in thematic groups. The themes are repeated in all the interviews with shifting emphasis, clarifying the picture.

1. Problems of being accepted after returning to Bosnia from exile:

On the return home nineteen returnees were met by family and two persons had no one to meet them. Four experienced aloofness or were badly treated on their return. Six experienced negative reactions from friends and other people because of their absence during the war.

'We are all growing the same crops and they don't want to buy from one who was away during the war. Former friends were hostile when we returned and I was severely mocked at my old work and had to quit. Now I try to live from growing vegetables. We live on my wife's salary and gifts from other family members. We couldn't get the house back, so we live in a family house.' (Man, 48).

The case illustrates a reaction several refugees met from former neighbours, colleagues, friends and family. They tried to reformulate it as 'not really hostility but rather jealousy for having been spared the atrocities of war'. It was not shown openly, more as obstructions in getting a job, house or other services. The returnees expressed a lack of common identity through shared memories after the war ended.

2. Difficulties for internally displaced refugees with regard to housing and employment.

Half of the repatriated group lived under conditions characterised as bad or very bad. Twenty-five percent did not live in their own houses, because refugees and other ethnic groups occupied them or because they were destroyed. The returnees reported the major obstacles to

be problems of getting a job, earning a living (52%), housing (38%), negative attitudes from local people (29%) and one mentioned mines in the neighbourhood to be a security problem.

'If I had stayed in Norway I would have longed myself sick for my country, my town and my people. Now I'm here without anything to live of, I have to watch my house with other people living in it on the other side of the street. I only want to return to Norway and never come back. This is no longer my city and my people.' (Man, 43 years)

The return to areas predominantly inhabited by other ethnic groups was at the time of the study still very difficult. Internally displaced refugees had moved into the homes of refugees from other ethnic groups or exiled refugees, and some towns were divided along ethnic lines. This situation was clearly under-communicated to the returning refugees. The expectations of going home to a familiar place turned into difficult experiences. Those who returned to their homes and jobs had an optimistic attitude even though the reconstruction of demolished homes was a major task.

3. Future possibilities for children:

Two (10%)considered returning to Norway because of the uncertain future of their children.

'I lost one son in the war and there have been so many other losses. I fear for the safety of our other son and the unstable situation in the country. We live in our own house, repaired with the money we received from Norway but would rather like to return to Norway as soon as possible.'(Woman mid 40's)

Several informants were concerned about the future prospects for their children. To re-establish the children's feeling of being a native of Bosnia was seen as important. The lack of common memories about the war was difficult to overcome and a barrier in re-establishing relationships. Children with psychological problems after war experiences had difficulties in continuing the treatment started in Norway.

4. Difficult economic and social conditions for the elderly compared to the situation before the war:

Eight (38%) had a job and received all their income from their work and half of these had the same job as before the war. The rest of the group received supplementary funding from family abroad or inside Bosnia as well as the money they brought from the Norwegian state when they returned to Bosnia.

'I had to leave my husband behind in Norway. He is sick and can't get the treatment he needs here. I never learned Norwegian, I longed for my family in Bosnia and we had to get our property back. The life here is so difficult, people don't care for each other like before the war, and they have changed. I want to go back to Norway again. I can't get a job, and I have no pension any more, medical help and medicine is expensive' (Woman, 68 years).

Old people experienced the war as a breakdown in the last part of their life. The familiar urban social structure changed as town people left and internally displaced people from the district moved into the towns. Family networks disintegrated; the economic situation in Bosnia Herzegovina collapsed; and shortage of drugs and high food prices caused problems for those who no longer received old-age-pensions.

All the returnees had mixed experiences. Positive feelings of being home again were present, but were reduced for those who had experienced major traumas, met many obstacles or had been ill. Only one woman was completely positive, having got back the old job and living with family and friends again.

Discussion

Our main finding was that refugees with a former history of severe traumatic experiences with a physical as well as an intrusive psychological character were less willing to return home. Psychological symptoms remained high over time and the decline in symptoms was larger among the returnees despite the hardship they met.

