Refugee children from the Middle East

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REFUGEE CHILDREN FROM THE MIDDLE EAST

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Table of Contents

Preface

Since 1988 the Rehabilitation and Research Centre for Torture Victims (RCT) has participated in the international project "Children in Crisis". The project was initiated at a conference held in London in May 1988 by the International Academy of Pediatric Transdisciplinary Education (IAPTE). At this conference, RCT organised a seminar on providing assistance to children whose parents have been subjected to torture. Previous research results were discussed, and it was concluded that there was a need for an international study documenting the extent and nature of problems experienced by this particular group of children. Psychologists, psychiatrists and pediatricians from Argentina, Denmark, France, Greece, Pakistan, the Philippines, South Africa, and the United States decided to cooperate regarding such a study. Thus, the project "Children in Crisis" was established.

A qualitative analysis carried out at RCT in 1989 comprised the first phase of the Danish part of the project (1). Together with reports from the other participating countries, the results of this analysis were presented at a seminar in the Philippines in December 1989. One of the specific results of this international seminar was the beginning of the present study.

The study has been conducted under the auspices of RCT. The dissertation advisors were Associate Professor of Clinical Psychology Libby Tata Arcel, of the University of Copenhagen, Associate Professor Anders Foldspang, MD, DMSc, of the University of Aarhus, and Professor Per Schultz Jørgensen, Ph.D., of the Royal Danish School of Educational Studies.

The study has been conducted in cooperation with the Danish Red Cross, particularly Chief Psychiatrist Ebbe Munk Andersen and Coordinating Nurse Kis Hansen. The structured interviews were carried out by Visiting Nurse Berit Haahr Rindorf. Professor Bent Sørensen, MD, DMSc, member of the United Nations Committee Against Torture and the Council of Europe Committee for the Prevention of Torture, acted as a consultant in establishing whether the adults had been subjected torture.

The RCT Documentation Centre assisted in collecting relevant literature, and Librarian Kirsten Reimer was responsible for the recording and graphical representation of data. Interviews were transcribed by Medical Secretary Jette Cavling. Other colleagues have assisted with layout, printing and proof-reading. Interviews were carried out with the practical assistance of interpreters from the Danish Red Cross and from RCT. The psychotherapists at RCT have provided continuous support through productive discussions and constructive criticism. Finally, Network Coordinator Kenja Henriksen has translated the dissertation into English.

I would like to thank everyone for the great interest shown and assistance provided in connection with this project.

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Rehabilitation and Research Centre for Torture Victims
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Abstract

Objective: To map the frequency (prevalence) of torture victims among parents in asylum seeking Middle Eastern refugee families, to map the occurrence (prevalence) of experiences of war and other forms of organised violence among the children in these families, to map the occurrence (prevalence) of emotional symptoms and behavioural problems among the children, and to identify risk indicators and modifying factors for anxiety symptoms among the children. *Design*: Interview with parents using a structured interview questionnaire developed for this study. Validated through a blinded semi-structured interview conducted with approximately 1/3 of the families. *Auspices*: The study has been carried out by the Rehabilitation and Research Centre for Torture Victims (RCT) in cooperation with the Danish Red Cross. *Material*: Structured interviews with parents regarding 311 children aged 3–15 from 149 families, all registered as asylum seekers from the Middle East between February 1, 1992 and April 30, 1993. The response was 90.4%. *Principal variables*: background (past-past)—social and demographic data; trauma complex (past)—war-related life circumstances (conditions) and experiences of war and other forms of organised violence such as loss, separation, direct exposure to violence and witnessing acts of violence (specific events and changes of life conditions); present life context (past-present)—family circumstances upon arrival in Denmark; effect (present)—the child's current psychological state. *Results*: 28% of the parents (44% of the fathers and 13% of the mothers) had been tortured, to the effect that 51% of the children were part of a family including a survivor of torture. The most frequent specific types of violence-related events or circumstances were 'lived in a refugee camp outside the home country' (92%), 'lived under conditions of war' (89%) and 'been on the run with parents' (89%). Twenty percent of the children had lost one parent, and another 60% had been separated from one parent for more than a month. The highest prevalence of emotional symptoms were found within the anxiety dimension, as 67% of the children were assessed as being clinically anxious. The most important risk indicators for anxiety were 'lived in a refugee camp outside the home country', 'part of a torture surviving family', 'lack of opportunities for play with other children', 'beaten/kicked by an official', and 'loss of father'. Current parental behaviour was also an important risk indicator for anxiety, if the mother or father hit or punished the child more than was the case prior to arrival in Denmark. The most important anxiety-modifying factor was arrival in Denmark in the company of both parents. *Conclusions*: Asylum seeking refugee children from the Middle East have had many experiences of war and other forms of organised violence. The children frequently reacted with anxiety and with other symptoms of emotional instability. Prevalent anxiety symptoms correlated both with previous living conditions and present family situation. Living under prolonged conditions influenced by war and other forms of organised violence (prevalence) were found to a higher degree to be risk indicators for anxiety than were specific events or changes of life conditions (incidence).

BACKGROUND

The Political Situation in the Middle East 1990–92

This dissertation deals with the mental health of a group of Middle Eastern refugee children that arrived in Denmark over a period of 15 months in 1992–93, seeking asylum with their parents. The families had chosen to flee from war, persecution, and violence in their home countries. The political situation and the human rights situation in these countries at the time preceding their departure is a context that must be understood in order to comprehend the families' experience and psychological situation upon arrival in Denmark.

Iran

Historical Background

Iran remained a monarchy until 1979 when Shah Reza Pahlevi was dethroned by an opposition of liberal, left wing and Shia Islamic fundamentalists, the latter group under the leadership of Ayatollah Ruhollah Khomeini. Khomeini returned from exile in February 1979 and assumed power shortly hereafter, declaring Iran an Islamic Republic. A new constitution was adopted succeeding popular vote in December 1979 (2).

Fundamentalists from the Islamic Republican Party quickly became the dominating forces of government, and other political groups were excluded from power. The Iran/Iraq war, which broke out in 1980, contributed to these developments, as attention focused on the external enemy, and was diverted from internal strife. When it became clear that only certain favoured groups would benefit from the fall of the Shah and the institution of the Islamic Republic, left wing and moderate groups went into opposition and, already from the early eighties, became involved in armed conflict with the regime (2).

In August 1988 a United Nations cease-fire agreement ended the dispute between Iran and Iraq (2). Ayatollah Ruhollah Khomeini died in 1989, and Ali Akbar Hashemi-Rafsanjani succeeded him as president.

Government and Population

Iran is an Islamic Republic with a National Assembly and a president elected from a number of candidates at popular elections. All candidates, however, must meet certain restrictive religious and political criteria, such that in reality choices are actually few. The government maintains power through arbitrary arrests, summary trials and the execution of members of the opposition (3).

Iran has two court systems: the traditional courts, dealing with civil and criminal offenders, and the Revolutionary Courts established in 1979 for the handling of "political cases". The trials of the Revolutionary Courts are conducted behind closed doors, and the defendants have practically no rights. For example, access to legal assistance is severely limited (3). In 1991, the Iranian parliament adopted a law entitling all defendants to legal assistance in all court systems. Conditions were ameliorated for a number of prisoners serving long sentences because of their political convictions. In addition, some prisoners were released. This, however, did not prevent the imprisonment of nine prominent dissidents. These were denied legal counsel and were consequently convicted in closed trials. Credible reports indicate that they were subjected to torture while detained. Thus, the new law appears to have been introduced in an attempt to project a more positive image to the west, rather than in any true attempt to afford citizens greater security (4).

The western division of social life into a public sphere, where the state may exercise control, and a private sphere (religion, culture, thought, private behaviour) where state control is limited, is not an accepted division in Iran. Here, authorities do not hesitate to enter private homes, open mail and tap private phone lines. Women may be arrested if they appear in a public place wearing make-up or not adhering to the Iranian code of dress (in which the hair and body must be covered except for the face and hands) (3).

In Iran, religion and political rule are indivisible. The president, top officials, the chairman of the national assembly, in addition to half of the assembly members, are all mullahs (Islamic clerics). Approximately 90% of the population of Iran are Shia Muslims. Apart from just over 1% who are not Muslims, the remainder are Sunni Muslims. Christian, Jewish, and Zoroastrian communities are acknowledged in the constitution and elect representatives to the national assembly, while the Bahá'í community, Iran's largest non-Muslim minority, is not acknowledged. Christians are not openly discriminated against but are harassed in different ways. Discrimination and intimidation of the Bahá'í community, however, remains official policy in the 90s (3).

Division resulting from the revolution, destruction from the war with Iraq, large-scale earthquakes in

1990, and inadequate governmental rule all contributed to considerable economic recession in the early 90s.

The Human Rights Situation 1990–92

In the early 1990s Iran was among the countries in which some of the most serious human rights violations took place. These included extrajudicial killings and summary executions of political dissidents; widespread use of torture; repression of freedom of expression, freedom of the press and of the right to assemble; arbitrary detention; denial of fair trial; repression of the right to change government; and severe discrimination in the area of women's and workers' rights (3, 5, 6). Numerous reports indicate torture and abuse of prisoners, detention of political opponents and executions after summary trials (7–9). Demonstrations occurred sporadically in the early 90s, but were quickly suppressed (4, 7–9). Certain reports indicate that hundreds of arrests were made after demonstrations and insurrection in the spring of 1992 (6, 10).

The Special Representative of the UN Commission on Human Rights visited Iran in 1990, for the first time in five years (3, 11). His report detailed the killing of exiled dissidents, public stoning and beheading, in addition to mass executions of drug offenders (11). As the conclusion of the report states: *"the enormous quantity and variety of allegations and complaints received from very diverse sources … provide a credible factual basis for the belief that human rights violations occur frequently in the country and that government action to prevent and remedy such violations has not been sufficient to put an end to them"* (3, p. 44–45).

An agreement signed in 1991, giving the Red Cross permission to visit prisons, (4, 5, 11) apparently did not lead to changes in prison system practice. Thus, in his report to the UN Commission on Human Rights, the Special Representative again reports the use of torture in Iranian prisons (10).

Iraq

Historical and Political Background

Iraq became a republic in 1958. Since the revolution in 1968 the country has been ruled by the Arab Ba'ath Party. Saddam Hussein has remained president since 1979. Under his rule the office of president has become the true centre of power in Iraq. Since the Ba'ath party took power, Iraq has had a one-party system. Only few attempts have been made, as a result of public protest, to decentralise and delegate power. Despite regular elections and constitutional rights, the population has little or no power to effect governmental changes or influence policy (3, 12). Some form of delegation of power, however, has been introduced with respect to the Kurdish minority in northern Iraq (see below) (12).

The population of Iraq comprises Sunni and Shia Muslims, Kurds, Turcomans, and Assyrians. These constitute a very divided group with ethnic and religious minorities that, following the creation of modern Iraq in 1921, never fully accepted the authority of Baghdad (12).

The Iraqi army is large, well-trained, and well-equipped. It maintains a special section responsible for security in the Kurdish autonomous region (3). In September 1980 Iraq, taking advantage of internal unrest in Iran, invaded the western part of the country. This led to the war between these countries which lasted for eight years (12).

In Iraq, common criminal offences are dealt with in the civil, criminal or religious courts, and the trials are public. In national security cases trials take place in the revolutionary courts where cases are heard behind closed doors. In these courts defendants are usually not entitled to legal counsel (3). Although the constitutional right to privacy exists, in practice this right is not respected in cases involving national security.

In 1990, proceeding the invasion of Kuwait, UN economic sanctions were imposed on Iraq (8). These were still upheld at the end of 1992 (9).

The Kurds in Iraq

Kurdistan covers an area of approximately 500,000 km² including part of Turkey, Iraq, Iran and Syria (13). Part of the Kurdish population in northern Iraq has been fighting for independence against changing governments since 1921 (3, 12). In 1974, a form of limited self-rule was established in three provinces of north-eastern Iraq. In 1980 a law was passed granting Kurds the right to form a Kurdish council in this region. Elections followed in 1980 and in 1986 for the 50-member Kurdish legislative assembly. Many Kurds, however, were dissatisfied with the degree of autonomy in the region and continue their struggle against the Iraqi government (12). Some, for example, fought on the Iranian side during the war with this country (3). Between 1981 and 1989 the government attempted to destroy Kurdish resistance and to depopulate the region by systematically killing thousands of men, women and children (3, 4). In addition, thousands of Kurds have disappeared

in Iraqi prisons during the 80s (7). In 1988 Iraq brutally crushed most traces of Kurdish resistance by means of chemical weapons, massacres, and the massive forced resettlement of about 500,000 Kurds and Assyrians (3, 14, 15). Executions have constituted an established Iraqi method for dealing with political resistance. Credible reports indicate that hundreds of individuals, among these Iraqi Kurds, have returned from exile after having been assured an amnesty only to be detained, tortured, executed, or simply "disappear" (3, 7, 8). The government has denied human rights monitors permission to investigate the situation in Iraq (3). Negotiations between the Iraqi government and the Kurdish nationalist party began in 1991, but were abandoned without results in 1992 (9). In 1991 the UN Security Council passed a resolution authorising military intervention by western forces in northern Iraq for the purpose of protecting the Kurdish minority of 3.5 million people from further massacres. With this resolution and with the subsequent deployment of western troops as a "shield" for the Kurds, the UN departed from the principle of non-interference in the internal affairs of other sovereign states (4).

In Iraqi Kurdistan in 1992 a Kurdish human rights organisation became the first organisation of its kind to work openly within Iraqi territory (16). The organisation investigated Iraqi government abuse of the Kurds but did not investigate abuses for which the Kurdish authorities themselves were responsible (16). In 1992, hundreds who sympathised with militant parties were detained by Kurdish authorities without charges (16).

The Human Rights Situation 1990–92

The human rights situation in Iraq reflects continued Ba'ath party efforts to control an ethnically and religiously divided population (12). Armed forces and the security apparatus comprising militia connected directly with the president have been responsible for countless human rights violations. In the early 90s practically all forms of human rights were severely limited or non-existent in Iraq (3). Intelligence and security forces monitored the population and used torture and summary executions of children and adults in their attempts to suppress political resistance. Disappearances, arbitrary arrests and detention, lacking rule of law, and widespread interference with the right to privacy were among other serious violations. Freedom of speech and press were non-existent, and Iraqis did not have the freedom to change their government (3). There are reports of imprisonment, torture and the killing of

hundreds of children for the purpose of punishing dissident parents (3). The use of both physical and psychological torture remains widespread, in spite of the fact that the constitution prohibits the practice of torture (3, 10).

In 1991 Saddam Hussein fiercely crushed a popular revolt. Iraqi troops began the bombing of densely populated areas. Losses numbered in the area of ten thousand and refugees in the area of two million (5, 8). In April 1992 the population of the southern marsh areas were ordered to evacuate the area (10). Many were killed in mass executions or died after having been driven out of the marsh area (5). Humanitarian aid organisations were denied access to severely affected areas of the southern marsh and to the town of Kirkuk in the north (5). Large numbers of civilian Shia Muslims in southern Iraq were killed by armed forces in 1992. An internal embargo in 1992 cut off both Shia Muslims in the southern marsh areas and Kurds in the north from access to necessities such as food, medicine, and fuel (6, 16). Government agents are suspected of having placed bombs on trucks carrying humanitarian aid supplies from Turkey to northern Iraq. At the end of the year, violations in the north came to a temporary halt as a result of the combined efforts of the American, British, French, and Turkish command (6).

Monitoring human rights is practically impossible in Iraq. In January 1992 the UN Special Rapporteur for Iraq was granted permission to visit the country. However, a series of reports, including descriptions of the regime as the one with the worst record on human rights since the Nazi Holocaust, resulted in Iraq closing the door on any form of cooperation (16).

The Invasion of Kuwait

Iraq invaded Kuwait in August 1990. In January 1991 an allied coalition of 28 nations, led by the US, began a counterattack. After six weeks of war with intensive bombing of Iraqi military targets, the Iraqis were forced out of Kuwait (4). During the invasion, Iraqi forces detained hundreds of civilians both in Iraq and Kuwait, placing them in strategic positions in order to use them as human "shields" against military attack. There were reports of mass killings, summary executions, as well as arbitrary arrests and torture of Kuwaiti citizens (3, 4, 17). In many instances, executions took place in public or were carried out in front of family members. Corpses were displayed in public in order to spread terror in the civilian population (3, 17). It is estimated that 10,000

prisoners of war and civilians were taken to Iraq during the invasion (4). Iraqi military forces killed civilians and executed children as young as 12 years of age (3).

By not taking proper precautions, the allied coalition was, according to the human rights organisation 'Human Rights Watch', indirectly responsible for up to one third of the deaths of 2,500–3,000 Iraqi civilians (4).

Kuwait

As mentioned above, Kuwait was occupied by Iraqi forces from August 1990 to February 1991. Although the political rights of the population were severely restricted before the invasion, there was respect for the integrity of individual citizens (3). The abuses of the occupational force have been described above. In the chaotic period following the liberation, Kuwaiti military and security forces as well as members of the civilian population were responsible for human rights violations during the arrest and interrogation of persons suspected of having cooperated with the Iraqi occupational power (5). Abuses included executions, torture, arbitrary detention and imprisonment as well as involuntary repatriation or deportation to Iraq. As the government returned to power, these vigilante abuses became less frequent. However, even after the termination of the state of emergency in June 1991, security forces continued the process of detaining, interrogating and sometimes also torturing suspected collaborators (5). Due to the fact that the Palestine Liberation Organisation (PLO) had officially supported Iraq during the occupation, both Palestinians and Iraqis were forced to leave Kuwait after the liberation. This was effected through economic pressure, refusal to renew work permits, or simply by deportation. Many Palestinians who had fled during the war were not allowed to re-enter the country (4). By the end of 1991, Kuwait's pre-war Palestinian population of about 350,000 had been reduced by approximately 80% (4). Deportations continued in 1992 (6). In October, elections for the National Assembly and its inauguration marked the final return to parliamentary government (6). The human rights situation in Kuwait improved considerably in 1992. However, despite the fact that the constitution prohibits the use of torture, reports appeared in 1992 detailing serious human rights violations and the use of torture (6).

Lebanon

Historical and Political Background

According to its constitution, Lebanon is a parliamentary, democratic republic. However, the

political system has been disrupted by the civil war that began in 1975 (3). Despite the fact that the government has continued to exist officially, its ability to actually exercise any form of control in the country has been quite limited. Unofficial militia have controlled large areas of the country. These have collected taxes and have governed without regard for existing legislation (3, 18). In the years prior to 1990, Syrian and Palestinian troops dominated the northern third of the country and Israeli troops the southern third (18). Civilians were not only in danger when the conflicting groups engaged in extensive combat in densely populated areas. Away from the battle fields, they were also targets for terrorist bombings, snipers, abductors and more (18). Since the onset of the civil war, Christian and Muslim Lebanese have been locked into armed conflict characterised by countless clashes between different sects and political parties. As a result of this lengthy conflict, the country has undergone a general devastation and impoverishment (18).

Violent episodes decreased in the years 1991–92, and the government gradually extended its authority over Lebanese territory (5, 6). A national coalition government was established in 1991 with representatives of seven different political groups. The government ordered all militia to give up arms, an order which some had already complied with by the end of 1991 (8). Preliminary negotiations began between the government and Palestinian representatives regarding the civil and social rights of Palestinians throughout Lebanon (5). Most of Lebanon, however, remained outside government control. Furthermore, Lebanon and Syria signed a "Treaty of Brotherhood, Cooperation and Coordination" in 1991. This treaty was intended to establish the foundation for cooperation between the two countries in a number of areas including the military, security, and economy. In addition, the two countries signed a defence and security agreement later that year, an agreement which among other things was to render possible the exchange of information about political suspects (5, 8). At the end of 1991, however, there were still Syrian troops in Lebanon (5).

Also in 1992, large parts of Lebanon remained outside government control and Palestinian groups in the south still operated autonomously in refugee camps (6, 9). Despite the Syrian/Lebanese defence agreement, Syrian military and intelligence forces continued to operate in Lebanese territory independently of Lebanese authorities and the number of Syrian troops in Lebanon increased once again (6).

The Lebanese economy deteriorated significantly in 1992.

The first parliamentary elections since 1972 took place in 1992 but were not properly arranged or carried out in a way that would ensure the greatest possible participation (6). About 17 Palestinian factions were still thought to be operating in Lebanon at this time. Palestinians were exposed to constant harassment both by national and Syrian intelligence operations as well as by various militia. A pattern of retaliation upon retaliation among different Palestinian factions brought about increased insecurity in refugee camps (19).

Palestinians

According to the Palestinian National Covenant, a Palestinian is an Arab who resided permanently in Palestine until 1947 or a child born after this with a Palestinian father (20).

The 1947 war between Palestinian Arabs and Jewish settlers together with the proclamation of the State of Israel in 1948 marked the beginning of the Palestinian refugee problem (21). Approximately 700,000 people, about half of the Palestinian population, relocated to refugee camps on the West Bank, the Gaza Strip, Lebanon, and Syria. Since then this population group has lived in what at the time was regarded as temporary camps. In connection with the flight from Israel, Palestinians lost their citizenship and were denied new citizenship in countries in which they sought refuge.

After the 1967 Six Day War, Israel took command of both the West Bank and the Gaza Strip and established military governments in the occupied territories. These events led to the growth of the Palestine Liberation Organisation (PLO), which controlled its armed struggle against Israel from the neighbouring states Jordan (until 1971) and Lebanon (1972–82) until the Israeli invasion of southern Lebanon forced them out (21).

The struggle continued through the 80s, particularly in West Bank and Gaza refugee camps, and culminated with the *Intifada* in the late 80s. Meanwhile, Palestinians were divided. While reports indicate that almost 800 Palestinians were killed by Israeli security forces during the Intifada in the years 1987–90 (11), they also point to the fact that 150 Palestinians were killed in 1990 by other Palestinians because they were suspected of cooperation with Israel (4). In the early 90s Palestinians were victims of human rights violations, including torture, perpetrated both by Israelis and by extremist Palestinian groups (16).

The Human Rights Situation 1990–92

In the early 90s the human rights situation in Lebanon was marked by the political situation. A number of political groups were responsible for violations as was the military and Syrian and Israeli troops in the country. Violations included torture, mutilation, murder, abductions, mass executions, arbitrary arrest and detention, and random destruction of private and public property (7, 11, 18). Generally, however, violence diminished during the period 1990–92, and the human rights situation improved, initially in and around Beirut and later in other parts of the country (3, 5, 6). In 1992 civilians were nevertheless still victims of shootings, bombings, snipers, abductors, summary executions and murder. Reports still indicated that torture was used (6, 9).

Syria

Historical and Political Background

From 1920–1941 Syria was part of the French-ruled Levant States mandate under the League of Nations. In 1941 Syrian nationalists proclaimed Syria a republic, and full independence was achieved when French forces withdrew in 1946. A turning-point in Syria's history was when the Pan-Arabic Ba'ath party took power in 1963. The party has retained government power since then, and except for one year (1973–74), Syria has been in a state of emergency ever since (3, 22). Syrian troops invaded Lebanon in 1976 after the Lebanese government appealed for help in the civil war. Since then Syrian troops have supported different factions in Lebanon depending on the balance of power (22). Syria has fought three wars against Israel (1948–49, 1967 and 1973) and when Israel invaded Lebanon in 1982 the two countries were once again in armed conflict. Syrian support of Iran during the Iran/Iraq war combined with the subsequent Iraqi involvement in Lebanon has resulted in a poor relationship between Iraq and Syria (22).

Syria is ruled by an authoritarian regime that does not hesitate to use force against citizens when threatened. The parliament is elected every four years, but has no independent authority. President Hafez al-Asad has absolute power. All three branches of government are dominated by the Ba'ath party, and its right to govern is guaranteed in the constitution. Political opposition is suppressed with force. The opposition movement Muslim Brotherhood was brutally defeated in 1982 (3). At the 1991 election president Asad easily won another seven-year period

in office. He was the only candidate and allegedly received 99.9% of the votes (4)!

Different courts handle offences that are divided into civil, criminal and political/security offences. Despite a concept of rule of law secured in legislation, all rights are denied in political cases. Trials are conducted behind closed doors. Due to the state of emergency, normal rights may be disregarded in any case. There are no criteria for, or restrictions on, the arrest of suspects, who may be detained for unlimited periods of time without being charged and without trial. Many "missing" persons are thought to be held by security forces (3).

The Human Rights Situation 1990–92

Numerous human rights violations have taken place during the 80s (22). Torture is routinely used by the intelligence operation both as a means of obtaining information from suspects and as a form of punishment (10). The government has maintained an extensive security apparatus with several main branches, all of which are responsible for gross human rights violations (3). Every year during the 1990–92 period, these violations included torture, arbitrary arrest and detention, denial of fair trial in security cases, denial of the freedom of speech, press and assembly, denial of citizens right to change their government and restrictions on workers' rights (3, 5, 6). The Syrian government is opposed to the monitoring of human rights (6, 16). Every year Amnesty International reported that hundreds of individuals were held as prisoners of conscience, many without trials, some for over 20 years. Some remained in prison even after having served their sentence. Although large groups of political prisoners were released in 1991 and 1992, just as many new prisoners were arrested. Also, the use of torture remained practice (4, 7–9, 11, 16). In 1992, members of a three year old Syrian human rights organisation were arrested and tortured prior to appearing before a "security court". The directors were sentenced to up to ten years of imprisonment and hard labour (16).

After the Kuwait war, Syria opened its borders to refugees and received approximately 70,000 Syrians, Palestinians, and Lebanese (3).

Syria's Palestinian population, which numbers over 300,000, is considered a group of temporary residents. These Palestinians do not have the right to own farm land, are unable to vote in Syrian elections and unable to obtain Syrian citizenship except by marriage to a male Syrian citizen (6).

TRAUMA AND STRESS: CENTRAL THEORETICAL CONCEPTS

The present study places itself conceptually within the area of trauma and stress research. In the following, therefore, a brief presentation of relevant concepts and results of research in this field will be given, particularly as they relate to children's experiences of and reactions to war and other forms of organised violence.

Trauma Theory—Conceptual Development

The etymological meaning of the word *trauma* is "*wound*", but according to Webster's Dictionary (23) the word is used regarding both the physical and the psychological reaction: "*a. an injury (as a wound) to living tissue caused by an extrinsic agent, b. a disordered psychic or behavioural state resulting from mental or emotional stress or physical injury*" as well as regarding the causal agent: "*an agent, force, or mechanism that causes trauma*". This double meaning entails a certain degree of confusion. This is due to the fact that the concept as used in trauma literature alternately refers to the reaction and to the triggering factor, often without explicitly defining which. In this context, the term *trauma* is used solely to refer to the psychological reaction following violent events, while the causal agent(s) are labelled *traumatic*, once they have been shown to cause trauma.

Reactions to violent events were first studied and understood from the perspective of psychoanalytic theories. These have consequently had great influence on the development of the field. Originally it was assumed, based on Freudian theory, that the traumatic event initiated a process of regression to earlier intrapsychic conflicts, and current symptoms of the traumatised person were understood as a reflection of earlier feelings and defences (24). Reactions, even to extreme violence as for example in war, were only thought to entail lasting psychological effects in those who were already mentally unstable (25). Meanwhile, research during and after World War II led to the development, also within psychoanalytic theory, of different positions concerning the importance of the actual traumatic event in relation to the importance of individual personality factors for understanding traumatogenesis. More recent psychoanalytic thought claims that pre-traumatic personality factors are influential in determining which events will be traumatic without actually determining the process and without necessarily being pathological or generally predisposing the person to trauma (24).

Cognitive-phenomenological stress/coping theories

constitute another theoretical branch that has contributed to the understanding of the importance of violent events for the individual. In this context the concepts stress or stress reaction and stressor or stress-provoking event are frequently used. Here trauma or traumatic stress is understood as an extreme form of stress (26). Stress/coping theories operate within a framework of three central concepts: *stress*, *appraisal* and *coping*. Stress is defined as *"a specific form of disturbance in the person/environment relationship"* (26, p.224). The stress reaction is dependent on the individual's appraisal of the situation as potentially or actually straining, regardless of whether everyday strain or violent events are involved. The stress reaction is also dependent on the importance attributed to the strain by the individual. A given situation can thus not *in itself* be termed strenuous or traumatic, as the same situation may be perceived differently by different individuals, thus being traumatic for some and not for others. Cognitive processes are central to the primary appraisal of a situation as stressing and in the evaluation of resources and possibilities available for handling the situation, constituting the secondary appraisal. A given situation is experienced as stressful/traumatic for a person when it is perceived that the situation cannot be handled with existing resources. Coping is the person's attempt to handle the disturbance in the person/environment relationship either directly or by reducing the emotional pain following from the disturbance (for example through psychological defence mechanisms such as denial or projection) (26, 27).

Stress/coping theories differ from psychoanalytic theories primarily in their focus on the *current* situation and its subjective significance for the individual and in rendering conscious cognitive processes central to the understanding of the trauma/stress reaction. Research conducted within this framework has provided valuable results concerning the coping strategies of children living in conditions characterised by organised violence (28, 29) and concerning the influence of these strategies on the psychological after-effects of violent events.

Research has been carried out from the perspective of developmental psychology in order to understand children's reactions to traumatic events (30–32). Thus Pynoos et al. (33) have integrated a number of different theoretical approaches to form a development-oriented model of traumatic stress in childhood. According to Pynoos, developmental consequences of specific traumatic experiences are determined by several factors, such as 1) the child's current social, familial and developmental context, 2) secondary stresses, effected by the influence the trauma-provoking event has on social structures, schooling, family functions, and individual challenges, 3) traumatic reminders following, and associated with, the traumatic event, and 4) the child's resistance and vulnerability, including the quality of and threat to the child's attachment to parents or parental substitutes.

Traumatic events can influence a child's emotional, cognitive, and moral development because they influence self-perception as well as the child's self-expectations and expectations of others (the child's "internal working model" (34). The process of adjusting after traumatic events must address both the traumatic experience itself and the consequences that have followed from it. The effect of later traumatic experiences must hereafter be understood both in relation to the degree of success in coping with previous experiences and secondary stressors and in relation to the latest traumatic experience and its consequences. Traumatic experiences can be of considerable importance for psychological development, as a feeling of safety and security is the foundation for attaining and integrating developmental competence throughout childhood.

Rendered central in this study, as a particular consequence of development-oriented thought, is the child's experience of and reaction to concrete traumatic living conditions and events and the presence of these experiences in the course of the child's life and in the child's social context.

Defining Trauma

Psychological trauma is generally understood as the reaction occurring when a person is exposed to an overwhelming experience that is out of his/her control, and in relation to which earlier coping strategies are found to be insufficient (25, 32, 35). This understanding of trauma may be applied to both children and adults. Events perceived as traumatic may differ in children and adults, just as the emotional symptoms in which trauma manifests itself also differ, being dependent, among other things, upon age. This difference may, nevertheless, be understood within theories of developmental psychology without necessitating qualitatively different definitions of trauma in adults and in children.

Terr extends the general definition of trauma by including the psychological consequences of prolonged and sickening expectation: *"... the mental result of one, sudden, external blow or a series of blows, rendering the young person temporarily helpless and breaking past ordinary coping and defensive opera-*

tions'' (35, p. 11). She claims that the trauma process begins with an event outside the child, hereby initiating an internal process of change. Terr proceeds to divide trauma into two types: the effect of isolated events (type I trauma) and the effect of extreme, prolonged or repeated outer influences (type II trauma). While a number of trauma reactions are identical for the two types of traumatic experiences, and may thus be described with the framework of Post-Traumatic Stress Disorder (PTSD), other reactions remain specific to one trauma type. The consequences of prolonged or repeated exposure follow a less predictable pattern than do the consequences of isolated events. The former, Terr maintains, may result in personality disorders.

Terr's elucidation of different consequences of different types of trauma is important because it calls attention to the fact that trauma may not always be traced back to a single, definable event. It is, however, important to maintain that every traumatic experience may give rise to a new trauma, since it always occurs within a new context (for example within the context created by previous traumatic experiences) and therefore is attributed new meaning. This is also the case when the experience is part of a series of similar abuses that to some extent render it possible for the child to anticipate the situation, such as is the case, for example, with sexual abuse. Moreover, Terr's theory has been developed through work with traumatic experiences and reactions of American children. Investigations have not been undertaken to determine whether a similar classification is relevant where the consequences of isolated experiences of organised violence or living under prolonged conditions of war and armed conflict are concerned.

In this particular study, specific war-related traumatic experiences and life contexts are conceptualised in two categories: *life conditions*, for example living under a prolonged war, growing up in a refugee camp or with parents traumatised by imprisonment or torture (prevalence), and *specific events and changes of life conditions*, for example direct exposure to violence and witnessing acts of violence, loss, and separation (incidence). Both types of experience can presumably be traumatic and are connected such that changes of life conditions may become a new life condition over time (for example concerning loss and separation) and life conditions may be characterised by prolonged repetition of specific events and changes of life conditions (shooting in refugee camps, recurrent bombing). In other words, the sum of events that are repeated monotonously and frequently becomes a life condition in itself. These concepts— life conditions, specific events, and changes of life

conditions—invite thinking in processes and relationships in a way that concepts such as "acute/isolated" versus "chronic/cumulative" traumatic influences do not.

The Trauma Process

When a person is exposed to a traumatic experience he/she will attempt to create meaning in the events, in order to adjust them to his/her perception of self and others (36). When these attempts are not successful, the person is overwhelmed by a sense of helplessness. His/her sense of control over life, perception of being connected to other people and of the meaning of life are severely shaken (26). The traumatic events are extraordinary, not necessarily because they rarely occur, but rather because they overwhelm usual coping strategies. The event initiates a process characterised by deep physiological, emotional, and cognitive changes. It can effect the division of these functions, such that the traumatised person may experience intense emotions without any clear recollection of the event, or he/she may remember every detail of the event without associating any emotional response with it (25).

After a traumatic experience the person is in a state of acute physical and psychological alertness characterised by anxiety and fear. Fragmented images or other sensory experiences associated with the event force themselves into the person's consciousness without warning (35). Even small children, who have been exposed to traumatic events at a stage before they were able to verbalise them (before the age of about $2\frac{1}{2}$ years), may re-live parts of the experience, expressing it in their play often in an obsessive-compulsive way (37, 38). In this way the traumatised person is continuously confronted with his/her own inaptitude. He/she will therefore seek to avoid thinking, feeling and dealing with the traumatic events and repress them from consciousness. This can result in the constriction of the field of consciousness and withdrawal from social life—consequently leaving the person with a poorer quality of life. Constriction of consciousness becomes a form of protection against violent and painful emotions, but simultaneously limits and reduces the quality of life, finally worsening the effects of the traumatic situation by hindering the necessary handling and integration of the experience. These two contrary reactions, re-experience and constriction, constitute the dialectic of trauma (25).

Constrictions in the life and activities of the traumatised are so-called "negative" symptoms which are often not noticed by others, or at least are not

understood within the context of trauma. This can lead to mistaken diagnosis. The absence of specific emotional symptoms can thus not simply be seen as an expression of psychological health. In a qualitative analysis of 30 refugee children in Sweden, Gustafsson et al. (39) thus found that among children with violent war-related experiences there was a group that did not immediately react with emotional symptoms, but only later developed severe symptoms of psychological imbalance.

Post-Traumatic Stress Disorder (PTSD)

Although reactions after traumatic events have long been recognised under a number of different terms (for example shell shock, traumatic shock, traumatic neurosis, and survivor syndrome) (40), the diagnosis Post-Traumatic Stress Disorder (PTSD) did not appear in the American Diagnostic and Statistical Manual for Mental Disorders (DSM-III) until 1980 (41). This was partly a result of the previously mentioned controversy regarding the importance of personality factors versus causal agents. In order to diagnose PTSD, four criteria must be met (42). The person must:

1. have been exposed to an extreme event that lies beyond usual human experience,
2. repeatedly re-experience the event or parts of the event,
3. attempt to avoid stimuli that give rise to recollections of the event (avoidance) or experience general emotional numbing, and
4. continuously be in a state of psychological alertness (arousal).

Research concerning children's reactions to extreme events was not developed until during and after World War II (43). Originally it was not assumed that such experiences would result in prolonged reactions in otherwise well-adjusted children. When it gradually became recognised that children were influenced by such events, the reactions were considered to be entirely dependent on parental reaction (44–46). In 1985 Garmezy & Rutter concluded, on the basis of a review of previous research, that severe, acute events, for example catastrophes, may result in emotional disorders in some children, whereas the disturbance in the majority of such cases is of brief duration (47). It was on these grounds that PTSD in children was not included until the 1987 DSM-III-R (48). There were two principal factors which rendered it difficult to establish that children may react with post-traumatic stress reactions in ways similar to adults. Firstly, previous studies have made use of general screening instruments that were not developed for the purpose of capturing PTSD symptoms. Secondly, these studies have relied solely on information provided by parents and teachers both of whom often tend to underestimate the stress symptoms of children (33). This is the case partly because of their own overwhelming state of stress (45, 49, 50), and partly because it may be difficult even for perceptive parents to observe re-experience and numbing reactions, two of the four criteria of the PTSD diagnosis (51, 52).

Although the PTSD diagnosis in general terms is the same for adults and for children, symptoms will often manifest themselves in different ways in children than they do in adults. Manifestations depend on the age and developmental stage of the child. In children, feelings of fear, helplessness, and terror may be expressed through disorganised and agitated behaviour (42). Also specific to child trauma are the following: repeated obsessive-compulsive behavioural sequences or monotonous play in which themes or aspects of the experience are expressed; nightmares with no identifiable content; diminished interest in activities previously enjoyed: trauma specific fear, evident particularly at sensitive times such as before sleep, in darkness, in the bathroom; loss of confidence in self and others; limited future perspective; and (where younger children are concerned) loss of previously achieved developmental skills such as cleanliness or linguistic ability (35, 52).

Meanwhile, systematic studies of children's psychological reactions after isolated violent experiences caused by hurricanes (53–56), earthquakes (57), floods (58, 59), sniper attacks (60, 61), and kidnapping (38, 62) have documented the existence of a post-traumatic reaction in children, very similar to the one which occurs in adults. None of the studies mentioned above have been conducted in the Middle East. However, Saigh (63), found support for the use of this diagnosis in a population (n=840) of Lebanese children between the ages of 9 and 13, referred to examination because of psychological difficulties following war-related experiences.

Post-Traumatic Developmental Problems

The developmental consequences of multiple traumatic experiences are complex. When children are exposed to traumatic events the developmental process is disrupted, and the children experience both immediate and subsequent difficulties in handling developmental tasks (33).

The PTSD diagnosis focuses exclusively on the trauma-provoking event and the following reaction.

Not taken into consideration, however, is the manner in which children construct their experience of violence and the meaning they attribute to traumatic events. Meanwhile, children are not simply passively influenced, but actively process their experiences, incorporating them into an already constructed social context (64). This social conceptualisation of violence is of central importance to the long-term effect of experiencing violence.

PTSD research concerning children indicates the existence of a more or less universal pattern of immediate reactions to traumatic experiences (65). However, whereas the PTSD concept focuses on one or more specific delimited events, war and other forms of organised violence are characterised by the continuous presence and repetition of a number of different stressors, which together constitute a condition of influence, thereby exercising a more profound influence on the psychosocial development of the child (66). Previous studies of children's reactions to war and other forms of organised violence have focused more on documenting the prevalence of emotional symptoms than on an actual psychiatric diagnostic and on a discussion of the psychological effects, from a developmental point of view, of growing up in a violent context (31, 36). Healthy adjustment after specific, delimited, traumatic experiences have shown themselves to be dependent upon cognitive competence, self-esteem, active coping strategies, a stable emotional relationship with a parent or parental substitute and access to support from the former, in addition to access to a wide system of social support outside the family (31, 67, 68).

Empirical findings concerning age and reaction to trauma are not synonymous (45). There does, however, appear to be a difference between the reactions of children of different ages. Due to limited cognitive resources and consequent difficulties in comprehending and processing experiences, pre-school children are particularly sensitive to traumatic events. These feel most helpless when confronted with danger, are most in need of help from their surroundings and are thus more dependent upon and influenced by the reactions of their parents (52). The children often react with regressive symptoms, clinging to their parents, protesting vehemently if attempts are made to leave them on their own. They show fear of going to sleep, fear of strangers and frequently have nightmares. School children have more cognitive, emotional and behavioural resources for handling traumatic situations. They often react with concentration difficulties, general arousal and fear of the future as well as with psychosomatic reactions. Where children in puberty are concerned,

the greatest consequence of traumatic experiences can be identity crises and forced entry into adult roles. As these children understand the consequences of the events, they are in some ways more vulnerable than school children. Self-destructive behaviour is used to divert anxiety. They are pessimistic about the future and may demonstrate a constant expectation of new catastrophes (32, 65).

In a developmental perspective, a significant source of secondary stress for children is post-traumatic disruptions in the parental function. Loss of or separation from parents may be a direct consequence of traumatic events, but considerable secondary stress may also result from disruptions in parental attention to children as well as from other limitations on parental ability (33). The practice of child-rearing in violent environments has a tendency to become more authoritative and restrictive, which may have a negative influence on parent/child interaction and limit the child's possibilities for play and peer interaction. Parental functions such as child-rearing and constituting role models—as well as providing love—may thus change, influencing the child's moral development (30, 33). Furthermore, living in a context of war and other forms of organised violence may result in conditions under which traumatic events and circumstances seem normal (69). Injustice, abuse, and violence thus become natural and necessary elements in the child's perception of the world and of himself/herself in relation to the world. In violent societies, this may influence the general perception of central human values, including morals, and as such generate concern about the future in such societies (65, 68).

Traumatic events can be destructive for a person's sense of security in the world and for confidence in others. Basic confidence developed early in life in connection with attachment to those first caring for the child constitutes the foundation of subsequent relations. The traumatic experience may cause alienation such that the person feels removed from surroundings, both intimate family contexts and more abstract contexts such as society, culture, and religion. The sense of security gained through association with people who care is fundamental to personality development (25). Basic confidences deteriorates when this experience is shaken, for example through a child's confrontation with lack of parental ability or willingness to provide protection from abuse. Consequently, the afflicted will experience doubts not only of others (for example parents) but also of self. The deterioration of basic confidence, which may occur in connection with exposure to violent abuse, may lead to later difficulties in forming intimate

relationships and can thus have serious consequences for following generations (65).

Anxiety and Attachment

Anxiety symptoms occur particularly frequently in children who have had traumatic experiences in connection with war or other forms of organised violence. The present study therefore focuses on the relationship between these symptoms and traumatic experiences and war-related living conditions. Anxiety expressed in a number of symptoms is nevertheless not uncommon in children and is therefore not in itself a deviant phenomenon. Thus the distinction between normal and pathological anxiety remains unclear (70).

Bowlby (34) defines *anxiety* as the emotion evoked when the child's primary attachment figure is not available. In this context the term available means *not only* being potentially present but *also* being responsive to the needs of the child. Anxiety causes the child to seek intimacy with the attachment figure and to show signs of distress. Under normal circumstances, such behaviour will result in protection and care, hereby reducing anxiety and re-establishing a sense of security (71). Security gained through experiencing the presence of the attachment figure is the foundation for the child's gradual exploration of the surroundings. In this way, anxiety can be advantageous, as it signals that action is necessary in order to ensure security. If, however, anxiety does not generate care and protection from the attachment figure, it may increase and become expressed in anxiety symptoms. These symptoms may become pathological in the event that they, due to their type, intensity and inflexibility, become an obstacle to the development of the child. This can occur, for example, through limiting participation in social and educational activities otherwise appropriate for the child at his/her current age level.

Attachment is established and developed over the first years of life. It is during this period of time that the child is particularly sensitive to separation (34). Over the first years of life more and more anxiety provoking situations may be observed, whereas the child becomes increasingly critical of such situations from the age of about 5. This occurs as the child becomes stronger and more competent and gains the experience that things it may have been fearful of previously, are not dangerous. This development is dependent, however, upon confidence in the availability of the attachment figure. The child is more likely to react with anxiety in future situations if it has been exposed to an anxiety-provoking experience in contexts where the attachment figure is not available. Bowlby claims that confidence in the availability of the attachment figure is a fairly accurate reflection of concrete experiences the child has actually had during early life. From these experiences the child, during his/her first years, constructs an ''internal working model'' of the world, of his/her place in the world and of likely reactions of the attachment figure in different situations. This model will later constitute the basis for the child's expectations and reactions later in life. A secure attachment creates the basis for development of *confidence* in self and in surroundings (basic confidence). This confidence constitutes the foundation for relations later in life. Experience of separation, loss, and threats of abandonment are situations that can have negative developmental consequences due to their direct threat to the attachment relation. Also, other limitations and difficulties such as stress and critical incidents can have decisive influence on psychological development.

While Bowlby regarded a child's emotional bonding with the first attachment figure (usually the mother) as being biologically determined, modern infant research increasingly views parental reactions to children as primarily psychologically determined. In addition, it has become apparent that Bowlby's notion that infant attachment is only possible with one person is not sustainable (66, 72). Although most children do have one primary attachment figure, they also possess bonds of varying strength with other persons in their immediate surroundings. Also, the primary attachment figure need not necessarily be the mother. Sensitivity and empathy appear to be the parental qualities most important in the development of secure attachments in the earliest years. Separations in themselves do not necessarily entail long-term consequences for attachment behaviour and later development. Rather, it is a question of how and by whom the child is cared for during separation, a question of the quality of parent/child relationship prior to separation and lastly of the handling of the child after the period of separation (66). A combination of stress during the first months of life and extensive problems, particularly in the mother, have been shown to result in lasting disorders in the mother/child relationship, thus having long-term consequences for the psychological development of the child (73).

Children's Reactions to War and Other Forms of Organised Violence: Empirical Documentation

Since World War II, children's emotional reactions to war and other forms of organised violence have

been the focus of a number of studies. Studies carried out during and shortly after the war provide a contradictory picture of the consequences of such violence for children. This may be a result of the lack of systematic research and generalisation from clinical experience (74, 75). Later studies have been more systematic, despite the fact that conducting scientific research in war-torn societies often renders it difficult to satisfactorily meet methodological standards and demands. The collection of data for surveys may be difficult, for example, leading to problems involving too low response proportion. Among the factors which require special attention in studies carried out in refugee populations are recall bias and obscuring of associations for reasons related to exile.

More recent scientific studies of children's emotional reactions to war and other forms of organised violence are detailed below.

Children in War and Armed Conflict

Changing and long-term conflicts in the Middle East over the last decades have formed the background for numerous studies of children's reactions to war and armed conflict. I have chosen to focus on these studies in order to have material which is comparable with the present study. Thus, studies conducted in other areas of the world are only addressed to a limited extent.