The main limitation of the study is the small number of returnees and the results must therefore be interpreted with some caution. As the design depends on the historical development of the migration-processes it was not possible to obtain an ideal design. A selection bias may obviously be present but the groups were considered comparable as no major demographic differences were found between the total T1 group and $T2_N$ and $T2_B$. This may increase the validity of the results.

Re-experiencing the arena of trauma

Trauma attacks the person's self-confidence and the predictability of the world. Threat to life and physically intrusive traumas may attack the inner core of basic trust (16). Going back to the places where the traumatic events took place implies re-experiencing places, memories and feelings. The experienced feelings of helplessness and powerlessness may be revived.

The difference in severity of trauma between the groups in the study reflects this. The returned group had suffered less directly physical traumas, even though these may have had implicit elements of physical threats.

Psychological symptom load and general health condition

The persistence and the chronicity of the psychological symptoms in the whole group are supported by other studies. Bramsen & van der Ploeg (17) studied the long-term psychological adjustment of ageing World War II (WW II) survivors 50 years after the war. They found a significant but modest relationship between exposure to shocking war-events and current psychological symptoms such as PTSD, anxiety and anger. A 3-year follow-up study of Vietnamese refugees Hauff & Vaglum (18) showed the long-lasting effect of war and persecution on psychological symptoms. Only in recent years empirical data are available from Bosnia. Weine *et al* (19) reported in a 1 year follow up study of Bosnian refugees in The United States that the level of PTSD diagnosis and symptoms remained substantial although there was a notable overall decrease.

In this study the level of original traumas is an important factor determining psychiatric outcomes irrespective of later experiences influencing the significant smaller reduction of PTSD and HTQ symptoms. This is supported by follow-up study of traumatised Vietnamese refugees in Australia where the risk to mental disturbances remained four times greater than controls 10 years after exposure. (20) The returnees presented less somatic and psychological symptoms at T2, but at an earlier stage in exile this picture was different. The difference in change in post-traumatic stress related symptoms over time was significant, with a decrease in the returned group. In contrast to the amount of reported psychological symptom load, few had been in contact with psychiatric/psychological health care in both groups. A combination of resilience, reluctance to admit problems, and low availability of services may be some of the reasons.

Challenges of the repatriation process

The refugees who returned home during after the first interview were among the most motivated at that time. Longing for home, the familiar surroundings and countryside were main objectives for the return. The strong links to family in Bosnia and a wish to take part in the rebuilding of their country were given as main reasons, whereas only a minority had a job

to return to. Despite the hard conditions in Bosnia for the returnees some positive experiences and attitude must have influenced the course. Studies from other parts of the world show similar patterns. Sundquist *et al* (21) showed in qualitative in-depth interviews with exiled and repatriated Latin American refugees: during exile the cultural barrier, social degradation, guilt, social passivity and ideological alienation caused a changed identity and low control which increase the vulnerability to psychological distress and physical disease. Risk factors for psychological distress and illness, torture, discrimination and not feeling secure proved to be as important as material factors and lifestyle. In a longitudinal study of stress in East German refugees, Scharzer *et al* (22) found that those who remained jobless over two years reported continuously the highest degree of physical symptoms.

In 2001, 2000 of the 12000 Bosnians had returned but 400 immigrated back to Norway. Seventy percent of the houses were destroyed during the war and reconstruction is slow and the unemployment rate was between 40 and 60 %. The Dayton peace treaty stated that everybody should be able to return to his/her home. Obstacles such as political obstruction, weak institutional capacity of municipal authorities and acute shortage of alternative accommodation as well as reluctance among local politicians and officials who seem little willing to implement this policy in all parts of the country made this difficult (23). . To support international reconstruction of the post-war society as a means to make return safer is important. This also includes support to establish war-tribunals and work for post-war reconciliation (24).