During the Israeli invasion and occupation of West Beirut in 1982, an epidemiological study (76) of mental health was conducted among two categories of randomly selected families (n = 5788, 51.5% men, 48.5% women). One group resided in their own accommodations while the other had been forced to leave their homes and were living in other apartments or in camps. The study focused on the occurrence of new "malplaced or unusual" symptoms in household members during the period after the Israeli invasion of South Lebanon a couple of months earlier. Most reports of new symptoms involved persons older than 33 years, followed by those younger than 11. The lowest number of reports involved those between 11 and 19 years of age. Results were weakened, however, by the lack of validity and reliability tests. As interviewers were expected to be capable of distinguishing between "normal" stress reaction and "malplaced or unusual" symptoms, this is a significant deficiency.

Chimienti et al. (77) carried out an epidemiological study of 1,039 Lebanese children between the ages of 3 and 9 (47% boys, 53% girls) using questionnaires answered by mothers. Children who had been subjected to a least one of the following experiences:

death of family member, destruction of home, forced relocation, witness of death (30% of total population) were 1.7 times more likely to demonstrate nervous, regressive, aggressive, and depressive symptoms in reaction to the general condition of war than were children without these specific experiences. Although this is an epidemiological study, data collection focuses on the population segment repeatedly exposed to hostilities. Results can thus not be directly generalised to other population groups.

Studies documenting types of traumatic experience in different child populations are few. However, in a thorough and methodologically solid epidemiological study, Macksoud (78) describes war-related traumatic experiences in 2,220 3–16 year-old Lebanese children. The average child had experienced 6 of 28 types of war-related events. A factor analysis indicated 11 factors combining to explain 59% of the variance, whereas only the factor 'Exposure to shelling or combat' explained more than 10% (14%).

In a random sampling of 1,200 7–15 year-olds in Gaza, Hein et al. (79) found that 87% of the children had been exposed to tear gas and that over half had been exposed to nightly house searches and had witnessed the abuse of family members. They found high prevalence of emotional symptoms such as nervousness, fear, restlessness, sleep disturbances, enuresis and psychosomatic symptoms. However, the selection procedure and methods are not described, rendering it difficult to assess the results.

Elbedour et al. (80) studied 356 randomly chosen 13–18 year-old Palestinian school children from three Israeli areas with the help of questionnaires. Based on the political situation at the time, these were judged to belong to different stress groups: 126 (83 boys, 43 girls) from Gaza (highest stress area), 109 (53 boys, 56 girls) from the West Bank (medium stress area), and 121 Israeli-Arabic children (62 boys, 59 children). In all, 15% of the children scored within the clinical area (5% of children in the US where the instrument was developed), 21% of children in Gaza compared to 13% of those from the other two areas. Girls generally scored higher than boys (though not where PTSD symptoms were concerned) and older children higher than younger, whereas the age difference was not significant among the Gaza children. This could indicate that once the strain is sufficiently great, the child's coping abilities are overwhelmed, regardless of age. It should be pointed out that the study does not report validity data concerning the scales used, nor are the actual war-related experiences for the children in each group accounted for.

Baker (81) interviewed mothers in a study of 130 Palestinian children between the ages of 6 and 14 (72

boys, 58 girls). These were randomly selected from three West Bank areas: an urban area (52), a village (68) and a refugee camp (20). Behavioural and psychosomatic symptoms were the most frequent. And while behavioural symptoms were more frequent in the refugee camp than in the other two locations, and psychosomatic symptoms were more frequent in the refugee camp and village than in the urban area, no significant association was found between degree of strain (assessed from residence) and intensity of symptoms. No gender differences were found, and age differences were found only concerning psychosomatic symptoms such that older children (9 and older) demonstrated more severe symptoms than younger children. As with other studies, this investigation does not provide an account of specific war-related experiences.

In the late 80s Punamäki carried out a methodologically and substantially thorough randomised, stratified study of 174 Palestinian women and their 105 children (8–14 years of age, 50% girls, 50% boys) living on the West Bank and in Gaza under Israeli occupation (28, 82, 83). In interviews with mothers and children, she focused on the children's emotional reactions to different forms of organised violence as well as on mediating personal, family, and social factors and coping strategies. She found that emotional symptoms and anxiety increased in relation to the number of traumatic experiences. Thus 85% of the children with many traumatic experiences suffered from anxiety and 21% from enuresis, compared to 35% and 8% respectively in other children (82). Upon controlling the analyses for gender and age, the level of anxiety was only found to increase in relation to several types of traumatic experiences in the youngest group (8–11 years), while the number of emotional symptoms was not found to be associated with gender and age (83). In a multiple regression the primary predictor for mental disturbance in the children was found to be mother's depression (this predictor explained 39% of variation) (82). Characteristic of a child with emotional symptoms was a depressive mother with a pessimistic attitude toward her own life and a poor family. Regarding anxiety, only the child's gender was found to be a significant predictor (12% of variation), as girls demonstrated more anxiety than boys. When the mother's mental condition was excluded from the statistical analysis, the number of traumatic experiences was found to be the primary predictor for emotional symptoms in the child (24% of variation). Punamäki concludes that her study confirms earlier results indicating that the mother's psychological condition mediates between the child's psychological function

and traumatic experiences, but that precisely this circumstance may increase the mother's experience of stress as her attempts to protect the child from such experiences often meet with only limited success. Furthermore, her study points to the fact that war and other forms of organised violence influences mothers as well as their children.

During the unrest in Israel in 1969, Ziv and Israeli (75) conducted a survey, with the help of questionnaires, of 103 children (60 boys, 43 girls, mean age 10) from 7 kibbutzim that came under heavy fire and 90 children (47 boys, 43 girls, mean age 10) from 7 kibbutzim that never came under fire. Contrary to the hypothesis, no difference was found in the anxiety level in the two groups. According to the authors, one explanation could be that being under fire becomes a normal part of the children's lives after a time and thus seems less threatening. Another explanation is suggested by Ziv et al. (84) in their study of the difference in attitudes and values in two groups of Israeli children in the 4th to 8th grade: 521 children that in the period proceeding the 1967 war lived in an area often under fire from the neighbouring country (the stress group), and 297 children that lived in two similar Israeli settlements that were never under fire (the control group). The stress group showed a higher degree of local patriotism and hidden aggression as well as greater appreciation of courage as a personal characteristic. The authors interpret these differences as an expression of the fact that children from the stress group are exhibiting an active coping strategy in relation to the threat and are successfully mastering their fear. Contrary to the studies detailed above, the children in these two studies were not exposed to many different war-related experiences other than being under fire. This may have facilitated the coping process.

In connection with the Yom Kippur War in Israel (1973) Milgram & Milgram (85) investigated the effect of the war on the anxiety level of Israeli children. A total of 85 5th and 6th grade children (42 boys, 43 girls) from two Tel-Aviv schools completed questionnaires regarding experiences of war, anxiety, and self-perception. The children had completed the anxiety scale 4 months before the war broke out in connection with another school-related study. This provided a unique opportunity for assessing the influence of war experiences on the children's level of anxiety. They found that the general anxiety score was twice as high after the war as it had been previously. However, for a subgroup of children (girls from the lower middle class) the anxiety level fell. Children possessing the lowest anxiety score before the war had the highest war-

time score and vice versa. A possible explanation is that children who already view their surroundings with anxiety, react with a lesser degree of further anxiety than do children who normally regard the world as less threatening and who are relatively unaccustomed to feeling anxiety.

Saigh (86) arrived at the opposite result in a survey of anxiety in Lebanese youths from two school classes (n=65, 38 boys, 27 girls, mean age 14.6 in the original sample of 77 youths). He had collected data concerning anxiety in connection with a standardisation study just prior to the Israeli-Lebanese war in 1982 and repeated the study immediately afterwards. Contrary to the hypothesis, no difference was found in post-war anxiety in evacuated and non-evacuated youths, and war-related fear was generally lower after the war than before. A possible explanation (beyond certain methodological problems in relation to the selection procedure which limit generalisability) could be found in Lebanon's extremely complex political situation during this particular period. The situation may have been perceived as more anxiety-provoking immediately prior to the Israeli invasion than afterwards, at which time Lebanese authority had been re-established in the capital.

Schwarzwald et al. (87) carried out a thorough survey (with questionnaires for children and their teachers) investigating the relationship between stress reactions and age, gender, and degree of strain in 492 (227 boys, 265 girls) Israeli 11, 13, and 16 year-old children from two areas which had experienced varying degrees of SCUD missile attacks during the 1990–91 Persian Gulf War. The highest stress reaction was found in children from the most afflicted area, and the reaction was associated with younger age and proximity to places or persons directly hit. The authors carried out a discriminant analysis where gender, age, objective stress (proximity to missile impact, damage to persons or property) and subjective stress (experience of having been in danger) were included. This showed that younger girls who had been directly exposed to missile-related damage and who reported a greater experience of having been in danger most probably fell into the clinical group (assessed by DSM-III-R criteria for PTSD and teacher reports on reduced learning capacity and social function after the war). In a follow-up study one year later (88) of 326 children from the original population (144 boys, 182 girls), the general stress reaction had diminished considerably, and continued stress reaction was associated with more intensive immediate reaction, greater degree of strain and younger age. The children in this study were in the company of their parents during the shelling and

results cannot directly be generalised to children without this potential source of support. As the authors are aware, the fact that data collection was only carried out using questionnaires may render the results less valid, particularly where the younger children a concerned.

Two groups of Israeli boys, one group born in the year of the 1967 Six Day War (n=57), the other two years later (n=63), participated in a longitudinal study of children who visited a specific health care clinic during 1967–70 (89). The children were examined again when they began their schooling. The ''war children'' showed delayed development of speech and cleanliness and were described as less social when they started school, both in their home and when at school. Furthermore, the children who were between 0 and 6 months during the Six Day War were worse than those whose mothers had been pregnant during the war. The study indicates that experiences of war early in life can have long-term developmental consequences, though these are not necessarily expressed in emotional symptoms. This points toward the possibility of a disturbed early mother/child relation in the group of ''war children'', but this hypothesis has yet to be examined directly.

During the Iraqi occupation of Kuwait in 1990–91, Nader & Pynos (90) conducted a pilot study of Kuwaiti children, interviewing them in order to document war-related experiences and reactions. Among the participants at a summer school, 51 children and youth between the ages of 8 and 21 (16 boys, 35 girls) were chosen randomly. The selection was biased in the way that children whose contact with the war had been limited did not participate in summer school, since their schooling had not been disrupted. Likewise, only very few of the most traumatised children participated. The children had been exposed to a long series of war-related experiences, and of 10 possible experiences, all children had been exposed to at least two. Just over 70% of the children reported symptoms corresponding to moderate to severe PTSD reaction. In addition, 98% of the children reported one or more mourning symptoms. A significant positive correlation was found between total number of violent experiences and severity of PTSD in as much as those who had experienced more types of violence had more PTSD symptoms. When the experiences were divided into three subgroups (threats to significant other, witnessing and mortal danger), witnessing was found to be the strongest predictor for PTSD score. Older children had experienced more types of violence and had higher PTSD scores. The latter tendency remained when controlled for number of experiences. No gender differences

were found, however. The study was planned so as to test the instrument used, namely a questionnaire, to train interviewers and to identify traumatic experiences and reactions for the planning of a more comprehensive study. Information is lacking concerning the practical aspects of the study. This, together with the lacking representativeness in the selection, limits the generalisability of the results obtained, something which the authors are aware of .

Conflicts in ex-Yugoslavia formed the context for the following two studies which have been included because of their contemporaneity. Zivcics (91) conducted a survey (questionnaires completed by children, their parents and teachers) of 480 Croatian students from the same school, divided into two groups based on degree of strain: 160 internal refugee children (78 boys, 82 girls, age 8–14) and 320 local children (170 boys, 150 girls, age 8–15) matched for age, gender and educational background of parents. While there was no difference in the two groups regarding depressive symptoms, the refugee children showed less joy and more fear and sadness than did the local children. Children in both groups reported more negative reactions than did parents and teachers, which may be explained by the parents themselves being in a crisis situation and therefore having a reduced capacity for handling the problems of their children. One limitation of the study is the exclusive use of questionnaires, which as previously mentioned may be a less valid method where such young children are concerned.

Also in Croatia, Kuteroac et al. (92), using self-completed questionnaires, investigated 70 Croatian children who had been forced to relocate and 64 who had not (10–15 years of age), all from the same school. They maintain that the two groups were comparable, but do not make clear exactly how this is the case. The questionnaires addressed concrete types of experiences and trauma reactions related to the PTSD dimensions re-experience and avoidance. The majority of the children had been exposed to acts of war, whereas the displaced children also had direct experiences of violence and loss of family members. The displaced children generally showed more trauma reactions than the non-displaced, although 79% of the non-displaced still fell within the categories of medium or high stress reaction with regard to the avoidance dimension. This could be interpreted as an expression of an active mental coping strategy, serving the purpose of shutting out thoughts and memories of the war in children living under prolonged conditions of war. Generally, girls reported more trauma reactions than did boys.

Refugee Children

Children's reaction to war and other forms of organised violence has also been studied in refugee populations. These studies can provide insight into the long-term effects of violence, while new stressors (adjusting to a new culture, loss of family and network etc.) will simultaneously "blend" into the results.

Cambodian refugees in the US belong to the most widely studied refugee population with regard to the consequences of organised violence for children and youth. The political background for this group of refugees was the massive repression during the 1975–79 period when the Khmer Rouge, led by Pol Pot, attempted to transform Cambodia into a primitive form of communism. During these years they successfully eradicated 1/4 of the population through executions, famine, and disease. Many, including children from the age of 6, were sent to work camps (which resembled concentration camps). Families were separated, children were separated from their parents, and many were subjected to or witnessed violent attacks (93).

In 1984 Kinzie, Sack et al. conducted the first longitudinal study of 46 Cambodian 17 year-old high school students out of a total of 52 at a school in the US (94, 95). Of this group, 40 had survived massive traumatic events over a four-year period in Cambodian concentration camps while aged 8 to 12. Half of the 40 were diagnosed as having PTSD (DSM-III), 21 a depression and 10 an anxiety diagnosis. Twenty-seven in all were given at least one of these diagnoses. PTSD and depression still showed high prevalence (48% and 41% respectively) in a follow-up study carried out three years later (96) in a representative group of 30 of the original 46 persons studied. Yet another study after an additional three years (97) showed a decline in PTSD symptoms, despite the fact that 23 persons were still diagnosed as having PTSD, whereas only 6% were given a depression diagnosis. A strong relationship was found between later straining events and PTSD, which suggests that PTSD leaves the person more vulnerable to subsequent traumatic experience.

Realmuto et al. (98) studied 46 young Cambodian participants in a summer camp (37 boys, 10 girls, age 12–23). All had lived under the Pol Pot regime as children. Of this group 39% had moderate to severe emotional symptoms and 37% could be diagnosed as having PTSD according to DSM-III-R criterion (87% according to DSM-III criteria). The number of symptoms was moderate, but there was

significant correlation with the number of traumatic experiences.

In connection with the planning of a more comprehensive multi-centre study, Clark et al. (99) conducted a pilot study of 69 Cambodian teenage and young adult refugees, 31 from the previously mentioned follow-up study (97) (31.0% women, mean age 23.0) and 38 from a sample of convenience (52.5% women, mean age 17.7). The two groups were combined based on comparability regarding psychiatric diagnosis (97). Contrary to popular assumption, earlier stressors (traumatic experiences and resettlement stress) could distinguish between a clinical (PTSD and depression) and non-clinical group, which was not the case for recently experienced stressors. A regression analysis showed a strong relationship between the number of early traumatic experiences, number of resettlement strains, and number of PTSD symptoms, whereas the strongest relationship with the number of depressive symptoms was found with regard to the number of recent stressing events. Specific experiences were not included in the regression analysis.

The first epidemiological study of a population of young Khmer refugees was carried out by Sack et al. (93). In a random sample of 209 persons (49.8% men, 50.2% women, age 13–25) from two communities in the US it was found that all, except for 20, had experienced the horrors of the Pol Pot regime in Cambodia between 1975 and 1979. Prevalence of actual PTSD was 18.2% (lifetime prevalence 21.5%) and depression 11% (lifetime prevalence 34%), while other diagnoses were rare occurrences. The PTSD diagnosis was strongly associated with age. The older the person, the greater the risk of a PTSD diagnosis. This relationship was not found where depression was concerned. Thus PTSD did not seem to occur among those who were too young during the period of abuse to be able to remember it. Meanwhile, the age association can also reflect the fact that those under 6 years old were not separated from their parents under the Pol Pot regime. Only one of the 20 young people who had not experienced the Pol Pot regime was diagnosed as having PTSD and for this individual the diagnosis was related to recent traumatic events. Over half of mothers and a third of the fathers were diagnosed as having PTSD, while a third of the mothers and a fifth of the fathers received a depression diagnosis. Upon comparison with the young people's own information about symptom occurrence, parents were found to underestimate the symptom level of their children. This is thought to be linked with certain characteristics of East Asian culture, but corresponds closely to similar findings among Croatian parents (91). Test instruments were reliable, and a smaller validity analysis indicated that results were valid among Cambodian refugees. The results indicate that PTSD is maintained over time both in young persons and in adults.

In an analysis of the relationship between psychiatric diagnosis and education and occupational function carried out in the same population (100), PTSD was found to be related to such functions where parents were concerned, but not where young people were concerned. These seemed to develop normally in this area in spite of PTSD. The authors warn against generalisation based on the results, as the measurements of functions were not the same for parents and young persons, for whom almost all measurements were based, for example, on information they themselves had provided. The relationship between psychiatric diagnosis in parents and children is addressed in another analysis of the same data set (101). A close relationship was found between PTSD in parents and in children. Such a relationship was not found concerning depression. Parents had most probably been diagnosed as having PTSD before their children were diagnosed. Concurrent PTSD in families was not mediated by socio-economic status, greater number of specific traumatic experiences, greater number of losses, or altered living conditions in the US. The authors suggest a number of possible explanations. These range from intervening social or family factors which have yet to be discovered to genetically determined vulnerability to traumatic events in certain families. As the authors actually have collected data on specific traumatic experiences, another possibility would be to investigate the possible relationship between these and the shared family reaction.

In the late 80s Hjern (102) conducted a longitudinal study of the health condition of recently arrived refugee children from Chile (32 boys, 30 girls) and the Middle East (19 boys, 24 girls) residing in a particular geographic area in Sweden. Using parent interviews, the assessment indicated behavioural deviance in 46% of the children five months after arrival in Sweden and in 44% of the children 18 months after arrival. Five symptoms were significantly associated with the experience of at least one form of organised violence: sleep disturbances (including nightmares), over-dependence, anxiety, depressive traits, and concentration difficulties. Family strain was strongly associated with behavioural deviance in the second interview (18 months after arrival), which suggests the important role of family in the long-term adjustment of refugee children.

In a study (103) of prevalence of psychiatric dia-

gnoses in a population of young refugees from Afghanistan (n = 38, 55% male, 45% female, age 12–24), from 15 of 20 possible families in a particular area in the US, significant positive correlation was found between psychiatric diagnosis (PTSD and depression) and the number of different forms of traumatic experience and parents' (especially mothers') psychological problems, whereas psychiatric diagnosis and measurement of the mother's general adjustment to life in the US were negatively correlated. Young persons with a diagnosis were older upon arrival in the US, were older during the study, and had resided in the US for a shorter period than those who were not diagnosed (these three factors were mutually related). There was no control group, and the applied screening instruments were not validated for Afghani refugees.

Children of Torture Survivors

Few studies have been made of the emotional reactions of children of torture survivors, and existing studies have almost all been conducted in clinical populations limiting generalisability.

Allodi (104) reports of three studies of Chilean and Argentinean children of torture victims: 1) 203 children of detained or missing parents, studied in Chile, all under the age of 12 (65% under the age of 6); 2) 9 children from Chilean families subjected to political persecution, also studied in Chile; and 3) 28 children from Argentinean families living in exile in Mexico (between the ages of 3 and 7 at the time of the study and between 0 and 4 at the time of the traumatic events). Each of the studies found chronic fear, depressive tendency, clinging and overdependent behaviour, sleep disturbances, somatic complaints, inhibition in social life, and poor academic performance. Factors associated with the severity of symptoms were younger age, prolonged duration of traumatic life circumstances, family and social isolation, and incomplete or inaccurate explanations of parental absence. Inclusion and exclusion criteria and methodology have not been further detailed.

Cohn et al. (105,106) studied 85 children (46 boys, 39 girls) of Chilean torture survivors living in Denmark; 57 were at least 6 years old during the study (all born in Chile), 28 were under 6 (14 born in Chile, 3 in other Latin American countries and 11 in Denmark). They found that 78% of the children had emotional or somatic symptoms. More than half of the children suffered from anxiety and insomnia with frequent nightmares, nocturnal enuresis, anorexia, headaches, or stomachaches. For the children,

the time since the arrest of their parents had been characterised by anxiety and insecurity, and the circumstances had been completely incomprehensive to them. In a follow-up study of 76% of the children 3–4 years later (107), the number of symptoms per child was found to be considerably higher; more children had symptoms, and there was significant correlation between the number of years spent in Denmark and the number of symptoms.

In a retrospective study of 76 children from 42 families (44 boys, 32 girls, age 0–19) examined and treated at RCT between 1983 and 1987, Lukaman & Bach-Mortensen (108) found that almost half of the children had emotional symptoms or developmental disorders, one third had psychosomatic symptoms, and one third had behavioural symptoms. Frequent symptoms were anxiety, headaches, emotional lability, stomachaches, and sleep disturbances. In a multiple logistic regression, the severity and intensity of the symptoms was related to young age, length of parental imprisonment, and being a girl.

None of the studies mentioned above have involved control groups. All have been conducted in clinical populations (although in the Danish studies, parents are the ones who have been referred for treatment) and other possible forms of abuse beyond torture/witnessing torture are not incorporated into the analyses.

In a study of 44 asylum seeking refugee children from 11 families living in a Swedish refugee camp (52% boys, 48% girls, the majority between 3 and 15 years of age), Ljungbjerg-Miklos & Cederblad (109) found, using interviews with parents, a (bivariate) association between the torture of parents and the following psychological sequelae: inhibition of aggression, low self-esteem, concentration difficulties, and hypersensitivity. One fifth of the children lived in families where the mother or father was a survivor of torture. This association has not been examined in relation to other experiences of organised violence that the children had been exposed to. Nor has the study detailed selection criteria or response proportion.

Epidemiological studies specifically incorporating torture of parents with other types of abuse are necessary in order to assess the importance of this particular aspect for the emotional condition of children. This issue is addressed in the present study.

Children of Holocaust Survivors

Studies of descendants of Holocaust survivors from World War II provide insight into how the traumatic experiences of parents can influence descendants. Not

until the late 60s did the health professions become aware of a relationship between problems presented by descendants of Holocaust survivors and the traumatic experiences of their parents. However, research results are ambiguous. Studies from the 70s, primarily of clinical populations, conclude that children of Holocaust survivors have more psychologicalproblems than do other children (110). Studies of nonclinical populations, however, do not identify this difference in emotional symptoms and behavioural symptoms (111).

Subsequent studies have concentrated more on differences not necessarily directly manifested in psychopathology. Thus, Solomon et al. (112) studied a population of soldiers (n = 96) fighting at the front in the Israeli-Lebanese war in 1982. All were identified by military health personnel as combat-stress reaction casualties. They were examined three times, 1, 2, and 3 years after the war. Participants were divided into two groups: 44 descendants of Holocaust survivors and 52 without this background. Children of Holocaust survivors had a higher PTSD rate in all three investigations, and the difference between the groups increased over time. The results suggest an increased sensitivity among second generation survivors. It is, however, also possible to imagine that the sense of defeat, natural in connection with war-stress reactions, would have greater significance for the children of Holocaust survivors in view of their "task" of compensating for their parents' sufferings in concentration camps (113,114).

Other studies have focused on psychological development conflicts that descendants of Holocaust survivors are confronted with due to the specific family circumstances under which they grow up. In particular, these are conflicts relating to separation, individuation and the management of aggression (111). Freyberg (113) thus concludes from a qualitative analysis of clinical material, that survivors may find their parental skills insufficient when their children in puberty are focused on independence and the development of separate identities. Many survivors experienced a brutal, definitive, and often never fully dealt with, separation from their parents in the concentration camp, and may experience the development of independence in their own children as yet another family loss (111,113,115). Nadler et al. (116) compared 19 young adult (11 male, 8 female) Israeli descendants of Holocaust survivors with a matched control group of 19 individuals (10 men, 9 women) whose parents emigrated to Israel before World War II. All 38 were students without a previous psychiatric history. Using projective techniques and interviews, they found, in accordance with the hypothesis, that

descendants of Holocaust survivors experienced a greater degree of guilt than did young adults without this family background. They also found that the descendants did not express aggression when confronted with frustrating events. Furthermore, the responses of second generation survivors reflected a greater expectation of impending catastrophe, which indicates a more intense level of free-floating anxiety in such families. Last & Klein (117,118) studied the transgenerational effect of the traumatisation of parents in a group of 76 young descendants of Holocaust survivors and a matched control group without this family background. Their results indicate that there is a relationship between the degree of parental traumatisation and child-rearing practice, and that the correlation pattern suggests gender specific transgenerational interactions. In particular, it can be noted that the *father's* degree of traumatisation was found to correlate with *mother's* greater need for control over sons, and that the *mother's* degree of traumatisation was found to correlate with the *father's* abstinence from exerting control over daughters. No correlation was found between the degree of parental traumatisation and children's mental health, but rather with specific traits such as of less self-assertiveness and more contact-seeking behaviour. The authors believe that consequences of parents' traumatisation manifest themselves in the formation of children's personalities, rather than in neurotic or psychotic symptomatology (118).

Modifying Factors

The context in which a traumatic experience takes place influences the psychological reaction of children to such an experience. On the basis of existing knowledge it seems reasonable to conclude that all children who have been exposed to war and other forms of organised violence are influenced by such experience, but that their reactions are dependent upon their physical and mental health, the presence or absence of their parents, family, and friends, material circumstances, previous experience, the type of experience, and the loss caused by the experience.

The opportunity for assuming an active role in conflict situations has been presumed a modifying factor for the relationship between traumatic experience and emotional symptoms (69). Thus in a randomised, stratified study of 796 children from 300 families on the West Bank and Gaza, Baker (119) examined the manner in which participation in the Palestinian Intifada influenced their mental health. He concludes that active participation increases self-esteem and sense of control, thus providing partial

protection against the development of emotional symptoms. This conclusion, however, is reached on the background of general findings, which characterise the entire group, but without investigating which children were in fact active and without analysing the difference between active and less active Palestinian children.

Qouta et al. (29) carried out a far more thorough investigation of the hypothesis that active participation offers protection from emotional symptoms. They interviewed 108 11–12 year-old Palestinian children from Gaza (55 boys, 53 girls), chosen from an original sample of 1,323 children such that 60 children had a high level of traumatic experience and 48 children a low level. The hypothesis was not supported by the evidence, as the highest level of neuroticism (Eysenck neuroticism scale, JEPQ) and risk-taking behaviour was found among children characterised both by a high level of traumatic experience *and* by active participation in the Intifada, while the lowest level of self-confidence was found among children active in the Intifada.

Other studies of children's reactions to traumatic conditions of war have pointed to the importance of structured activities (39,120). In the study of 44 refugee children in Sweden (109), opportunities for play and school activities were found to constitute part of compensating factors in the children's experience of war and other forms of organised violence.

Children are dependent upon their parents' ability to create a sense of stability, coherence, and competence. Several studies have focused on parental roles in situations where children are confronted with violence. The conclusion reached in a number of studies is that parental presence has a modifying effect on the consequences of traumatic experience (121–123). Parental presence, however, may also worsen the child's perception of the situation, as it is confronted with parental incompetence, helplessness and lack of ability to ensure protection (65). Finally, it became clear, as previously mentioned in relation to Punamäki's study, that war has a negative influence on mothers as well as on children (83).

In his study of 29 families surviving torture, 46 refugee families, and 53 immigrant families from the same Latin American population in exile, Allodi (124) found no significant difference in the psychological reactions of these three groups. He suggests that the discrepancy between these and other results may be explained by the presence of parents or parental substitutes or satisfactory medical, psychological, and social support succeeding trauma.

Kinzie et al. (94, 95) conducted a study of 40 Cambodian high school students (age 17) in the US, all of whom had survived massive traumatic events during four years in the Cambodian concentration camps of the Pol Pot regime when aged 8–12. They found that the role of the family was extremely important in modifying emotional symptoms. A follow-up study three years later (96) indicated that this family function could no longer be identified.

In their study in Sweden of 50 Iranian refugee children and their families, Almqvist & Brandell-Forsberg (125) found that the most severe emotional symptoms were found among children who had been seriously ill, exposed to violence or to a difficult separation, as well as among children who had not been prepared for leaving their home country. They emphasise the importance of support from parents (or parental substitutes) in these difficult situations and the simultaneous parental difficulties in providing children with support in situations characterised by anxiety, fear and helplessness. For the child, a change in the roles of family members as a result of the imprisonment of a parent may generate restlessness and confusion. In addition, this may cause insecurity concerning values and norms when the child experiences the triumph of violence and power over justice.

A qualitative study of 30 children of political prisoners in the Philippines (126) identified the following buffers to the consequences of extreme stress: extensive knowledge of the political convictions of the imprisoned parent, open and democratic family lifestyle, play with other children in similar situations, and emotional group support.

In a study of two groups of internally displaced refugee families in Croatia (127), one group comprising 65 families living in a refugee camp with 125 children in all, the other comprising 118 families with 194 children staying with families in local communities, it was found that children whose mothers encountered difficulties in handling refugee life, assessed by a general stress index, had more stress symptoms than other children, and that children from the refugee camp had greater risk of emotional problems than children who were accommodated privately with their family. The two groups were not matched and methods for data collection were not validated, rendering an interpretation of the results difficult.

In 1990, during the Persian Gulf War, Rosenthal and Levy-Shiff (128) conducted a thorough study of children's (age 4–36 months) reactions to stressors associated with the war as experienced by 99 Israeli mothers. The children showed severe stress reactions such as behavioural symptoms, sleep difficulties, stomachaches, and temper tantrums. Reactions were

dependent on the proximity to affected areas, and while older children exhibited the greatest immediate stress reaction, they subsequently adapted to conditions at a faster rate than the younger children. Mothers who were less resistant and expressed the greatest need for help were more likely to have maladjusted children. It is, however, impossible to say whether the children were reacting to the problems of their mothers or whether their maladjustment resulted in increased difficulty for the mothers in dealing with the war situation. The authors suggest a transaction model as being more appropriate in explaining these relationships.

In a study (interview with mothers) of 152 Lebanese children (age 5–7) from three pre-school programs in West Beirut (129), depressive symptomatology in mothers was found to be the best predictor for the child's reported morbidity (though not for the child's behaviour), with more depressive symptoms being associated with higher morbidity.

In a qualitative study of 11 children (3 boys, 8 girls between 5 and 13 years of age) from five families surviving torture, in treatment at RCT during 1989 (1), the intra- and inter-family context was found to be of central importance to the coping strategy of the child. Based on the dimensions active *versus* passive problem-solving, outer versus *inner* problem-solving, and social interaction *versus* isolation, four separate principal types of coping strategies were identified in this data: 1) isolation and withdrawal, 2) mental flight, 3) eagerness to acclimatise, 4) strength of will and fighting. Characteristic of this group of children was the fact that many maintained their use of one particular coping strategy, possibly appropriate in their home country at a previous time, but currently inappropriate in the country of refuge. Lack of support from surroundings, particularly from parents, reduced the children's ability to revise and develop coping strategies. Lack of information about parental imprisonment and torture were found to be an essential theme in understanding the children's insufficient coping ability.

Validity

In all empirical studies the validity of observations are of central importance to the applicability of results. When structured questionnaires are used in psychological/medical research, the validity of data collected will often be assessed through comparison to criterion based on clinical practice (criterion-relatede validity).

Torture

Since the mid-1970s Amnesty International (AI) has conducted missions around the world in order to document alleged torture (130,131). In 1994, government sanctioned torture took place in 89 countries (132–134). Refugees from such countries often seek asylum in Europe, the US, and Canada. Immigration authorities and health professionals are thus faced with the challenge of assessing whether torture actually took place and what health consequences it may have caused in the individual.

Documentation of the sequelae of torture has been produced by AI missions. Furthermore, the relationship between torture and a fairly specific, consistent pattern of psychological problems has been documented in several scientific studies (135). Often there are no somatic signs of torture unless health examination occurs immediately after the torture, whereas the mental sequelae appear evident, severe, and long-lasting. Usually, objective evidence of torture is not accessible. Thus in general, the grounds serving in the assessment of the validity of the survivor's claim are his/her own description of torture and the consistency of this report with physical and particularly psychological findings (136–138).

A method of documenting alleged torture has been developed by doctors associated with AI and other human rights organisations (137–142). This method is based on combined information concerning health condition prior to arrest, a detailed description of torture methods used, immediate and subsequent psychological and physical reactions to the torture, and clinical findings revealed by the examination. Validity assessment of alleged torture is then based on the individual components of the survivor's account, the findings of the medical and psychological examination, and the mutual consistency of these.

The time and resource consumption of this method limits its usefulness to individual cases. It may, however, constitute the basis for validation of more extensive observation instruments (143). A questionnaire suitable for use in population settings has been developed by Mollica et al. (136,144,145), but although the health components of this scale have been validated, this is not the case regarding the torture aspect.

Anxiety

A series of structured questionnaires, primarily based on DSM-III (41) or DSM-III-R (48) criteria, have been developed and validated for the examination of anxiety in children. Some scales are anxiety specific

(146–148), while others constitute an integral part of scales for assessing general mental health (149–155). Table 1 comprises validity studies of anxiety scales using information from parents. Other studies based on parental information have validated general scales which integrate anxiety aspects (153–156).

Scoring techniques for scales vary, but the method most widely used is that of simple addition of individual item scores. All scales cited in Table 1 make use of this technique. This is based on the assumption (which is doubtful from a logical perspective) that all of the scale items have identical *a priori* weighting and *a priori* equidistant levels.

Most frequently, referral to psychiatric treatment or clinical diagnosis have been used as validation criteria. Thus, among the studies using parents as a source of information, Conners (150) and Costello et al. (157) have used referral for treatment, and Brunshaw & Szatmari (158), Edelbrock & Costello (159), Bird et al. (160) and Jensen et al. (161) have used *ad hoc* clinical diagnosis (Table 1). Referral for psychiatric treatment appears doubtful as a validity criterion in itself, as referral may in fact result from factors other than emotional symptoms in the child (for example parental difficulties, divorce, problems in school).

As seen in Table 1, study parameters vary, and only Brunshaw & Szatmari (158) and Bird et al. (160) have used generally accepted validity parameters (162). Brunshaw & Szatmari (158) found that optimal sensitivity and specificity were 52% and 93% respectively. Their scale thus worked well for children without anxiety but not as well for children with anxiety. Bird et al. (160) found sensitivity and specificity of 62% and 70%, respectively, at the cut-off point recommended for the scale.

Regarding diagnostic value, Klein (70) concludes that scales for assessing anxiety in children have low validity regardless of whether questionnaires are completed by the child, the parents, or the teachers. Structured interviews show low mutual consistency, but the least structured demonstrated the best consistency with clinical diagnosis. It remains uncertain whether parents or children provide the most valid information.

Summary

Tables 2–4 provide an overview of comparable results regarding children's experience of and emotional reaction to war and other forms of organised violence. The studies depict many and varied war-related experiences in such populations. Table 2 summarises the few studies which have addressed children's specific war-related experiences. When several prevalences are given in one column, different forms of specific experience within the particular main group are indicated (for example different types of witnessing experiences), or in one case (92) the prevalence for "non-displaced and displaced" children. Table 3 provides an overview of studies, carried out in the home country, of war-related mental health consequences in children. The results have been summed up in the categories "general stress reaction" and "anxiety symptoms". Prevalences have been given, respectively, for children who have been and for those who have not been directly exposed to war and other forms of organised violence, or in two cases before and after the war. Table 4 sums up the prevalence of different types of mental health problems in refugee child populations.

From the studies of *children in war* it may be concluded that immediate emotional reactions which can be grouped within the PTSD category are frequent after concrete war-related experience. Anxiety symptoms are also frequent, though not always to a greater extent after concrete temporally delimited war experiences. There appears to be a dose-response relationship, as the number and frequency of traumatic experiences, the proximity to targeted areas, and the experience of having been in mortal danger are all significant predictors for emotional reaction. The studies have also revealed that even very young children are emotionally influenced by war. Studies of children's coping strategies show that children using active strategies manage better emotionally than do other children. It remains uncertain, however, whether active participation in political struggle is a protective factor as such. The importance of parental reactions, particularly those of the mother, has also been established, particularly where younger children are concerned. This circumstance entails a higher risk for younger than for older children if the relation to their parents is affected, for example through separations or through strong emotional reactions in the parents. However, when parents succeed in maintaining a close and secure relation, smaller children often will react to a lesser extent than older children. In this way the extent of traumatic experience may still constitute the most important factor, since it influences both parents and children.

A specific pattern has not been identified for age and gender differences in children's reactions to war and other forms of organised violence. In the light of studies which have included these aspects, it seems relevant to conclude that this is a reflection of the

Table 1. *Validity studies of childhood anxiety scales using parents as source of information.*

Reference	Country	Study-group			Validated scale	Validation criterion	Anxiety-concept	Parameter	Results
		Type	Age	No.					
Conners, 1970	USA	Clinical & community samples	5–16	444	Conners[a]	Patient status	Fears & worries	Mean score difference	1.43[b]
Costello et al., 1985	USA	Ped & psych ref[c]	7–11	80	DISC-P[d]	Patient status	DSM-III (anxiety)	Mean score difference	6.0[e]
Brunshaw & Szatmari, 1988	Canada	Psych ref[f]	6–12	100	SDI[g]	Diagnosis based on parent interview	DSM-III (emotional disorder)	Sensitivity Specificity	52% 93%
Edelbrock & Costello, 1988	USA	Psych ref[f]	6–16	270	CBCL[h]	Diagnosis based on parent interview	DSM-III (anxiety)	Correlation	0.17–0.35
Bird et al., 1991	Puerto Rico	Screened positive & negative	6–16	304	CBCL[h]	Diagnosis based on parent & child interview & teacher information	DSM-III-R (anxiety)	Sensitivity Specificity	62% 70%
Jensen et al., 1993	USA	Clinical & community samples	5–17	201	CBCL[h]	Diagnosis based on parent interview	DSM-III-R (anxiety)	Mean score difference Correlation	3.5[i] 0.19

[a] Conners, a symptom rating scale for completion by parents (questionnaire). [b] Score range, 16. [c] Ped & psych ref, pediatric and psychiatric referrals. [d] DISC-P, NIMH Diagnostic Interview Schedule for Children, Parents Version. [e] Score range, 21. [f] Psych ref, psychiatric referrals. [g] SDI, Survey Diagnostic Instrument (questionnaire). [h] CBCL, Child Behaviour Checklist (questionnaire). [i] Score range, unknown; score mean, 61.1.

Table 2. *Literature review of childrens' exposure to war and organised violence.*

Reference	Country of investigation	Study-group Type	No.	Age	War* %	Knew# %	Witnessed+ %	House search/raid %	Loss, separation %	Detained %	Beaten, tortured %	Injured %
Macksoud 1992	Lebanon	School children	2220	3–16	90	–	50	–	21–26	1	3	6
Hein et al. 1993	Gaza	Random community sample	1200	7–15	87	–	52	71	–	19	35	16
Nader & Pynoos 1993	Kuwait	School children	54	8–21	100	59–86	35–65	–	–	–	–	24
Hjern 1990	Sweeden	Refugees from Chile & Middle East	63	2–15	13	–	27-43	48	10–44	8	13	–
Kuterovac et al. 1994	Croatia	Non-displaced and displaced	134	10–15	92–94	–	5–44	0–54	8–73	0–15	–	–
Mghir et al. 1995	USA	Community sample	38	12–24	–	16–22	27	–	30	16	–	–

* Shelling, combat, bombing, tear gas. # Knew someone killed, captured, tortured. + Witnessed violent acts, killing, torture, seen dead/injured bodies.

Table 3. *Literature review of war related mental health consequences in children.*

Reference	Country of investigation	Study-group Type	No.	Age	Informant	General stress reaction Exposed	General stress reaction Non-exposed	Anxiety-Symptoms# Exposed	Anxiety-Symptoms# Non-exposed	Before	After
Saigh 1985	Libanon	School children	65	M 14.6	Children					No difference	
Elbedour et al. 1993[b]	Israel*	Random school children	356	13–18	Children	21%	13%				
Ziv & Israeli 1973	Israel	Kibutzims, exposed+controls	193	M 10	Children			No difference			
Milgram & Milgram 1976	Israel	School children	85	10–12	Children					6.9	13.4[&]
Schwarzwald et al 1993	Israel	School children	492	11–16	Children	Higher					
Nader & Pynoos 1993	Kuwait	School children	51	8–21	Children	24.9%	12.9%+				
Chimienti et al. 1989	Libanon	Random community sample	1039	3–9	Mothers	1.7 higher		36%	23%		
Baker 1991	Israel*	Random sample	130	6–14	Mothers	Higher		40%	7%		
Punamäki 1987	Israel*	Random community sample	105	8–14	Children +mothers	Higher		85%	35%		
Punamäki 1989	Israel*	Random community+controls	135	8–14	Children +mothers	Higher		Higher			
Zivcics 1993	Croatia	School children	480	8–15	Children +parents +teachers			3.8	2.8□		

* Palestinians # Nightmares, fear of leaving the house, fear of soldiers, generel anxiety. & Range 0–20. + PTSD symptoms ¤ Range 0–8.

Table 4. *Literature review of mental health problems in refugee child populations.*

Reference	Country of investigation	Study-group Refugees from	No.	Age	Informant	Mental health problem					
						Behaviour %	Emotional %	Anxiety %	Depression %	Sleep-disturb. %	PTSD %
Kinzie et al. 1986	USA	Cambodia	40	17	Children		68	18	53		50*
Realmuto et al. 1992	USA	Cambodia	46	12–23	Children						37#
Sack et al. 1994	USA	Cambodia	209	13–25	Children						18#
Cohn et al. 1985	Denmark	Chile	85	–	Parents		78	3+		55	
Lukman & Bach-Mortensen 1995	Denmark	Latin America (80%)	76	0–19	Parents	28	43	59	11	17	
Ljungberg-Miklos et al. 1989	Sweeden	Mixed	44	1–19	Parents	31		23	19	38	
Hjern 1990	Sweeden	Chile + Middle East	63	2–15	Parents	46		60	35	55	

* According to DSM-III criteria. # According to DSM-III-R criteria. + Overanxious disorder.

nature of the phenomenon rather than of a lack of investigation. Associations between gender, age, specific forms of traumatic experience, and reactions in children is apparently complex and cannot be described in a simple manner. This necessitates, among other things, the use of statistical methods combining and weighting significant factors in relation to each other. This, however, has only been undertaken in a small number of studies. Furthermore, it is likely that specific gender differences are also a function of the socialisation practices of different cultures, but this aspect has not been closely examined.

Studies of *children in exile* also indicate that the prevalence of emotional symptoms is high. The most frequent diagnostic categories seem to be PTSD, anxiety, and depression. Symptoms apparently do not subside of their own accord after families have arrived safely in a country of refuge. Rather, several studies indicate that additional emotional symptoms emerge over time. Furthermore, PTSD appears to leave the person vulnerable to later traumatic experience. The intensity and number of previous war-related traumatic experiences were still found to be a predictor for PTSD symptoms which can be observed in the country of refuge. Also in refugee populations, the emotional reactions of parents have proven to be a significant predictor for children's reactions, and in qualitative studies the degree of family openness regarding experiences has manifested itself as important for children's reactions.

In refugee populations the associations between age, gender, and traumatic experience also remains complicated. Studies of young refugees who have experienced war and violence as children found that the oldest had the highest risk of PTSD, whereas studies of children of torture survivors showed that the youngest had the greatest number of emotional symptoms. This may be related to different types of traumatic experience. However, methodological problems may also be a significant factor in relation to acquiring valid information, particularly concerning the trauma reaction of young children. Numbing and avoidance symptoms are difficult for parents to observe. Also, the children themselves may deny their symptoms, as part of the symptomatology. Therefore, the PTSD diagnosis is perhaps not always the best theoretical concept for investigating children's trauma reaction.

From the perspective of developmental psychology one would expect that traumatic experiences within the first 3–4 years of life, involving separations from parents or resulting in parents' (particularly mothers') stress reaction, would be related to sub-

sequent observable anxiety reactions. Likewise one would expect younger children to exhibit a greater number of specific anxiety symptoms in relation to previous traumatic experience than older children, for whom heightened levels of anxiety often are expressed in the form of other symptoms, for example psychosomatic symptoms or learning difficulties.

The relationship between specific forms of traumatic experience and subsequent emotional reactions has not been thoroughly examined. Several studies have shown that children who grow up in a society influenced by war and other forms of organised violence have had a series of different traumatic experiences. In spite of this, these different experiences are often not included in the analysis of the children's reactions, but are rather grouped into main types based on various criteria.

Most of the studies discussed above are based on structured data collection methods. However, in a number of cases, the validity of the methods used has not been tested in the present population. Validity studies from Europe and the US of structured questionnaires (scales) have not provided clear results regarding their use for studying anxiety in children.

THE PRESENT STUDY

Purpose

The purpose of the study may be divided into observation-methodological, epidemiological and etiological purposes:

1. *Observation-methodological*:
(a) To (1) develop and (2) evaluate a systematic instrument (interview questionnaire) for identification of families subjected to torture among recently arrived refugee families from the Middle East.
(b) To further develop and evaluate a systematic instrument (interview questionnaire) for measurement of emotional symptoms and behavioural symptoms in recently arrived refugee children from the Middle East.

2. *Epidemiological:*
(a) To map the frequency (prevalence) of torture victims among parents of recently arrived refugee children from the Middle East.
(b) To map the frequency (prevalence) of experiences of war and other forms of organised violence among children in recently arrived refugee families from the Middle East.
(c) To map the occurrence (prevalence) of emotional symptoms and behavioural problems among children in recently arrived refugee families from the Middle East.

3. *Etiological:*
(a) To identify (1) risk indicators for anxiety symptoms and (2) modifying factors for anxiety symptoms among children in recently arrived refugee families from the Middle East.