In our study the returnees were a healthier and less severely traumatized group who received economic support to return home from a host country. In a study of Bosnian refugees living under harsh conditions in Croatia during the war and first post-war years, Mollica *et al* found that the healthier, educated Bosnian refugees from this population did not return to Bosnia but resettled in N America and W Europe (2). The difference between these two studies illustrates how economic opportunities may play an important role in the decision-making process of a return.

<u>The repatriation process and implications for organisation of health care services for traumatised refugees</u>

The decision whether to remain in exile or to return home to an unstable society is difficult. The return experience is of great importance for the signals sent back to those who are still in

exile. To support international reconstruction of the post-war society as a means to make return safer is important. This also includes support to establish war-tribunals and work for post-war reconciliation (25).

A global perspective on public health should be applied based upon the knowledge of long-term effect of trauma and post-migration stress. (26) Finding and treating traumatized refugees in exile is important, but a medicalisation of life may on the other hand lead to a relocation of distress from the social to the clinical arena. Summerfield (27) wrote that the registration in diagnoses and measurement of human pain depends on the philosophical and socio-moral considerations evolved over time and cannot simply be reduced to a technical matter. On the other hand, the diagnostic entities may be looked upon as useful to assist in helping managers and practitioners to determine overall and long-term impact on the community and to develop appropriate services (28). Adjusted psychosocial health services should, in collaboration with the refugee-groups, be established in order to strengthen resilience, thus making it possible for those who have the desire and the possibility, to return.

There is a need for continuous research on the longitudinal course of psychological reactions to exile and repatriation and factors affecting the repatriation process.

Acknowledgment

The Norwegian Directorate of Immigration (UDI) is gratefully acknowledged for financial support to the journey to Bosnia, the Norwegian Research Council for research grant for the project, my colleague and friend who made it possible to find and interview the repatriated refugees in Bosnia as well as Professor Jon Martin Sundet, University of Oslo, for his constructive contribution to the statistical work. I also would like to thank all participants in the study, in Norway and Bosnia.

The Norwegian Ethical Research Committee approved the project and there are no conflicting interests involved.

---

1 HAUFF, E., VAGLUM, P. Organised violence and the stress of exile. Predictors of mental health in a community cohort of Vietnamese refugees three years after resettlement. Br J of Psych 1995; 166:360-367.

2 MOLLICA, R.F., SARAJLIC, N., CHERNOFF, M., et al (2001) Longitudinal study of psychiatric symptoms mortality and emigration among Bosnian refugees. JAMA 2002; 286: 546-554.

3 PHUONG, C. Freely to return': Reversing Ethnic Cleansing in Bosnia-Herzegovina. J of Ref Stud 2002; 13(2): 165-183.

4 MOLLICA, R.F., McINNIES, K, SARALJIC, N., et al. Disability associated with psychiatric co morbidity and health status in Bosnian refugees living in Croatia. JAMA 1999; 282 (5): 433-439.

5 MOLLICA, R.F., XINGJIA,C., McINNES, K., et al Science-based policy for psychosocial interventions in refugee camps. A Cambodian example. J of Nerv and Ment Dis 2002; 190 (3): 158-165.

6 FULLILOVE, M.T. Psychiatric Implications of displacement: Contributions from the psychology of the Place. Am J of Psych1996; 153: 1516-1523.

7 LIE, B., LAVIK, N.J., LAAKE, P. Traumatic Events and Psychological Symptoms in a non-clinical Refugee Population: The situation among 462 newly arrived Refugees in Norway. J of Ref Stud 2002; 14 (3): 276-294.

8 LIE B. A 3-year follow-up study of psychosocial functioning and general symptoms in settled refugees. Acta Psych Scand 2002,106:6; 415-425.

9 MOLLICA, R.F., WYSHAK, G., de MARNEFFE, D., KHUON, F. LAVELLE, J. 'Indochinese version of the Hopkins Symptom Checklist-25: A screening instrument for the psychiatric care for refugees.' American Journal of psychiatry 1987; 144:497-500.

10 LAVIK NJ, LAAKE P, HAUFF E, SOLBERG Ø. The use of self-reports in psychiatric studies of traumatized refugees: validation and analysis of HSCL-25. Nord J Psychiatry 1999; 53:17-20.