A Priori Hypotheses

Based on earlier studies, it is expected that asylum seeking Middle Eastern refugee children will have been exposed, to a significant extent, to traumatic experiences in relation to war and other forms of organised violence. Furthermore, it is expected that the experiences have entailed anxiety to a significant degree such that it may currently be observed in the children. Among the traumatic experiences, the following are of particular interest:

– short-term and lasting separation from one or both parents,
– witnessing experiences,
– direct abuse such as imprisonment and ill-treatment,
– growing up under conditions of war and other forms of organised violence.

Based on the importance parents have been shown to have for the emotional reactions of children and on knowledge of the psychological sequelae of torture, it is further expected that having a parent who has survived torture will exert a negative influence on children's emotional symptoms. Therefore, this aspect will be incorporated into the study as another form of traumatic life circumstance.

The traumatic experiences will be studied at four different levels, which will be combined in the analyses: 1) whether the child has had the experience, 2) the frequency or duration of the experience, 3) age at the time of the experience, and 4) time elapsed since the experience. Thus, the investigation will, for example, be concerned with whether the child has been separated from his/her mother, the length of the separation, the age at which separation occurred, and the length of time between separation and the current study.

Finally, the importance of a number of modifying factors is examined. Of these, the following are given special attention:

– opportunities for play and schooling,
– information about parental fate and the reasons for relocation,
– changes in parental behaviour around the time of the study.

SUBJECTS AND METHODS

Population

The study comprises 311 refugee children from the Middle East (160 boys and 151 girls; mean age 7.5 years (3–15)) (Table 5). These were registered as asylum seekers in Denmark together with at least one of their parents during the period February 1, 1992 to April 30, 1993. Another 28 refugee children from the Middle East were unaccompanied and were therefore not included in the study. Eight children and their families were sent out of Denmark shortly after arrival. Where 22 were concerned, interviews could not be conducted because of immediate transferral to refugee centres in other regions of Denmark. Such transferrals were decided upon by immigration authorities without regard to the study, based among other things on the accommodation situation at the arrival centre. Lastly, parents of three children declined participation in the study. The response was 90.4%. There was no difference between non-participants and participants with regard to gender, age, and nationality, except where Syrian nationals were concerned (21.2% among the non-participants *versus* 4.2% among the participants, P<0.0005).

There were 22 children (7.1%) from Lebanon, 168 (54.0%) from Iraq, 32 (10.3%) from Iran, 13 (4.2%) from Syria, 75 (24.1%) were stateless Palestinians, and one was from Turkey. There were 88 children (28.3%) of Palestinian ethnicity and 103 (33.1%) of Kurdish ethnicity. A group of 26 children (8.4%) had grown up in Kuwait, but were Iraqi or stateless Palestinians.

One hundred eighty-seven children arrived in Denmark with both their parents. One hundred fifteen were accompanied only by their mother and 6 only by their father. Two children arrived with their mother and stepfather, while one child arrived with his/her maternal grandmother, who functioned as a foster mother, however, since the child had always lived with her. The mean age of mothers was 33 years (19–56), of fathers 37 years (26–50).

The 311 participating children came from 149 families. The mean time between emi- and immigration of the families was 8.8 months (0–147). Median latency between the arrival of the families and the interview was 7 days (1–382). One reason for the considerable length of time between arrival

and interview in some cases (19% more than a month) was that the families had hesitated for a long time before being registered as asylum seekers by the Danish authorities. Also, some had been registered directly in other camps than the Sandholm camp to which the nurse travelled when it was practically possible in order to conduct the interviews.

Data and Collection of Data

A structured interview questionnaire was developed for use with the parents. The interview comprised questions within the following areas and in the following order:

1. *Social and Demographic Data:*
   Nationality, ethnicity, parents' social and religious background and family situation. Following the Danish procedure for asylum seekers, the child was registered with the father's nationality if he accompanied his family, and if not, the child was registered with his or her mother's nationality. Ethnicity (Palestinian or Kurdish) was always registered with reference to the father (20). Due to difficulties in differentiating between different types of education, parents' education was measured as the total number of years including schooling, vocational training and university studies. Division into different professional groups was performed on the background of open answer categories after all interviews had been completed.

2. *Living Conditions of the Child in the Home Country:*
   War-related social life conditions, age of the child at the onset of the particular conditions, social life within the family (e.g. increased signs of responsibility) and outside the family (e.g. school, play).

3. *The Child's Experience of War and Other Forms of Organised Violence:*
   Concrete experiences of loss, separations, direct assault and witnessing acts of violence (specific events and changes of life conditions) in addition to age at first experience and duration or frequency of experience.

4. *The Present Family Situation:*
   Change in parental behaviour towards the child and questions regarding whether or not the child has been provided with information about parents' possible imprisonment and torture and about the reasons for relocation.

5. *The Current Psychological State of the Child:*
   Emotional symptoms and behavioural problems of the child within the following qualitatively different dimensions: anxiety, depression, aggressiveness, nervousness, psychosomatics, enuresis/encopresis, sleep disturbances, speech problems and regressive behaviour. The specific questions within each dimension were constructed such that they addressed concrete behaviour observable by parents. Parents were asked whether the child demonstrated the particular behaviour 'rarely or never', 'sometimes' 'somewhat' (level 1) or 'daily or almost daily'/'to a great extent' (level 2). The questions referred to the child's behaviour in the immediate past.

6. *The Imprisonment and Torture of Parents:*
   In order to delimit torture from other human rights violations the structured interview focused on violence

Table 5. *Age and gender in 311 (total population) and 99 (validation population) Middle Eastern refugee children aged 3–15, Denmark 1992–93.*

Age (years)	Whole population			Validation population		
	No.	Female %	Male %	No.	Female %	Male %
3–6	138	45.7	54.3	50	48.0	52.0
7–11	124	52.4	47.6	35	48.6	51.4
12–15	49	46.9	53.1	14	42.9	57.1
Total	311	48.6	51.4	99	47.5	52.5

occurring only during detention or imprisonment. It included questions on exposure to nine frequent types of deliberate violence (see Table 8). After this the refugee was asked whether torture had taken place. If the person had been exposed to at least one form of assault, he/she was regarded as having been exposed to organised violence.

A preliminary translation of the interview questionnaire was carried out by two professional interpreters (Farsi and Arabic). The purpose was to test and revise specific phrasing in order to facilitate translation during the actual interviews. The questions were then tested on parents of 10 children from 8 families (asylum seekers from the Middle East who had arrived in Denmark before the beginning of this study) and then revised accordingly.

All interviews were conducted by a Danish nurse (or in her absence due to vacation or illness, by the author) with the assistance of professional Arabic, Farsi, Kurdish, Russian, or Bulgarian interpreters. The interviews were conducted in the refugee camps where the families resided.

It was expected that most survivors of torture would prefer to discuss their experiences with violence on their own. Therefore this part of the interview was planned as individual interviews. However, in cases where both parents had been present during the part of the interview focusing on the child, the couples also preferred to remain together during the questions concerning their own experiences.

Interviewing the children themselves was not considered an option because of their age (mean age 7.5 years), language problems, and ethical considerations concerning the children's and parents' situation as recently arrived refugees often coming from violent conflict areas.

Validity

The validity study comprised a segment of the participants in the epidemiological study: 74 adults (31 men, 43 women) with 99 children (52 boys, 47 girls, mean age 7.3 years (3–15), Table 5) from 46 families (28 married couples). They were consecutively sampled upon arrival at the Sandholm camp between May 15 and June 15, 1992 and between September 1, 1992 and January 15, 1993.

Another 19 families (with 46 children) arrived within these periods and participated in the epidemiological study, but because they were transferred to refugee centres elsewhere in Denmark, they were not accessible for the validation interview. No eligible refugee refused participation.

The *structured interview* (SI) was conducted by the Danish nurse. In 72 cases the questions about torture were answered by the person in question. However, in two cases (one man and one woman) the questions focusing on torture were answered by the spouse. Also, 25 women and 26 men chose to answer this particular part of the SI with their spouses present.

A *clinical reference* was produced by conducting a *blinded, semi-structured, in-depth psychological interview* (PI). The PI lasted one to two hours and was conducted by the author. All married couples wanted to be interviewed together. Eighteen refugees were interviewed individually. While the SI was a highly structured and extensive interview,

the PI was semi-structured and intensive. It was conducted as an empathic interview allowing for examples of the child's reactions to different situations and so that adequate time could be used to carry out a clinical assessment of the child. This assessment, however, was rendered difficult because of the family's situation as recently arrived refugees. It was impossible, for example, to make use of the child's participation in social and academic activities relevant for his/her age as an indicator of severity of emotional symptoms. Assessment therefore had to be based on the type of symptoms relative to the age of the child and to information provided by parents on the emergence, development and current persistence of symptoms.

Assessment of whether torture had taken place was based on principles developed by the AI medical group (137–142), emphasising however the mental aspects (sleep disturbances with frequent nightmares, chronic anxiety, depression, impaired memory, loss of concentration and change in self-perception (135,163)). The definition of torture applied complies with that of the Tokyo Declaration (164) *"… the deliberate, systematic or wanton infliction of physical or mental suffering by one or more persons acting alone or on the orders of any authority, to force another person to yield information, to make a confession or for any other reason"*.

Directly following the interview, the child was classified as symptomatic or non-symptomatic in relation to the same qualitative dimensions on which the SI was based (anxiety, depression, aggressiveness, nervousness, psychosomatics, enuresis/encopresis, sleep disturbances, and regressive behaviour (see appendix)). Furthermore, the adults were classified as "tortured" or "not tortured". At this point a detailed case description was produced, after which final classification took place. Final classification is used in all the analyses.

In cases where detainment was reported, the description was presented anonymously to an expert (Bent Sørensen, MD, DMSc). Final PI assessment of exposure to torture was made after mutual discussions. In three cases, the two assessments were not in accordance, which resulted in a final classification as "not tortured" in one case and "tortured" in two cases.

Median latency between SI and PI was 3 days (1–89 days). In one case PI was conducted 9 days prior to SI.

Anxiety Indicators

From the 12 concrete questions concerning anxiety symptoms (see Table 11, correlation matrix appendix Table 1) four qualitatively different dependent variables were constructed based on diagnostic categories of PTSD (51, 52):

1. *Re-experience:*
   nightmares, fears shooting
2. *Arousal:*
   easily aroused, lack of concentration
3. *Regressive Anxiety:*
   fears the dark, fears being alone, fears strangers, clings to parents
4. *Future Anxiety:*
   fears the future, fears death and fears unknown situations
   Furthermore, a variable was constructed for:

5. *Separation anxiety:*
   nightmares, fears the dark, fears being alone, fears death, clings to parents (70).
Also included as a dependent variable was:
6. *Nightmares.*
   The dependent variables were dichotomously constructed such that at least one answer of the type 'daily or almost daily'/'to a great extent' to questions included in the category led to score 1, while the remaining were given score 0. Finally, the following variable, constructed in the validity study, figured in the analyses:
7. *Clinical anxiety.*

Statistical Analysis

The statistical analysis applies X^2 test for 2x2 and 2xk tables (without yates-correction), Fisher's exact test, Student's t-test, Spearman's rank correlation coefficient (r_s), Kruskal-Wallis' one-way analysis of variance, factor analysis inclusive principal components analysis and varimax rotation, and multiple logistic regression (165). In assessment of association in 2x2 tables the statistic test has been calculated first and thereafter the estimate of the difference between compared groups. For the latter, the multiplicative estimate, relative risk (RR) and odds ratio (OR) have been used, indicating higher risk of anxiety, for example, conditional upon a particular circumstance (166). In the multiple logistic regression, a weighted OR is calculated conditional upon several circumstances. Furthermore attributable risk (AR), was used, which, assuming that association is an expression of true causality, indicates how much of the effect (anxiety, for example) could be avoided by eliminating relevant etiological factors. A general significance level of $P \leq 0.05$ was used. The multivariate analyses were carried out by associate professor Anders Foldspang, MD, DMSc, Aarhus University, in close cooperation with the author.

The validity parameters (162) used were sensitivity (the proportion (%) of cases correctly identified by SI among persons assessed as cases in PI) and specificity (the proportion (%) of non-cases correctly identified in SI, among persons assessed as non-cases in PI). The predictive values of positive and negative SI "tests" are the proportions (%) of "true" assessments among test positive and test negative persons, respectively.

Plan for Predictive Analysis

Upon analysis of the great number of possible predictors for anxiety, the independent variables were divided into four main groups according to a temporal perspective (Table 6):

Present—effect formulation:

Gender, age at the time of the study, language, test inaccuracy (interviewer, interview situation). The age division used follows broad developmental phases (pre-school, school age, adolescence) (32, 65).

Past- past—context for trauma(background):

Parents' nationality and ethnicity, parents' educational background, family structure and changes in this structure,

family's experiences with organised violence before the birth of the child, schooling.

Past—experience of war and other forms of organised violence:

War-related living conditions, loss and separations, direct assault, witnessing experiences, social life of the child, parents social circumstances, frequency of, age at, and time since the experiences.

Past Present -Present life context:

Present family constellation, family life, family openness.

Bivariate analyses were carried out first, then multivariate logistic regressions. The latter were carried out first according to each "time" (past-past, past, and past-present) with age and gender included in all analysis, after that combined from the following plan in two tempi:
Simple model:
All variables concerning "past-past" and "past-present" were included, but only experiences of war and other forms of organised violence were included regarding "past". Then significant variables were combined from "past-past" and "past" and finally from "past-past", "past", and "past-present".
Extended model:
Additional relevant information (child's age at first traumatic experience, time elapsed since the experience, and frequency of the particular type of experience) as well as information about family members who had disappeared or been left behind, the social life of the child, and parents' social background in the year prior to relocation, was added to those variables found significant in the analysis of "past" in the simple model. The variables were then combined with "past-past" and "past-present" as above.

Ethical Considerations

The study has been approved by the regional committee on medical ethics and by the Danish Data Protection Agency.

Written information was produced about each of the interviews: the structured interview and the validation interview. The information was translated into Arabic, Farsi, Turkish, and Kurdish by a professional interpreter and then back-translated into Danish by another interpreter. Then, the two Danish versions were compared and discrepancies in the translations discussed. The information provided detailed the purpose of the study and the organisations conducting the study (RCT and the Danish Red Cross). It explained that participation was optional, that data would be treated confidentially, and that participation in the study had no effect on the person's asylum case. The information sheet was handed out before the interview, and the information in it was repeated at the beginning of the interview.

RESULTS

Validation

Torture

Twenty-two refugees in all (29.7%), 17 male and 5 female (54.8% *vs.* 11.6%, P<0.0001) reported that

Table 6. *Theoretical framework for investigation and predictive analysis.*

PAST-PAST (background – context for trauma)	PAST (trauma complex)	PAST-PRESENT (present life context)	PRESENT (effect, effectformulation)
Parents' nationality 　ethnicity	Age at 1. traumatic experience		Age – Gender
	Time since traumatic experience	Present family constellation 　martial status	
	Traumatic life circumstances		Anxiety symptoms 　nightmare 　re-experience
Parents' social background 　education 　religion 　social class	Death in the family Separations Witnessing violence		arousal 　regressive anxiety 　future anxiety 　separations anxiety 　clinical anxiety
Family structure – changes 　parents' death 　siblings' death 　grandparents' traumatic death 　number of siblings in 　the family at child's birth	Direct exposure to violence Parents' exposures 　detention 　organized violence 　torture Disappeared-left family members	Family life 　contact	Interview situation interview person 　family members present 　language
		Openness-indicators 　information	
Torture of parents before birth of the child	Child's social life 　hindrance of school 　hindrance of play 　more responsibility 　paid work		
Child's participation in school activities before violent experiences	Parents' social background 　last occupation 　economy last year		

they had been exposed to torture (Table 7). Furthermore, 22 (29.7%), 17 men and 5 women, were classified as torture survivors by PI. For 66 refugees (89.2%), SI and PI were in accordance, without any gender differences. Overall sensitivity and specificity were 81.8% and 92.3% respectively. The consequent predictive values were 81.8% and 92.3% as concerns a positive and a negative SI statement, respectively.

Table 8 shows significant correlation coefficients between exposure to specific forms of organised violence. All forms of violence were associated with more than half of the rest of the methods. Beating, suspension and threats were all associated with every other type of torture.

SI reported beating, hunger or thirst, cold, threats and witnessing torture were significantly associated with the PI torture assessment (Table 9). No women

had been exposed to electrical torture, suffocation, burns, or suspension. Among women, having witnessed torture and having been exposed to other forms of abuse were not associated with the PI assessment (two reports on each).

In a multiple logistic regression, exposure to beatings and threats were significant predictors for PI assessment (OR 50.1, P<0.001 and OR 27.4, P<0.025, respectively). As compared to the overall SI report on torture, combining beating and threats into a common indicator of torture resulted in the re-classification of three refugees and thus in a moderate improvement of test parameters (Table 10). On this background it was decided in the epidemiological study to use own SI assessment as an indication of whether the person was a survivor of torture.

There were close associations between exposure to

Table 7. *Exposure to torture during previous detention, as reported in structured interview, by prevalence (%) of torture* and gender in 74 adult Middle Eastern refugees, Denmark, 1992–93.*

Gender	Reported exposure[+]	Total No.	Tortured* No.	Tortured* %	OR[#]	Agreement (%)	Sensitivity (%)	Specificity (%)	Predicitive value: Positive test (%)	Predicitive value: Negative test (%)
Male	No	14	2	14.3	45.0[b]	87.1	88.2	85.7	88.2	85.7
	Yes	17	15	88.2						
Female	No	38	2	5.3	27.0[a]	90.7	60.0	94.7	60.0	94.7
	Yes	5	3	60.0						
Both	No	52	4	7.7	54.0[c]	89.2	81.8	92.3	81.8	92.3
	Yes	22	18	81.8						

* As assessed by psychological interview. [+] As reported in structured interview. [#] Odds ratio, indicates the relative risk of having been tortured compared to refugees who do not report exposure. [a] P<0.01; [b] P<0.00005; [c] P<0.00001.

Table 8. *Significant correlation coefficients* between specific deliberate violent exposures during previous detention, as reported in structured interview, in 74 adult Middle Eastern refugees, Denmark, 1992–93.*

	Beatings	Electricity	Suffocation	Burns	Suspension	Hunger, thirst	Cold	Threats	Witnessing tortue
Electricity	.35[b]								
Suffocation	.28[a]								
Burns	.28[a]	.39[c]	.49[c]						
Suspension	.51[c]	.44[c]	.26[a]	.56[c]					
Hunger or thirst	.72[c]	.35[b]	.28[a]	.28[a]	.51[c]				
Cold	.62[c]				.43[c]	.71[c]			
Threats	.82[c]	.36[b]	.29[a]	.29[a]	.52[c]	.89[c]	.65[c]		
Witnessing torture	.54[c]	.27[a]		.36[b]	.51[c]	.70[c]	.41[c]	.57[c]	
Other ill-treatments	.45[c]	.49[c]			.29[a]	.54[c]	.25[a]	.38[c]	.51[c]

* Spearman's rank correlation coefficient r_s. [a] P<0.05; [b] P<0.01; [c] P<0.001.

Table 9. *Exposure to specific types of deliberate violence during previous detention, as reported in structured interview, by prevalence (%) of exposure to torture* in 74 adult Middle Eastern refugees, Denmark, 1992–93.*

Violence type	Not exposed [+]		Exposed [+]		OR[#]
	Total No.	Tortured* %	Total No.	Tortured* %	
Beatings	55	7.3	19	94.7	229.5[c]
Electricity	71	26.8	3	100.0	→∞
Suffocation	72	27.8	2	100.0	→∞
Burns	72	27.8	2	100.0	→∞
Suspension	68	23.5	6	100.0	→∞
Hunger or thirst	55	10.9	19	84.2	43.6[c]
Cold	63	19.0	11	90.9	42.5[b]
Threats	56	8.9	18	94.4	173.4[c]
Witnessing torture	61	19.7	13	76.9	13.6[a]
Other ill-treatments	63	20.6	11	81.8	17.3[a]

* As assessed by psychological interview. [+] As reported in structured interview. [#] Odds ratio, indicates the relative risk of having been tortured compared to refugees who do not report exposure. [a] $P<0.0002$; [b] $P<0.00002$; [c] $P<0.00001$

Table 10. *Exposure to beatings and/or threats during previous detention, as reported in structured interview, by prevalence (%) of torture* in 74 adult Middle Eastern refugees, Denmark, 1992–93.*

Reported exposure [+]	Total No.	Tortured* No.	Tortured* %	OR[#]	Agreement (%)	Sensitivity (%)	Specificity (%)	Predictive value: Positive test(%)	Negative test (%)
No	53	3	5.7						
				158.3[a]	93.2	86.4	96.2	90.5	94.3
Yes	21	19	90.5						

* As assessed by psychological interview. [+] As reported in structured interview. [#] Odds ratio, indicates the relative risk of having been tortured compared to refugees who do not report exposure. [a] $P<0.00001$

specific forms of organised violence and self-assessed torture exposure. One female refugee, who reported exposure to hunger or thirst, threats, and other ill-treatment, did not consider herself tortured but was classified as tortured based on the PI.

The distinction, applied in the PI, between torture and other types of organised violence is illustrated in the case stories below.

1. A Kurdish man from Iraq was arrested and detained three times within six months. In total, he spent four months in prison. He was not arrested for political reasons, and, as he could buy extra services, e.g. food, his conditions in prison were different from those of political prisoners. He was, however, a witness to the torture of other prisoners. He was able to describe, for example, how during an entire night he heard two men being tortured and later saw them left bleeding by the toilet, unable to move for several days. During interrogation he was threatened with

re-arrest, should he after his release tell of the conditions in the prison. By then, he himself was very afraid of being tortured. After his release, he had nightmares about the torture he witnessed, and he felt he was a different person than prior to imprisonment. He thinks a lot about what he saw, although he tries not to do so. He becomes affected when he speaks about prison conditions (looks away, pauses), but is able to continue. At the SI, he considered himself tortured, but he was not considered tortured at PI assessment.

2. A Palestinian man from Kuwait. Following the Gulf War, he was detained for interrogation several times during a single day. During interrogation he was kicked, spat at, and verbally humiliated. Also, his interrogators threatened to abduct his children. At the same time, the family was harassed and threatened by the police. A 15 year-old son was abducted, held for three days, tortured, and left outside the family's home,

unconscious and with burns from electrical torture. During detainment, the son was questioned about his father's political involvement. Also an older son was detained, interrogated, and beaten. During the interview the refugee talked almost compulsively about the condition of the rest of the family and the political situation in the country, but he avoided talking about himself and left the examiner with the impression, that this was his strategy for keeping feelings at a distance. He seemed emotionally unstable during the interview, and he admitted that he "felt as if he lived with a volcano inside himself, which could erupt at any time". He did not, however, consider himself tortured, as he compared his own experience and health condition to that of his youngest son. In spite of this, he was considered tortured by PI assessment.

3. A Palestinian woman from Lebanon whose husband was liquidated by his own political organisation in a refugee camp in Lebanon. The family had been harassed by the organisation, since the husband had refused to participate in homicidal activities. He had warned her of the possibility that he could be killed and had asked her to flee immediately with the children, should it happen. When she was told that the had died, she followed his advice and left immediately without any possibility of saying goodbye to the rest of the family. At the time of the interview she was afraid of reprisals from the organisation. She was emotion-

ally unstable, anxious, and sad. She did not consider herself tortured at the SI, nor was she considered tortured according to the PI.

4. An Iraqi man who had been imprisoned three times because of political activities. He had been beaten all over, suspended by the arms, exposed to cold showers and electricity under his tongue. He has suffered from mental and physical symptoms since his first torture experience almost 30 years ago, but the symptoms have increased over time. He has difficulties falling asleep and staying asleep and has frequent nightmares about the torture. He suffers from anxiety attacks, palpitation, and a feeling of suffocation, often triggered by the sight of policemen in uniform or by certain sounds. He has difficulties concentrating and remembering, and he often looses track of conversation. He has neck pain. During the interviews, he at first avoids talking about torture and provides short non-specific answers, like "it was not nice to be in prison". He often looks away, but at the same time he experiences talking to the psychologist as a relief. According to the SI he considers himself tortured and is also considered tortured by PI assessment.

Anxiety

Two SI anxiety symptoms were not associated with PI assessment (Table 11). Among the ten symptoms associated with PI, OR was particularly significant

Table 11. *Screening interview symptom scores by prevalence (%) of anxiety* in 99 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Standard symptom	Symptom 'rare'		Symptom 'somewhat' 'sometimes'			Symptom 'frequent', 'intense'		
	Total No.	Anxious* %	Total	Anxious*	OR#	Total No.	Anxious* %	OR#
Nightmares	66	53.0	15	93.3	12.4[e]	18	94.4	15.1[e]
Fears sleeping without light	19	42.1	18	66.7	2.8	62	74.2	4.0[d]
Fears being alone	20	30.0	13	76.9	7.8[d]	66	75.8	7.3[f]
Fears shooting	45	51.1	9	44.4	0.8	45	86.7	6.2[f]
Easily aroused	40	52.5	15	73.3	2.5	44	77.3	3.1[c]
Fears strangers	79	63.3	8	62.5	1.0	12	91.7	6.4[b]
Fears the future	69	62.3	10	90.0	5.4[a]	20	70.0	1.4
Fears death	75	60.0	18	88.9	5.3[c]	6	83.3	3.3
Clings to parents	20	45.0	19	68.4	2.7	60	73.3	3.4[b]
Fears unknown situations	75	60.0	10	80.0	2.7	14	92.9	8.7[c]
Lack of concentration:								
– when watching TV	95	66.3	0	–	–	4	75.0	1.5
– when told a story	97	67.0	0	–	–	2	50.0	0.5

* As assessed by psychological interview. # Odds ratio, indicates the relative risk of being anxious compared to children with score zero. [a] $P<0.10$; [b] $P<0.05$; [c] $P<0.025$; [d] $P<0.01$; [e] $P<0.005$; [f] $P<0.001$.

Table 12. *Significant predictors* of anxiety by combined individual symptoms reported during screening interview in 99 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Symptom	Grade	β	S.E.(β)	OR	P
Nightmares	1	3.7345	1.0760	41.9	0.0005
Fears being alone	1	2.2289	0.8052	9.3	0.006
Fears shooting	2	3.4926	0.8946	32.9	0.0001
Fears death	1	2.4009	1.0055	11.0	0.017
Clings to parents	1	−2.1243	1.0336	0.12	0.040

* P<0.05. From multiple logistic regressions including all 12 structured interview symptoms at level 1 (score 'somewhat' or 'sometimes' and level 2 (score 'frequent' or 'intense').

regarding 'nightmares' (both levels), 'fears being alone' (both levels), 'fears shooting' (level 2), 'fears strangers' (level 2), and 'fears unknown situations' (level 2).

To find the symptom constellation most unequivocally able to distinguish children with anxiety from children without anxiety, a multiple logistic regression was carried out including all 12 structured interview symptoms at both levels. Table 12 shows the logarithmic β-coefficients of the regression for SI-symptoms significantly associated with PI assessment, corrected for other symptom associations. An anxiety scale was then constructed based on the sum of the β-coefficients and converted to an individual, multivariate, estimated risk (%) of having anxiety as assessed in PI. Sensitivity

Table 13. *Prevalence (%) of anxiety* by weighted anxiety score in 99 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Score	Total No.	Anxious* %	Sensitivity %	Specificity %
1	2	0.0	100.0	6.1
12	10	10.0	98.5	33.3
14	11	9.1	97.0	63.6
36	4	50.0	93.9	69.7
42	1	0.0	93.9	72.7
57	5	60.0	89.4	78.8
64	8	75.0	80.3	84.8
82	1	100.0	78.8	84.8
84	20	85.0	53.0	93.9
87	10	90.0	39.4	97.0
96	1	100.0	37.9	97.0
98	10	90.0	24.2	100.0
99	16	100.0	–	–
Total	99	66.7		

* As assessed by psychological interview.

and specificity for possible cut-off levels are seen in Table 13 and Figure 1. Best discrimination is achieved by cut-off above score 42 or score 57. Test parameters for these two cut-off levels are seen in Table 14. At cut-off level above score 42, the least misclassification is achieved (13.1%).

The validity of the scale was not improved by including age specific symptom levels. Neither linear age, nor gender, nor time elapsed between SI and PI played any role when included in the multiple logistic regression.

As the identification of children with anxiety was regarded as central (sensitivity more important than specificity), the final cut-off level for use in further analysis was chosen above score 42.

The frequencies of clinical anxiety in the validation population and in the total population were 71,7% and 66.9%, respectively.

Experiences of War and Other Forms of Organised Violence
Traumatic Experiences
Nine out of ten children had lived under conditions of war, had been on the run with their parents, and had lived in a refugee camp outside their home country (Table 15). Three fourths had been forced to seek shelter from bombing and had been forced to leave their homes because of war and other forms of organised violence. Three fourths had witnessed bombing; more than half had been separated from one parent for more than a month and had witnessed house searches and shooting in the streets (Table 16). Relatively few children had themselves been detained
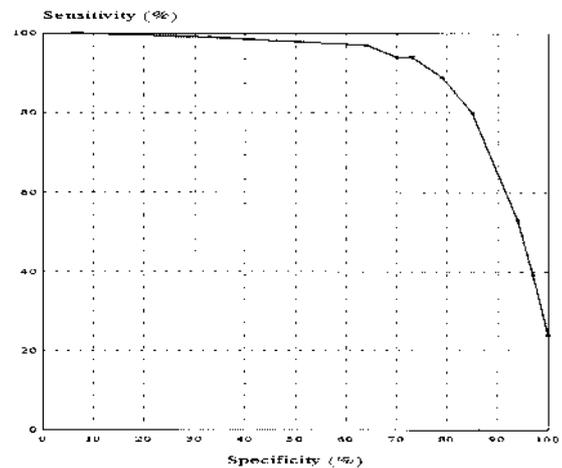

Fig. 1. Receiver Operating Curve for weighted anxiety scale in 99 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.

Table 14. *Test parameter values (%, with 95% confidence intervals in parenthesis) of cut-off levels of a weighted anxiety score in 99 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Score	Sensitivity %	Specificity %	Predictive value:	
			Postive test %	Negative test %
Above 42	93.9 (85.2–98.3)	72.7 (54.5–86.7)	87.3 (77.3–94.0)	85.7 (67.3–96.0)
Above 57	89.4 (79.4–95.6)	78.8 (61.1–91.0)	89.4 (79.4–95.6)	78.8 (61.1–91.0)

Table 15. *Proportion (%) of exposure to war related conditions by nationality and ethnicity in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

War related conditions	No.	%	Nationality					P*	Ethnicity		P*	Kuwait residence# %
			Lebanon %	Iraq %	Iran %	Syria %	Stateless Palest. %		Palestinians %	Kurds %		
Lived under conditions of war	278	89.4	95.5	93.5	96.9	61.5	81.3	<.0001	80.7	94.2	<.01	100.0
Taking shelter for bombing	234	75.2	90.9	73.8	90.6	38.5	74.7	~.001	73.9	79.6	>.10	57.7[a]
Residence change due to war	235	75.6	68.2	78.6	81.3	61.5	72.0	>.10	71.6	83.5	>.05	57.7[a]
Been on the run with the parents	277	89.1	86.4	92.9	81.3	100.0	82.7	>.05	85.2	98.1	<.01	96.2
Lived in a refugee camp												
– in home country	65	20.9	27.3	1.8	6.3	38.5	65.3	<.0001	64.8	1.9	<.0001	0.0[b]
– elsewhere	287	92.3	100.0	88.7	96.9	100.0	94.7	>.10	95.5	93.2	>.10	92.3
Total	311	100.0	7.1	54.0	10.3	4.2	24.1	–	28.3	33.1	–	8.4

* From χ^2 k × 2 heterogeneity test. # Iraqis, 23; Stateless Palestinians, 3. [a] P<0.05; [b] P<0.01.

(5.8%) or beaten or kicked by an official (6.4%). Three children (1%) had been tortured, whereas 44% of fathers and 13% of mothers had been tortured (28% of parents). Thus 51% of the children were part of a family with a torture survivor. The mean total types of experiences of war and other forms of organised violence was 8.7 of 17 possible (no such experiences, 4 children; 15 experiences, 4 children).

A factor analysis based on the 311 children revealed two patterns of experience which each explained more than 10% of variation in the data: "War context" (Factor I (21% of the variation of the data set): lived under conditions of war, witnessed bombing, taken shelter, moved, been on the run) and 'Witnessed violent events' (Factor II (13%): witnessed arrest of family member; torture, killing or intimidation of persons not family members; witnessed house search). Table 17 shows individual experience of at least one component of each factor and experience of at least one component by at least one child in a family. Assessed in this way, "War

context" had been experienced by 97% of families (95% of the children) and 'Witnessed violent events' by 71% of families (68% of the children).

Nationality and Ethnicity

Regarding war-related conditions (Table 15, Figure 2) significant differences were found between different nationalities in relation to 'lived under conditions of war', 'taken shelter from bombing', and 'lived in a refugee camp in the home country'. Significant differences were found between the ethnic groups regarding 'lived under conditions of war', 'been on the run with parents', and 'lived in a refugee camp in the home country'. National differences were found for all specific experiences related to war and other forms of organised violence and parents' torture (Table 16, Figure 3–4) except 'witnessed arrest of family member' and 'witnessed violence toward non-family' and differences between the ethnic groups for all except 'witnessed house search', 'witnessed viol-
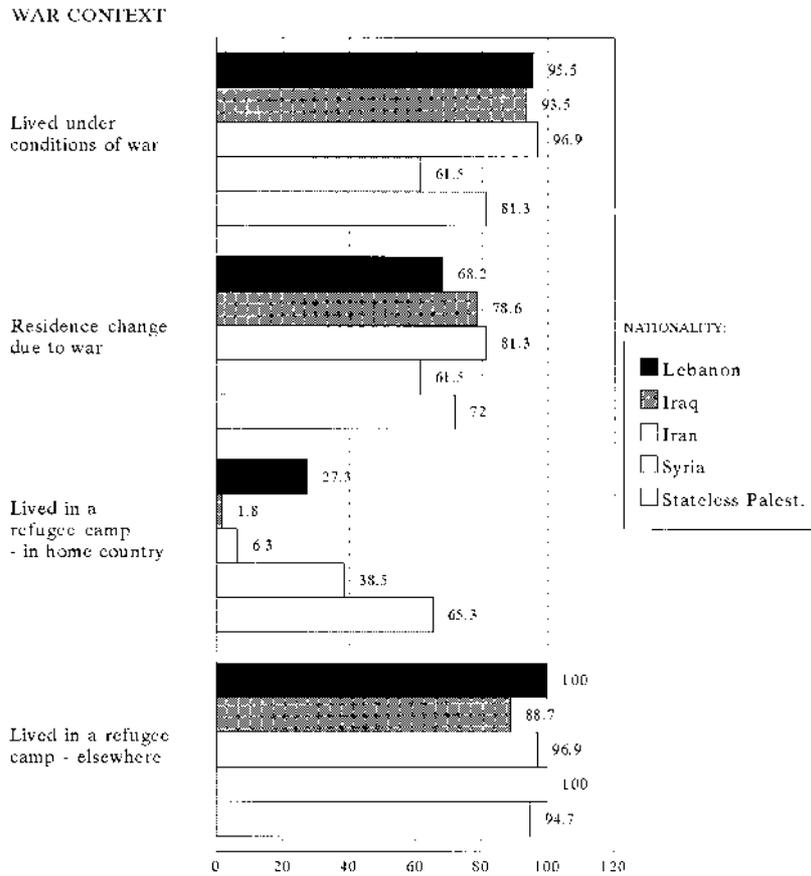
WAR CONTEXT

Fig. 2. Proportion (%) of exposure to war contexts by nationality in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.

ence toward family member', 'witnessed bombing', 'beaten or kicked by official', and 'torture of parent'. A high number of Lebanese children had lost one of their parents (death or disappearance) (54.5% *vs.* 17.3% for other children, P<0.0005), had witnessed street shooting (90.0% *vs.* 67.1%, P<0.05) and violence toward a family member (45.5% *vs.* 20.1%, P~0.01). Children from Iraq had lived under conditions of war relatively often (93.5% *vs.* 84.6%, P~0.01), had been on the run with parents (92.9% *vs.* 84.6%, P 0.05), had witnessed house searches (69.6% *vs.* 49.7%, P<0.0005) and had been detained (9.5% *vs.* 1.4%, P<0.005). The experience of seeking shelter from bombing was typical among the Iranian children (90.6% *vs.* 73.5%, P<0.05), as was witnessing the arrest of a family member (40.6% *vs.* 22.9%, P<0.05), death or disappearance of one parent (37.5% *vs.* 17.9%, P<0.01), torture of one parent (78.1% *vs.* 48.0%, P~0.001) and having been beaten or kicked by an official (21.9% *vs.* 4.7%, P<0.005). All Syrian children had experienced sep-

aration from one parent (100.0% *vs.* 57.7%, P<0.005), and many had lost one parent (61.5% *vs.* 18.1%, P<0.001). Stateless Palestinians had lived in a refugee camp outside their home country (65.3% *vs.* 6.8%, P<0.0001) and had witnessed street shooting (78.7% *vs.* 65.7%, P<0.05) more frequently than other children. Many ethnic Palestinians had lived in refugee camps outside their homeland (64.8% *vs.* 3.6%, P<0.0001), had witnessed street shooting (78.4% *vs.* 65.0%, P<0.05) and had been separated from one parent (69.3% *vs.* 55.6%, P<0.05). The Kurds had been forced to move because of war or persecution (83.5% *vs.* 71.6%, P<0.05), had been on the run (98.1% *vs.* 84.6%, P<0.0005), and had witnessed the arrest of family members (35.0% *vs.* 19.7%, P<0.005) and violence toward persons outside the family (38.8% *vs.* 25.5%, P<0.05). Half of the children from Kuwait had witnessed the arrest of (50.0% *vs.* 22.5%, P<0.005) and violence against (46.2% *vs.* 19.6%, P<0.005) a family member, and had, more frequently than others, been detained

Table 16. *Proportion (%) of exposure to specific events of war and other organised violence and family exposure by nationality and ethnicity in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Type of event	No.	%	Nationality					P*	Ethnicity		P*	Kuwait residence[#]
			Lebanon %	Iraq %	Iran %	Syria %	Stateless Palest. %		Palestinians %	Kurds %		%
Witnessing violent acts												
Bombing	257	82.6	90.9	85.1	93.8	61.5	74.7	<.01	75.0	85.4	>.05	73.1
Street shooting	214	68.8	90.9	67.3	53.1	38.5	78.7	~.001	78.4	70.9	<.05	42.3[a]
House search	188	60.5	27.3	69.6	50.0	38.5	58.7	<.001	55.7	66.0	>.10	76.9
Arrest of family member	77	24.8	22.7	25.6	40.6	0.0	21.3	>.05	19.3	35.0	~.01	50.0[a]
Torture, killing, intimidation of family member	68	21.9	45.5	19.6	25.0	0.0	21.3	~.01	19.3	24.3	>.10	46.2[a]
Torture, killing, intimidation of persons outside the family	93	29.9	45.5	29.8	31.3	0.0	30.7	>.10	29.5	38.8	<.05	46.2
Loss and separation												
Death or disappearance of parent	62	19.9	54.5	10.1	37.5	61.5	17.3	<.0001	22.7	9.7	<.01	7.7
Separation from a parent lasting > one month	185	59.5	40.9	53.6	68.8	100.0	68.0	<.01	69.3	39.8	<.0001	15.4[b]
Direct exposure to violence												
Detained	18	5.8	0.0	9.5	6.3	0.0	0.0	<.05	0.0	9.7	~.01	26.9[b]
Beaten/kicked by official	20	6.4	4.5	4.2	21.9	0.0	6.7	<.01	5.7	5.8	>.10	23.1[a]
Family exposure												
Torture of parent	159	51.1	27.3	49.4	78.1	61.5	49.3	<.01	55.7	52.4	>.10	42.3
Total	311	100.0	7.1	54.0	10.3	4.2	24.1	–	28.3	33.1	–	8.4

* From χ^2 k × 2 heterogeneity test. [#] Iraqis, 23; Stateless Palestinians, 3. [a] $P \leq 0.005$; [b] $P \leq 0.0005$.

(26.9% *vs.* 3.9%, P<0.0001) and beaten (23.1% *vs.* 4.9%. P<0.0005). Regarding nationality and ethnicity, no significant difference was found concerning the mean cumulative number of experiences of war and other forms of organised violence.

Concerning the experience "War context" and 'Witnessed violent events' (Table 17), no significant differences were found at the family level. War context was more frequently experienced by Iraqi children (98.2% *vs.* 91.6%, P<0.01) and by all Kurdish children (100.0% *vs.* 92.8%, P<0.005).

The only Turkish child in the group studied had been on the run with parents, had lived in a refugee camp and had witnessed organised violence against a family member.

Social and Religious Family Background

No significant differences were found at child or family level concerning the experience of "War con-text" or 'Witnessed violent events' in relation to the length of parents' education (in years), the mother's occupation, family's social status, or parents' religious background. When the father was an independent business man, there was increased risk of 'Witnessed violent events' at child level (RR 1.3, P≤0.05) and family level (RR 1.4, P≤0.05). When he was employed in administrative work, there was less risk of "War context" (child level: RR 0.9, P≤0.05; family level: RR 0.9, P≤0.05) and of 'Witnessed violent events' (child level: RR 0.8, P≤0.01; family level: RR 0.8, P≤0.10).

Emotional Symptoms and Behavioural Problems

The emotional symptoms and behavioural problems of the children are shown in Tables 18–21. The mean number of anxiety symptoms (Table 18) was 4.9 on

Table 17. *Proportion (%) of patterns of exposure to war and other organised violence* by nationality and ethnicity in 149 Middle Eastern refugee families and their 311 children, aged 3–15 years, Denmark, 1992–93.*

Unit of analysis Context and event pattern	Total No. %		Nationality					P#	Ethnicity			
			Lebanon %	Iraq %	Iran %	Syria %	Stateless Palest. %		Palestinians %	Kurds %	P#	Kuwait residence+
Families												
War context	144	96.6	100.0	97.6	100.0	100.0	91.4	>.10	92.7	100.0	>.10	100.0
Witnessing events of violence	106	71.1	100.0	72.6	70.6	50.0	65.7	>.10	68.3	76.6	>.10	72.7
Children												
War context	296	95.2	95.5	98.2	96.9	100.0	86.7	<.01	88.6	100.0	~.001	100.0
Witnessing events of violence	212	68.2	77.3	71.4	62.5	38.5	66.7	>.05	63.6	73.8	>.10	76.9

* Families: Proportion (%) experienced at least one component of the 'War context' and the 'Witnessing events of violence' factor, respectively, by at least one childhood member of a family; Children: Proportion (%) experienced at least one component of the 'War context' and the 'Witnessing events of violence' factor, respectively. # From χ^2 k × 2 heterogeneity test. + Iraqis, 23; Stateless Palestinians, 3.
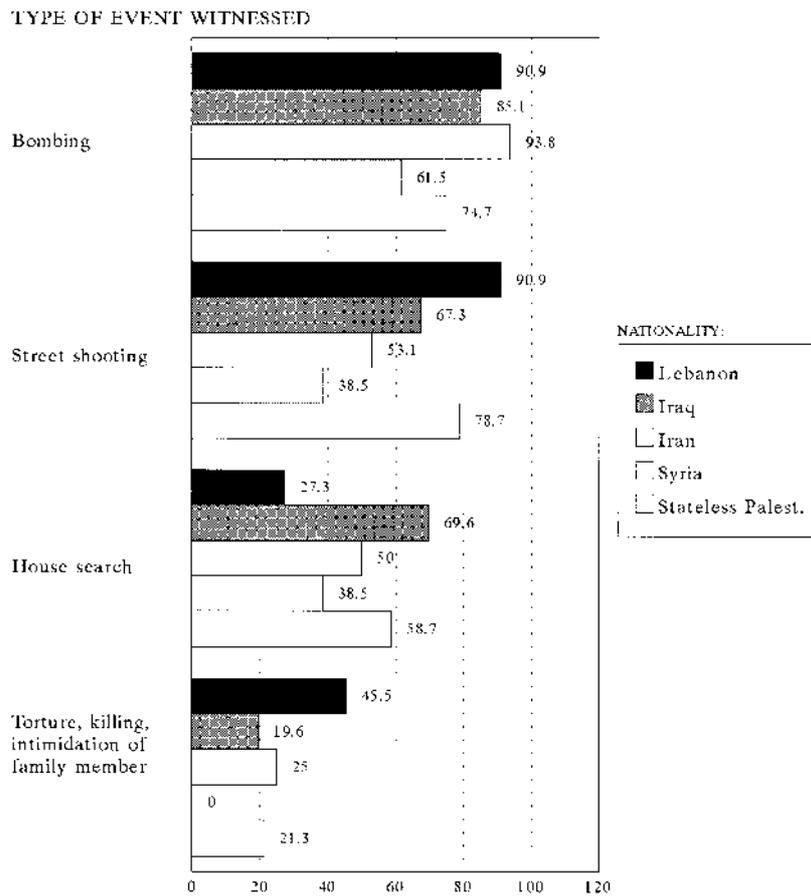
Fig. 3. Proportion (%) of witnessing events of war and organized violence by nationality in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.

TYPE OF EVENT
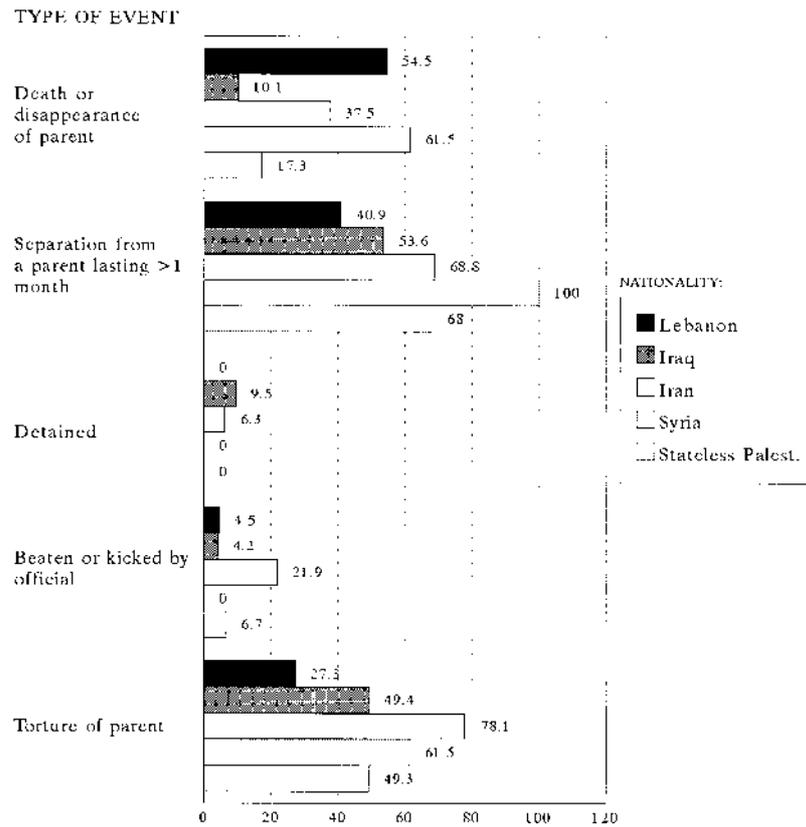
Fig. 4. Proportion (%) of exposure to events of war and organized violence by nationality in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.