11 MOLLICA, R.F., CASPI-YAVIN, Y., BOLLINI, P., TRUONG, T., TOR, S., LAVELLE, J. 'The Harvard Trauma questionnaire. Validating a cross-cultural instrument for measuring torture, trauma and posttraumatic stress disorder in Indochinese refugees.' Journal of nervous and mental disease. 1992, 180 (2): 111-116.

12 RAPHAEL B, LUNDIN T & WEISAETH L. A research method for the study of psychological and psychiatric aspects of disaster. Acta Psychiatrica Scandinavia Supplementum 1989; 353:1-75.

13 LAVIK NJ, HAUFF E, SKRONDAHL A. & SOLBERG Ø. Mental disorder among refugees and the impact of persecution and exile, Some findings from an out-patient population. British Journal of Psychiatry 1996; 169:726-732.

14 KLEIJN, W.C., HOVENS, J.E., RODENBERG, J.J. Posttraumatic stress symptoms in refugees: Assessments with the Harvard Trauma Questionnaire and the Hopkins Symptom Checklist-25 in different languages. Psychol Rep 2001; 88 (2): 527-532.

15 KVALE, S. (1996) Interviews. An introduction to qualitative research interviewing. Thousand Oaks: Sage.

16 McFARLANE A &, De GIROLAMO G. The nature of traumatic stressors and the epidemiology of posttraumatic reactions. In: Van der Kolk B, Mc Farlane A, Weisaeth L eds. *Traumatic Stress. The effects of overwhelming experiences on the mind, body and society.* New York: The Guildford Press, 1996: 129-155.

17 BRAMSEN, HM, VAN DER PLOEG. Fifty years later: the long-term psychological adjustment of ageing World War II survivors. Acta Psych Scand 1999; 100: 350-358.

18 HAUFF, E., VAGLUM, P. Chronic Posttraumatic Stress Disorder in Vietnamese Refugees. J of Nerv and Ment Dis 1994; 182 (2): 85-90.

19 WEINE, S. M., RAZZANO, L., BRIKC, N. et al. Profiling the trauma related symptoms of Bosnian refugees who have not sought mental health services. J of Nerv and Ment Dis 2000; 188 (7): 416-421.

20 STEEL Z, SILOVE D, PHAN T, BAUMAN A Long term effect of psychological trauma on the mental health of Vietnamese refugees resettled in Australia: a population based study. Lancet 2002; 360: 1056-1062.

21 SUNDQUIST. J., IGLESIAS, E., ISACSSON, A.A. Migration and Health. A study of Latin American refugees, their exile in Sweden and repatriation. Scand J of Prim Health Care 1995; 13: 135-140.

22 SCHARZER, R., JERUSALEM, M., HAHN, A. Unemployment, social support and health complaints: A longitudinal study of stress in East German refugees. J of Com and Applied Psychol 1994; 4: 31-45.

23 FISCHEL DE ANDRADE , J.H., DELANEY, N.B. Minority return to South Eastern Bosnia Herzegovina; A review of the 2000 return season. J of Ref Studies. 2001; 14 (3): 315-330.

24 STEIN DJ Psychiatric aspects of the Truth and Reconciliation Commisssion in South Africa. Br J Psychiatry. 1998; 173 (12): 455-457n.

25 STEIN DJ Psychiatric aspects of the Truth and Reconciliation Commisssion in South Africa. Br J Psychiatry. 1998; 173 (12): 455-457.

26 SILOVE D & EKBLAD S How well do refugees adapt after resettlement in Western countries? Acta Psych Scand 2002,106:6; 401-402.

27 SUMMERFIELD, D. (2001) 'The invention of posttraumatic stress disorder and the social usefulness of a psychiatric category' BMJ 322: 95-98.

28 BOLTON, D., GILLESPIE, K., DUFFY, M., BURGES, C.M. (2001) 'Misappropriation and misuse of PTSD' *BMJ Electronic response to Education and debate: Summerfield D. (2001).*