Table 18. *Symptoms of anxiety in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Symptom	Symptom 'rare'		Symptom 'some-what', 'sometimes'		Symptom 'frequent', 'intense'	
	No.	%	No.	%	No.	%
Nightmares	194	62.4	58	18.6	59	19.0
Fears sleeping without light	87	28.0	45	14.5	179	57.6
Fears being alone	85	27.3	23	7.4	203	65.3
Fears shooting	154	49.5	39	12.5	118	37.9
Easily aroused	127	40.8	46	14.8	138	44.4
Fears strangers	255	82.0	17	5.5	39	12.5
Fears the future	209	67.2	39	12.5	63	20.3
Fears death	242	77.8	52	16.7	17	5.5
Clings to parents	85	27.3	55	17.7	171	55.0
Fears unknown situations	178	57.2	46	14.8	87	28.0
Lack of concentration:						
– when watching TV	288	92.6	3	1.0	20	6.4
– when told a story	292	93.9	7	2.3	12	3.9
Mean number of symptoms	–	–	4.9*	–	3.6#	–
Range	–	–	0–12	–	0–10	–

* Symptom 'somewhat', 'sometimes', 'frequent' or 'intense'. # Symptom 'frequent' or 'intense'.

at least level 1 (symptom 'somewhat', 'sometimes', 'frequent' or 'intense') and 3.6 at level 2 ('frequent' or 'intense'), without significant age and gender differences. Anxiety manifested itself most frequently as 'fears sleeping without light', 'fears being alone', and 'clings to parents' with prevalences of over 50% at level 2.

The mean number of depressive symptoms (Table 19) was 3.5 at level 1 and 2.1 at level 2, also without significant age and gender differences. The most frequent symptoms at level 2 were 'cries easily' (almost half),'appears sad or miserable', and 'lack of appetite' (about one third).

The mean number of symptoms of aggressive behaviour (Table 20) was 2.3 (level 1) and 1.4 (level 2) with the most frequent single symptoms

Table 19. *Symptoms of depression in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Symptom	Symptom 'rare'		Symptom 'some-what', 'sometimes'		Symptom 'frequent', 'intense'	
	No.	%	No.	%	No.	%
Does not play	293	94.2	4	1.3	14	4.5
Does not play with other children	277	89.1	14	4.5	20	6.4
Problems falling asleep	225	72.3	24	7.7	62	19.9
Problems staying asleep	203	65.3	52	16.7	56	18.0
Lost previous interests	287	92.3	10	3.2	14	4.5
Avoids talking about unpleasant experiences	280	90.0	31	10.0	–	–
Isolates him/herself	265	85.2	24	7.7	22	7.1
Feeling hopeless about the future	279	89.7	11	3.5	21	6.8
Cries easily	125	40.2	40	12.9	146	46.9
Appears sad or miserable	130	41.8	75	24.1	106	34.1
Lack of appetite	177	56.9	18	5.8	116	37.3
Lack of confidence in others	185	59.5	67	21.5	59	19.0
Lack of self-confidence when facing new tasks	238	76.5	41	13.2	32	10.3
Mean number of symptoms	–	–	3.5*	–	2.1[#]	–
Range	–	–	0–11	–	0–9	–

* Symptom 'somewhat', 'sometimes', 'frequent' or 'intense'. [#] Symptom 'frequent' or 'intense'.

Table 20. *Symptoms of aggressive behaviour in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Symptom	Symptom 'rare'		Symptom 'some-what', 'sometimes'		Symptom 'frequent', 'intense'	
	No.	%	No.	%	No.	%
Easily upset and angry	105	33.8	42	13.5	164	52.7
Eats greedily	284	91.3	13	4.2	14	4.5
Conflicts with siblings	111	35.7	93	29.9	107	34.4
Fights with friends	259	83.3	1	6.8	31	10.0
Destroys things	260	83.6	33	10.6	18	5.8
Bullies other children	272	87.5	17	5.5	22	7.1
Disobedient towards parents	214	68.8	46	14.8	51	16.4
Screams at or hits parents	253	81.4	37	11.9	21	6.8
Mean number of symptoms	–	–	2.3*	–	1.4[#]	–
Range	–	–	0–7	–	0–7	–

* Symptom 'somewhat', 'sometimes', 'frequent' or 'intense'. [#] Symptom 'frequent' or 'intense'.

being 'easily upset and angry' (about half) and 'conflicts with siblings' (one third). There were no significant gender differences, while the number of symptoms was associated with age at both levels (Kruskal-Wallis one-way analysis of variance, $P \leq 0.001$ at level 1; $P < 0.05$ at level 2), with a tendency for younger children to have more symptoms than older children.

Other emotional symptoms and behavioural problems were less common (Table 21). A little more than 20% of the children showed regressive behaviour which parents had observed, while 11% frequently bit their nails or suffered nocturnal enuresis. Encopresis and delayed speech were almost non-existent in this child population. A significant gender difference was found only regarding headaches at level 2, where boys had higher risk than girls (RR 2.4, $P < 0.05$). Significant age differences were found concerning nocturnal enuresis at level 1 (RR in relation to 3–6 year-olds: 7–11 year-olds 0.4; $P < 0.0005$; 12–15 year-olds 0.1; $P < 0.005$) and at level 2 (RR for 7–11 year-olds 0.5; $P < 0.05$; for 12–15 year-olds 0.1; $P < 0.01$) and delayed speech at

level 1 (2 children over the age of 6 with symptom (10 and 12 years old)).

Predictors for Anxiety

Correlations between the seven constructed anxiety variables are seen in Table 22. All anxiety variables were significantly correlated with each other except 'nightmares' with 'regressive anxiety'. There was a particularly strong correlation between 'regressive anxiety' and 'separation anxiety' (r_s 0.62, $P < 0.00001$), between 're-experience' and 'clinical anxiety' (r_s 0.56, $P < 0.00001$) and between 're-experience' and 'nightmares' (r_s 0.49, $P < 0.00001$). The prevalence of symptoms within each constructed variable appears in Appendix Table 2.

Nightmares

Significant bivariate predictors for nightmares appear in Table 23 (results of the bivariate analyses are also shown in Appendix Tables 3–19). The first column shows the importance of the social circumstances the

Table 21. *Other emotional and behavioural symptoms in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Symptom	Symptom 'rare'		Symptom 'some-what', 'sometimes'		Symptom 'frequent', 'intense'	
	No.	%	No.	%	No.	%
Nailbiting	268	86.2	7	2.3	36	11.6
Fingersucking	291	93.6	5	1.6	15	4.8
Headaches	247	79.4	39	12.5	25	8.0
Stomachaches	235	75.6	54	17.4	22	7.1
Enuresis diurnal	292	93.9	12	3.9	7	2.3
Enuresis nocturnal	242	77.8	35	11.3	34	10.9
Encopresis	309	99.4	1	0.3	1	0.3
Regressive behaviour	182	58.5	65	20.9	64	20.6
Delayed speach	296	95.2	13	4.2	2	0.6

Table 22. *Correlations* between types of anxiety symptom patterns in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

	Nightmare	Re-experience	Arousal	Regressive	Future	Separation
Re-experience	.49[c]					
Arousal	.19[a]	.22[b]				
Regressiv anxiety	.07	.20[b]	.33[c]			
Future anxiety	.21[b]	.16[a]	.25[c]	.18[a]		
Separation anxiety	.25[c]	.31[c]	.36[c]	.62[c]	.19[a]	
Clinical anxiety	.27[c]	.56[c]	.26[c]	.28[c]	.24[b]	.27[c]

* Spearman's rank correlations koefficient r_s. [a] $P < 0.005$; [b] $P < 0.0005$; [c] $P < 0.00001$.

Table 23. *Significant predictors of nightmare in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Past-past (background)	RR	Past (violent experience)	RR	Past-present (present life context)	RR
*Nationality**		*Violent life circumstances**		*Family structure**	
Iranian	2.2[d]	Lived in a refugee camp		Father not present in Denmark	1.7[b]
*Kuwait residence**	→0[c]	outside home country	→∞[b]	One parent not present in DK	2.0[d]
Length of mothers education		*Separation**			
0–3 years	1.0	Separation(s) from mother	3.0[f]		
4–8 years	3.7[d]	Separation(s) from both parents	2.9[d]		
9–12 years	3.2[b]	*Witnessing events of violence**			
more than 12 years	3.5[b]	Street shooting	1.8[b]		
Strata of society		*Family exposure**			
highest	1.0	Parent(s) tortured	2.0[d]		
middle	0.4[d]	Father exposed to organized violence			
lowest	0.3[d]	after child's birth	1.6[a]		
*Violence against the family**		Mother detained	1.9[c]		
Grandparents' violent death	2.6[d]	Mother tortured	2.4[c]		
Mother tortured	3.1[b]	Mother tortured after child's birth	2.2[b]		
		Mother exposed to organized violence			
		after child's birth	1.9[b]		

* P-values by comparison of one group to all others. [a] $P \sim 0.05$; [b] $P < 0.05$; [c] $P < 0.01$; [d] $P < 0.005$; [e] $P < 0.0005$; [f] $P < 0.0001$

child is born into and the significance of the organised violence which has affected the family even before the child was born.

Children from Iran had more than twice the risk of nightmares compared to other children, whereas no Kuwaiti children had nightmares. If the mother's education had been of more than 0–3 years, there was more than three times the risk that her children would have nightmares, while children from the lower and middle strata of society had considerably reduced risk of nightmares. Being born of a mother exposed to torture prior to the birth tripled the risk of nightmares (55.6% *vs.* 17.9% among all others, $P < 0.05$), while being born into a family where a grandparent had died because of war or persecution increased the risk of nightmares by two and a half times (43.5% *vs.* 17.0%, $P < 0.005$).

The second column of Table 23 shows significant association between nightmares and the child's experiences of war and other forms of organised violence. Ten (out of 35) types of experiences of war and other forms of organised violence have been shown to be significantly related to nightmares, 6 of these with a relative risk of above 2.0. Nightmares only occurred in children who had lived in a refugee camp outside their home country before coming to Denmark (20.6% *vs.* 0.0%, $P < 0.01$). Separation from mother or from both mother and father tripled the risk of nightmares in relation to children who had not been subjected to these separations, while the

risk of nightmares was almost doubled for children who had witnessed street shooting in relation to those who had not. Those living in a family where either the mother or father had been tortured had double the risk of nightmares compared to other children (25.2% *vs* 12.5%, $P < 0.005$), whereas having a mother who had been tortured before or after the birth of the child more than doubled the risk of nightmares.

The third column of Table 23 depicts the bivariate association between family structure at the time of the study and nightmare occurrence. While the age of the child at the time of the study was not found related to the occurrence of nightmares, the risk of nightmares was found doubled in children whose father or mother had not accompanied them to Denmark (27.0% *vs* 13.8, $P < 0.005$).

Next, the variables were combined in a multiple logistic regression, first each stratum on its own (background variables—experiences of organised violence—present life context). The significant variables from each stratum were then combined in one analysis (Table 24, all tables regarding the multivariate analyses are moreover depicted in the appendix with confidence intervals). The strongest predictor for nightmares were stay in refugee camp outside the home country (OR→∞, $P < 0.001$), grandparents death due to organised violence before the birth of the child (OR 5.4, $P < 0.005$), separation from mother (OR 4.4, $P < 0.005$), Kurdish ethnicity (OR 3.5, $P < 0.005$) and torture of parents (OR 2.6, $P < 0.01$),

Table 24. *Significant multiple logistic regression* estimates (odds ratio, OR) of nightmare in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model				
		I Background OR	II Violent experience OR	I–II combined OR	III Present life context OR	I-III combined OR
I: Background						
Iranian	32	3.0[b]				
Kurds	103	3.0[d]		2.4[b]		3.5[d]
Prior Kuwait residence	26	→0[d]		→0[d]		→0[d]
Father: years educated		1.1[f#]		1.1[f#]		1.1[f#]
Grandparents' violent death before child's birth	23	4.9[d]		5.1[d]		5.4[d]
Been to school	161	2.4[c]		2.4[c]		2.3[b]
II: Violent experience						
Lived in a refugee camp outside home country	287		→∞[d]	→∞[e]		→∞[e]
Separation(s) from mother	27		4.0[d]	4.4[d]		4.4[d]
Parent(s) tortured	159		2.0[b]	2.0[a]		2.6[c]
III: Present life context						
Gender: boy	160	2.1[b]				
Both parents in Denmark	189				0.4[d]	0.3[e]

* Simple model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience,* war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organized violence; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [#] OR denotes the per year probability increase as concerns the dependent variable. [a] $P<0.05$; [b] $P<0.025$; [c] $P<0.01$; [d] $P<0.005$; [e] $P<0.001$; [f] $P<0.0005$.

whereas being born in Kuwait (OR→0, $P<0.005$) and being in Denmark with both parents (OR 0.3, $P<0.001$) meant less nightmares. Other significant positive predictors were that the child had gone to school and the length of father's education (risk increased with each year). The variables gender and Iranian nationality, which were significant background variables, appeared not to be significant in the combined models. But whereas gender did not correlate significantly with any other predictors from the combined models, Iranian nationality correlated with Kurdish ethnicity (r_s −0.2, $P<0.001$); length of father's education (r_s 0.2, $P<0.01$); separation from mother (r_s 0.2, $P<0.001$); torture of parents (r_s 0.2, $P<0.01$) and 'both parents in Denmark' (r_s −0.2, $P<0.001$).

Figure 5 depicts sensitivity and specificity at possible cut-off levels for the risk scale (%), which can be constructed from this predictor model's logarithmic β-coefficients (see construction of anxiety scale p. 35). At the same time, the figure illustrates the
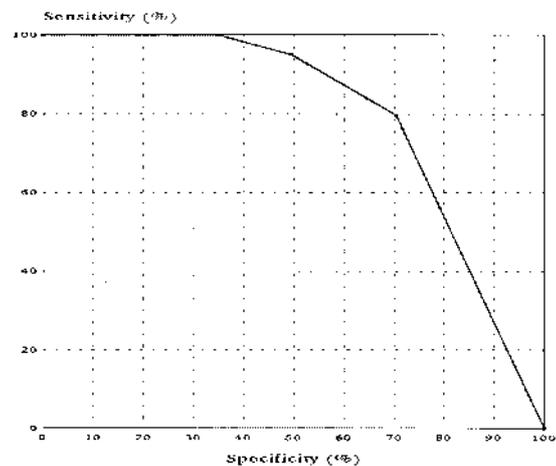

Fig. 5. Receiver Operating Curve based on multivariate risk of nightmares in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.

extent to which the reaction (in this case nightmares) can be explained by the predictor model (the area between the diagonal and the curve).

Next, significant predictors regarding experience of organised violence were combined in yet another multiple logistic regression with information concerning age level at, intensity of, and time elapsed since the first experience, as well as information on parents' disappearance, siblings left behind in the home country, obstruction of school and play activities, parental occupations, and the economic status of the family immediately prior to the escape (context for the experience of violence). This led to the same final model as the first analysis (Table 25).

Nightmares were thus primarily determined by background factors (past-past), secondarily by violent experiences (past) and to a limited extent by present life context (past-present). The most import-ant predictors were 'lived in a refugee camp outside home country', 'grandparent's violent death before the birth of the child', 'separation from mother', 'Kurdish ethnicity', 'parent(s) tortured', and 'both parents in Denmark' (modifying factor).

Re-experience

In the bivariate analyses, Lebanese children, in relation to other children, were found to have 1½ times the risk of anxiety symptoms indicating their re-experience of previous traumatic events (Table 26), while children whose fathers had an education lasting 4–8 years or more than 12 years in duration had approximately half the risk compared to children of fathers with an education of 0–3 years duration. Other significant positive correlations (RR 1.3–1.4) between background variables and

Table 25. *Significant multiple logistic regression* estimates (odds ratio, OR) of nightmare in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model I Background OR	II Violen experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Iranian	32	3.0[b]				
Kurds	103	3.0[d]		2.5[c]		3.5[d]
Prior Kuwait residence	26	→0[d]		→0[d]		→0[d]
Father: years educated		1.1[f#]		1.1[f#]		1.1[f#]
Grandparent's violent death before child's birth	23	4.9[d]		5.2[d]		5.4[d]
Been to school	161	2.4[c]		2.6[c]		2.3[b]
II: Violent experience and context of violence						
Lived in a refugee camp outside home country	287		→∞[d]	→∞[e]		→∞[e]
Separation(s) from mother	27		3.9[d]	5.3[e]		4.4[d]
Parent(s) tortured	159		2.1[b]			2.6[c]
Father manual work	127		0.5[a]			
III: Present life context						
Gender: boy	160	2.1[b]		2.0[a]		
Both parents in Denmark	189				0.4[d]	0.3[e]

* Extended model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience and context of violence,* significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parent(s), sibling(s) left in home country, hindrance of school and play participation, parents' occupation and economical situation prior to escape; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. # OR denotes the per year probability increase as concerns the dependent variable. [a] P<0.05; [b] P<0.025; [c] P<0.01; [d] P<0.005; [e] P<0.001; [f] P<0.0005.

Table 26. *Significant predictors of anxiety symptoms indicating re-experience of traumatic events in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Past-past (background)	RR	Past (violent experience)	RR	Past-present (present life context)	RR
*Nationality**		*Violent life circumstances**		*Family structure**	
Lebanese	1.5[b]	Lived under conditions of war	1.9[c]	Father not present in Denmark	1.3[b]
*Ethnicity**		Taking shelter for bombing	1.3[b]	One parent not present in DK	1.4[c]
Kurds	1.3[b]	Residence change due to violence	1.7[e]	*Change in parents' behaviour**	
Length of fathers education		Been on the run with the parents	1.6[b]	Father talks more with the child	0.7[c]
0–3 years	1.0	Lived in a refugee camp		*Information to the child**	
4–8 years	0.5[d]	outside home country	3.1[d]	Parent(s) tortured	1.4[b]
9–12 years	0.9	*Loss and separation**			
more than 12 years	0.6[c]	Death of a family member	1.3[b]		
Mothers religion		Violent death of a family member	1.4[b]		
Muslim	1.0	Death of father	1.5[b]		
Christian	1.4[b]	Separation(s) from mother	1.5[b]		
*Violence against the family**		Separation(s) from both parents	1.5[b]		
Father tortured	0.7[b]	*Witnessing events of violence**			
*Child been to school**	1.4[d]	Street shooting	1.6[e]		
		Torture, killing, intimidation of a family member	1.4[c]		
		*Direct or family exposure**			
		Child beaten/kicked by official	1.8[d]		
		Father detained	0.7[c]		
		Father exposed to organised violence after child's birth	1.3[b]		
		Mother tortured	1.6[d]		
		Mother tortured after child's birth	1.7[d]		
		Mother exposed to organised violence after child's birth	1.4[b]		

* P-values by comparison of one group to all others. [a] $P \sim 0.05$; [b] $P < 0.05$; [c] $P < 0.01$; [d] $P < 0.005$; [e] $P < 0.0005$; [f] $P < 0.0001$.

re-experience were Kurdish ethnicity, Christian mother, and child's schooling, whereas having a father who had been subjected to torture before the birth of the child was negatively associated with re-experience (RR 0.7).

Seventeen out of 35 types of experience of war and other forms of organised violence were positively associated with re-experience reactions, one negatively (father's imprisonment, RR 0.7). Children who had lived in a refugee camp outside their home country had three times the risk of re-experience symptoms relative to other children (51.9% vs. 16.7% of other children, $P < 0.001$). Children who had lived under conditions of war, had been forced to move because of war or persecution, had been on the run with parents, lost their father, been separated from their mother or from both parents at once, witnessed shooting in the streets, been beaten or kicked by an official, and children whose mother had been tortured (at all or after the birth of the child) all had between

1½ and double the risk for re-experience reactions relative to other children.

Being in Denmark with only one parent and having been informed about the torture of one or both parents increased the risk of re-experience (RR 1.3–1.4), whereas having a father who talked more to the child at the time of the study than he had previously done, reduced the risk (RR 0.7).

When the variables were combined in a multiple logistic regression (Table 27), it was found that direct assault, such as being beaten or kicked by an official (OR 9.4, $P < 0.005$) and the mother being tortured (OR 5.5, $P < 0.001$), father's experience of organised violence after the birth of the child (OR 4.2, $P < 0.0005$), and 'lived in a refugee camp outside the home country' (OR 3.9, $P < 0.005$) were the most important positive predictors for re-experience. Having a father who had been imprisoned appeared to be a negative predictor (OR 0.2, $P < 0.0005$). Other positive predictors were residence change due to war

Table 27. *Significant multiple logistic regression* estimates (odds ratio, OR) of re-experience in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model				
		I Background OR	II Violent experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Kurds	103	2.8[g]		2.1[d]		
Mother muslim	279	0.3[d]		0.4[b]		
Middle stratum of society	213	0.5[c]				0.5[a]
Mother tortured before child's birth	9	9.7[e]				
Been to school	161	4.5[g]				
II: Violent experience						
Residence change due to violence	235		2.5[d]	2.0[b]		2.8[e]
Lived in a refugee camp in home country	65		0.5[c]			0.3[g]
Lived in a refugee camp outside home country	287		3.9[e]			3.9[b]
Violent death in the family after child's birth	35		2.6[b]			
Witnessing street shooting	214		2.5[d]	2.9[f]		2.6[d]
Detained	18		0.2[c]	0.2[c]		0.3[b]
Beaten/kicked by official	20		8.5[e]	9.9[f]		9.4[e]
Father detained	186		0.2[g]	0.2[g]		0.2[g]
Father exposed to organised violence after child's birth	94		4.1[g]	3.1[f]		4.2[g]
Mother tortured	33		6.1[g]	7.7[g]		5.5[f]
III: Present life context						
Age at examination 3–6 years	138	2.5[b]				
Both parents in Denmark	189				0.5[d]	0.4[e]
Child informed of parents torture	38				2.1[b]	

* Simple model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience,* war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organized violence; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [a] $P \sim 0.05$; [b] $P < 0.05$; [c] $P < 0.025$; [d] $P < 0.01$; [e] $P < 0.005$; [f] $P < 0.001$; [g] $P < 0.0005$.

and having witnessed street shooting, while being in Denmark with both parents was a negative predictor.

Seven predictors, significant in at least one of the models, were not found significant in the final combined model: age 3–6 years (correlated with: schooling, r_s −0.8, $P < 0.001$), Kurdish ethnicity (correlated with: Muslim mother, r_s 0.2, $P < 0.001$; lived in refugee camp in home country, r_s −0.3, $P < 0.001$; father exposed to organised violence after the birth of the child, r_s 0.2, $P < 0.01$; both parents in Denmark, r_s 0.2, $P < 0.001$), Muslim mother (correlated with: lived in refugee camp in home country, r_s 0.2, $P < 0.01$; child beaten, r_s −0.2, $P < 0.01$), mother tortured before birth of the child (correlated with: mother tortured, r_s 0.5, $P < 0.001$), schooling, violent death in the family after the birth of the child (correlated with: middle stratum of society, r_s −0.2, $P < 0.001$; both parents in Denmark, r_s −0.2, $P < 0.001$) and child informed about the torture of parents (correlated with: child beaten, r_s 0.2, $P < 0.01$; father exposed
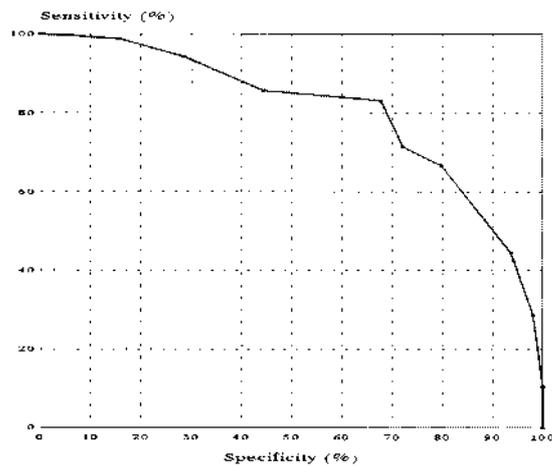
Fig. 6. Receiver Operating Curve based on multivariate risk of re-experience in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.

to organised violence after the birth of the child, r_s 0.2, P<0.001). Figure 6 illustrates sensitivity and specificity for the risk scale (%) constructed from this predictor model.

When additional relevant information concerning the violent experiences and the context of the violence are combined with the significant predictors in yet another multiple logistic regression (Table 28), the variable 'residence change due to war' was replaced with the more specific variable 'residence change less than 36 months ago due to war' (OR 4.0, P<0.0005), and the variables 'lived in a refugee camp in the home country less than 12 months ago' (OR→∞, P<0.01) and 'witnessed street shooting less than 24 months ago' (OR 0.3, P<0.025) were significant predictors in addition to the general variables concerning such occurrence.

Re-experience is thus primarily determined by experience of organised violence (past), and only to a limited extent by present life context (past-present) and background factors (past-past). Important predictors were 'beaten or kicked by an official', 'mother tortured', 'father exposed to organised violence after the birth of the child' and 'lived in refugee camp outside the home country'.

Arousal

Only the background variables Kurdish ethnicity and length of mother's education were found significantly associated with arousal symptoms in the bivariate analyses (Table 29), the latter such that children whose mother had gone to school for a period of 4–8 years had less risk than children whose mother had received under 4 years of schooling.

In the bivariate analyses fourteen of 35 possible predictors regarding the children's' experiences of war and other forms of organised violence were found to be positively associated with arousal. Children who had lived in a refugee camp outside their home country had 2½ times increased risk of arousal (49.1% *vs.* 20.8 among all others, P<0.01), whereas children, who had sought shelter from bombing, had witnessed the arrest of a family member, had been detained, had been beaten or kicked by an official, and children whose mother or father had been subjected to torture at any time or to torture or other organised violence after the birth of the child, had 1½ times increased risk.

Children who at the time of the study were beaten or scolded more by their mother or father than previously had 1½ times the risk of arousal compared to other children, whereas children who had been informed of the reasons for escape had just under half the risk.

When the variables were combined in a multiple logistic regression (Table 30), behaviour change in the father towards beating the child more was found to be the most important predictor for arousal (OR 10.0, P<0.0005). Furthermore, having lived in a refugee camp outside the home country (OR 6.9, P<0.001), having been beaten or kicked by an official (OR 4.5, P<0.05) and having a mother who had been subjected to torture (OR 4.1, P<0.005) were important predictors for arousal. Other positive predictors were Kurdish ethnicity, father's experience of organised violence before the birth of the child, and information to the child about the reason for escape, whereas being in Denmark with both parents was a negative predictor for arousal (OR 0.4, P<0.005). Four predictors were not significant in the final combined model : mother tortured before the birth of the child (correlated with: mother tortured, r_s 0.5, P<0.001), been on the run with parents (Kurdish ethnicity, r_s 0.2, P<0.001; taken shelter from bombing, r_s 0.3, P<0.001; residence change due to war r_s 0.5, P<0.001), taken shelter from bombing (father hits or punishes child more than previously, r_s 0.2, P<0.01) and residence change due to war. Sensitivity and specificity for the risk scale is illustrated in Figure 7.

Combined with additional relevant information (Table 31) 'mother tortured' was replaced by 'mother tortured before the birth of the child' (OR 26.6, P<0.0005), and the predictor 'child beaten' showed a stronger association (OR 12.4, P<0.005) than in the simple analysis. Having left siblings behind in the home country and having been deprived of opportunities for play were new positive predictors in relation

Table 28. *Significant multiple logistic regression* estimates (odds ratio, OR) of re-experience in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model				
		I Background OR	II Violen experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Kurds	103	2.8[g]				
Mother muslim	279	0.3[d]				
Middle stratum of society	213	0.5[c]				
Mother tortured before child's birth	9	9.7[e]				
Been to school	161	4.5[g]				
II: Violent experience and context of violence						
Residence chance due to violence <36 month ago	100		4.3[g]	4.3[g]		4.0[g]
Lived in a refugee camp in h.c.	65		0.4[c]	0.4[c]		0.3[e]
<12 month ago	4		→∞[c]	→∞[c]		→∞[d]
Lived in a refugee camp outside home country	287		3.7[b]	3.7[b]		3.5[b]
Parent died/disappeared	62		3.3[e]	3.3[e]		
Witnessing street shooting	214		3.5[g]	3.5[g]		3.8[g]
<24 month ago	32		0.3[d]	0.3[d]		0.3[c]
Detained	18		0.2[c]	0.2[c]		0.2[c]
Beaten/kicked by official	20		8.9[e]	8.9[e]		11.0[f]
Father detained	186		0.3[g]	0.3[g]		0.3[g]
Father exposed to organised violence after child's birth	94		4.7[g]	4.7[g]		4.6[g]
Mother tortured	33		7.4[g]	7.4[g]		6.5[g]
III: Present life context						
Age at examination 3–6 years	138	2.5[b]				
Both parents in Denmark	189				0.5[d]	0.3[g]
Child informed of parents torture	38				2.1[b]	

* Extended model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience and context of violence,* significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parent(s), sibling(s) left in home country, hindrance of school and play participation, parents' occupation and economical situation prior to escape; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. [a] $P \sim 0.05$; [b] $P < 0.05$; [c] $P < 0.025$; [d] $P < 0.01$; [e] $P < 0.005$; [f] $P < 0.001$; [g] $P < 0.0005$.

to the simple analysis, while having had economic problems in the home country was found to be a negative predictor for arousal.

Arousal was determined equally by experience of organised violence (past) and current life context (past-present) and only to a limited extent by background factors (past-past). Strong predictors were 'father hits child', 'lived in refugee camp outside the home country', 'mother tortured', 'beaten/kicked by official', and in the extended model 'sibling left behind in home country'.

Regressive Anxiety

Negative background predictors (RR 0.8–0.9) for regressive anxiety (Table 32) were Iraqi nationality,

Table 29. *Significant predictors of arousal in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Past-past (background)	RR	Past (violent experience)	RR	Past-present (present life context)	RR
*Ethnicity**		*Violent life circumstances**		*Change in parents' behaviour**	
Kurdish	1.4[b]	Taking shelter for bombing	1.5[b]	Father scolds the child more	1.4[a]
Length of mothers education		Lived in a refugee camp		Father hits/punishes more	1.6[e]
0–3 years	1.0	outside home country	2.4[e]	Father talks more with the child	0.7[b]
4–8 years	0.7[b]	*Witnessing events of violence**		Mother scolds the child more	1.5[d]
9–12 years	0.9	Arrest of family member	1.6[e]	Mother hits/punishes more	1.6[d]
more than 12 years	0.9	Torture, killing, intimidation		*Information to the child**	
		of a family member	1.3[b]	Reason for escape	1.8[e]
		*Direct exposure**			
		Detained	1.7[e]		
		Beaten/kicked by official	1.9[e]		
		*Family exposure**			
		Parent(s) tortured	1.6[e]		
		Father detained	1.3[b]		
		Father tortured	1.4[d]		
		Father tortured after child's birth	1.6[e]		
		Father exposed to organised violence			
		after child's birth	1.6[f]		
		Mother tortured	1.7[e]		
		Mother tortured after child's birth	1.8[d]		
		Mother exposed to organised violence			
		after child's birth	1.5[e]		

* P-values by comparison of one group to all others. [a] P ~ 0.05; [b] P < 0.05; [c] P < 0.01; [d] P < 0.005; [e] P < 0.0005; [f] P < 0.0001.

length of mother's and father's education and child's schooling, while stateless and ethnic Palestinians and children from the lowest stratum of society had slightly increased risk (RR 1.2).
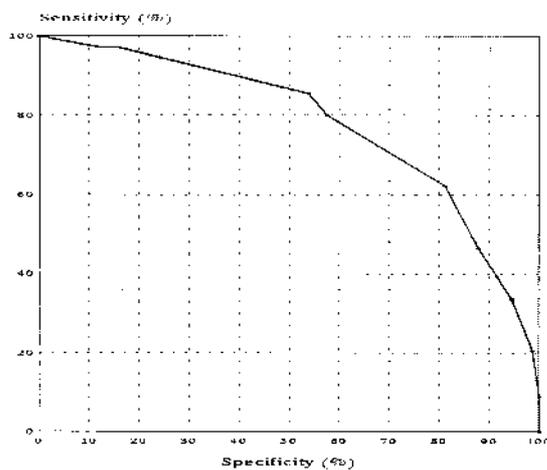
Eight of 35 possible predictors concerning the

Fig. 7. Receiver Operating Curve based on multivariate risk of arousal in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.

child's experiences of war and other forms of organised violence were positively associated with regressive anxiety symptoms in the bivariate analyses, but only 'lived in refugee camp outside home country' with a relative risk of above 1½ (89.2% *vs.* 54.2% among other children, P < 0.0001).

Children, who were 12–15 years old at the time of the study had a lower risk of regressive anxiety symptoms than children who were between 3 and 6 years old.

In the multiple logistic regression (Table 33) death of father (OR → ∞, P < 0.01), stay in refugee camp outside the home country (OR 18.0, P < 0.0005), Palestinian ethnicity (OR 12.7, P < 0.001) and mother scolding more (OR 5.5, P < 0.005) appeared to be the strongest predictors for regressive anxiety. The mother talking more to the child and separation from the father for more than one month were additional positive predictors. Increasing age at the time of the study was a negative predictor. Four predictors significant in one or more of the models were not found significant in the final combined model: middle stratum of society (correlated with Palestinian ethnicity, r_s −0.3, P < 0.001; father's death, r_s −0.2, P < 0.001), lived in refugee camp in home country

Table 30. *Significant multiple logistic regression* estimates (odds ratio, OR) of arousal in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model				
		I Background OR	II Violen experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Kurds	103	2.0[d]		1.9[b]		2.9[f]
Mother tortured before child's birth	9	5.2[b]				
II: Violent experience						
Taken shelter for bombing	234		3.7[f]	3.7[f]		
Residence chance due to violence	235		0.3[d]	0.4[b]		
Been on the run with the parents	277		2.7[a]			
Lived in a refugee camp outside home country	287		3.4[b]	3.6[b]		6.9[e]
Beaten/kicked by official	20		4.0[b]	4.7[b]		4.5[a]
Father exposed to organised violence after child's birth	94		2.6[e]	2.1[c]		2.0[b]
Mother tortured	33		4.3[d]	4.5[e]		4.1[d]
III: Present life context						
Both parents in Denmark	189				0.6[b]	0.4[d]
Father hits/punishes more	26				5.5[f]	10.0[f]
Child informed of reason for escape	219				2.9[f]	3.5[f]

* Simple model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience,* war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organized violence; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [a] $P < 0.05$; [b] $P < 0.025$; [c] $P < 0.01$; [d] $P < 0.005$; [e] $P < 0.001$; [f] $P < 0.0005$.

(Palestinian ethnicity, r_s 0.7, $P < 0.001$; mother scolds more, r_s 0.1, $P < 0.01$; mother talks more to the child, r_s 0.2, $P < 0.001$), death in the family after the birth of the child (age, r_s 0.3, $P < 0.001$; father's death, r_s 0.3, $P < 0.001$) and number of siblings in Denmark (age, r_s 0.3, $P < 0.001$; lived in refugee camp outside home country, r_s 0.2, $P < 0.01$). Sensitivity and specificity for the risk scale are illustrated in Figure 8.

In the extended multiple logistic regression (Table 34) 'lived in refugee camp outside home country' was replaced by 'lived in refugee camp outside home country less than 36 months ago' (OR 44.4, $P < 0.0005$). 'Death in the family while child was aged 3–6 years' was a new significant predictor in the combined model (OR 7.2, $P < 0.005$), and the predictor 'Palestinian ethnicity' was strengthened (OR 26.5, $P < 0.0005$).

Regressive anxiety was thus determined by factors within all three time segments, but primarily by
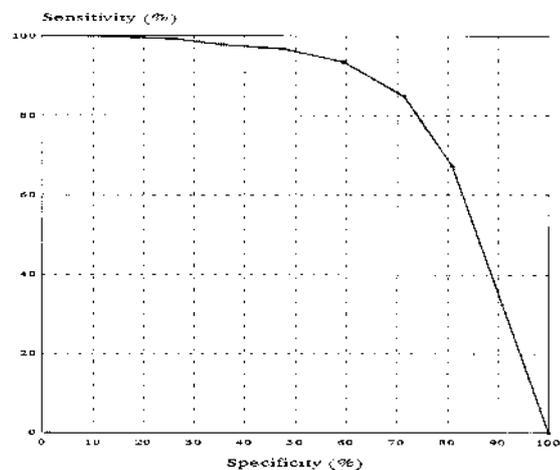

Fig. 8. Receiver Operating Curve based on multivariate risk of regressive anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.

Table 31. *Significant multiple logistic regression* estimates (odds ratio, OR) of arousal in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model				
		I Background OR	II Violen experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Kurds	103	2.0[d]		1.8[a]		2.6[d]
Mother tortured before child's birth	9	5.2[b]				26.6[f]
II: Violent experience and context of violence						
Taken shelter for bombing	234		5.1[f]	4.9[f]		3.9[e]
Residence chance due to violence	235		0.2[f]	0.2[f]		0.2[f]
Lived in a refugee camp outside home country	287					4.8[b]
< 24 month ago	263		2.5[a]	2.5[a]		
Beaten/kicked by official	20		10.6[d]	10.8[e]		12.4[d]
Beaten 12–15 years old	1		→0[d]	→0[d]		→0[e]
Father exposed to organised violence after child's birth	94		2.9[e]	2.6[d]		2.9[e]
Mother tortured	33		3.9[d]	4.4[d]		
Sibling(s) left in home country	28		3.2[c]	3.6[d]		5.6[f]
Lost play opportunities > one month	227		2.6[d]	2.6[d]		3.0[d]
Father self-employed	55		2.7[c]	2.5[b]		
Economical problems prior to escape	202		0.5[c]	0.5[b]		0.4[e]
III: Present life context						
Both parents in Denmark	189				0.6[b]	
Father hits/punishes more	26				5.5[f]	7.4[f]
Child informed of reason for escape	219				2.9[f]	3.5[f]

* Extended model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience and context of violence,* significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parents', sibling(s) left in home country, hindrance of school and play participation, parents' occupation and economical situation prior to escape; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [a] $P<0.05$; [b] $P<0.025$; [c] $P<0.01$; [d] $P<0.005$; [e] $P<0.001$; [f] $P<0.0005$.

experience of organised violence (past). Strong predictors were 'lived in refugee camp outside home country' (this particular predictor was further strengthened if the first experience of the camp had occurred within the three years prior to arrival in Denmark), 'father's death', 'Palestinian ethnicity', and 'mother scolds more', while increasing age was a modifying factor.

Future Anxiety

Table 35 demonstrates that Iranian children had 1½ times the risk of future anxiety compared to other children (65.6% *vs.* 38.0% among other children, $P<0.005$). Children from Iraq and Kurdish children had lower risks, while children from the middle stratum of society had half the risk of future anxiety

Table 32. *Significant predictors of regressive anxiety symptoms in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Past-past (background)	RR	Past (violent experience)	RR	Past-present (present life context)	RR
*Nationality**		*Violent life circumstances**		*Child's age at interview*	
Iraqi	0.8[e]	Taking shelter for bombing	1.1[b]	3–6 years	1.0
Stateless Palestinians	1.2[e]	Lived in refugee camp in home country	1.2[c]	7–11 years	0.9
*Ethnicity**		Lived in a refugee camp		12–15 years	0.8[d]
Palestinian	1.2[f]	outside home country	1.6[f]	*Change in parents' behaviour**	
Length of fathers education		*Separation**		Father hits/punishes more	1.2[b]
0–3 years	1.0	Separated from father		Mother scolds the child more	1.1[c]
4–8 years	0.9	more than one month	1.1[b]	Mother hits/punishes more	1.1[b]
9–12 years	0.9	*Witnessing events of violence**		Mother talks more with child	1.1[b]
more than 12 years	0.8[b]	Bombing	1.2[b]		
Length of mothers education		Street shooting	1.2[d]		
0–3 years	1.0	*Family exposure**			
4–8 years	0.9[b]	Parent(s) tortured	1.1[b]		
9–12 years	0.9	Father tortured	1.1[b]		
more than 12 years	0.9				
Strata of society					
highest	1.0				
middle	1.0				
lowest	1.2[d]				
*Child been to school>4 years**	0.9[b]				

* P-values by comparison of one group to all others. [a] $P \sim 0.05$; [b] $P < 0.05$; [c] $P < 0.01$; [d] $P < 0.005$; [e] $P < 0.0005$; [f] $P < 0.0001$.

compared to children from the highest stratum of society.

Eleven of 35 predictors concerning the child's experience of war and other forms of organised violence were found in positive bivariate association with future anxiety, one in negative. Children who had lived in refugee camp outside their home country had 2½ times higher risk of future anxiety than other children (42.9% *vs.* 16.7%, P<0.05). Children who had been beaten or kicked by an official and children whose mothers had been tortured (at all or after the birth of the child) had a doubled risk, whereas having at least one parent who had been subjected to torture, a father who had been tortured or subjected to organised violence after the birth of the child, a mother who had been detained, or a mother who had been subjected to organised violence after the birth of the child, entailed at least 1½ times greater risk of future anxiety. Children who had lost a family member had less risk of future anxiety than did other children (RR 0.7).

Being in Denmark with only one parent increased the risk of future anxiety by approximately 1½ times. Children whose mother or father hit or punished them more at the time of the study than they had

previously done had more than 1½ times the risk of future anxiety compared to other children, whereas children whose mother or father talked or cuddled more with them had reduced risk (RR 0.6–0.7). Children who had been informed that parents had been beaten or tortured had 1½ times greater risk of future anxiety than children who had not been informed.

In the multiple logistic regression (Table 36), a stay in a refugee camp outside the home country (OR 9.2, P<0.005), mother's detention (OR 4.9, P<0.0005), father's torture after the birth of the child (OR 3.9, P<0.0005) and mother's behaviour change towards hitting more (OR 3.8, P<0.001) were the primary positive predictors for future anxiety, while the child's own detention (OR 0.2, P<0.05) and mother's behaviour change towards cuddling the child more (OR 0.3, P<0.0005) were the most important negative predictors. Other negative predictors were middle stratum of society, death in the family after the birth of the child and both parents in Denmark. Four predictors were not significant in the final combined model: Iranian nationality (correlated with child beaten, r_s 0.2, P<0.001; father tortured after the birth of child, r_s 0.2, P<0.01; mother

Table 33. *Significant multiple logistic regression* estimates (odds ratio, OR) of regressive anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model				
		I Background OR	II Violen experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Palestinian	88	17.5[f]		22.3[f]		12.7[e]
Middle stratum of society	213	0.4[b]				
II: Violent experience						
Lived in a refugee camp in home country	65		5.6[c]			
Lived in a refugee camp outside home country	287		10.2[f]	12.5[f]		18.0[f]
Death in the family after child's birth	144		2.5[b]	2.3[a]		
Father died	19		$\rightarrow\infty$[b]	$\rightarrow\infty$[c]		$\rightarrow\infty$[c]
Separated from father > one month	184		3.4[d]	3.8[e]		3.2[d]
III: Present life context						
Age at examination		0.8[e#]	0.8[f#]	0.8[f#]	0.8[e#]	0.8[f#]
Number of siblings in Denmark					1.3[a#]	
Mother scolds the child more	80				4.0[d]	5.5[d]
Mother talks more with the child	192				2.4[b]	2.6[b]

* Simple model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience,* war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organized violence; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. # OR denotes the per year (per sibling) probability increase as concerns the dependent variable. [a] $P < 0.05$; [b] $P < 0.025$; [c] $P < 0.01$; [d] $P < 0.005$; [e] $P < 0.001$; [f] $P < 0.0005$.

detained, r_s 0.2, $P < 0.001$; both parents in Denmark, r_s −0.2, $P < 0.001$), lived in refugee camp in home country (middle stratum of society, r_s −0.3, $P < 0.001$; both parents in Denmark, r_s −0.2, $P < 0.001$); child beaten (child detained, r_s 0.2, $P < 0.001$; father tortured after the birth of the child, r_s 0.3, $P < 0.001$; mother hits or punishes more, r_s 0.2, $P < 0.001$) and child informed about torture of parents (father tortured after the birth of child, r_s 0.3, $P < 0.001$). Sensitivity and specificity for the risk scale are illustrated in Figure 9.

In the extended multiple logistic regression (Table 37) 'death in the family less than 36 months ago' manifested itself as a significant positive predictor for future anxiety (OR 5.7, $P < 0.001$) in addition to the general predictor concerning death in the family, which was still a negative predictor (OR 0.2, $P < 0.0005$). Child beaten or kicked (OR 7.0, $P < 0.025$) and father disappeared (OR 4.7, $P < 0.001$) were positive predictors, while child's increased
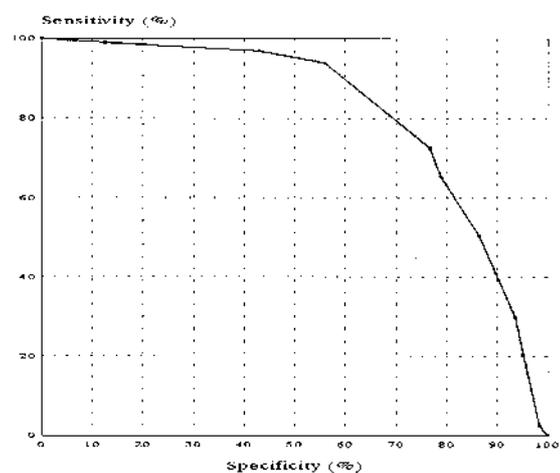

Fig. 9. Receiver Operating Curve based on multivariate risk of future anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.

Table 34. *Significant multiple logistic regression* estimates (odds ratio, OR) of regressive anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model				
		I Background OR	II Violent experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Palestinian	88	17.5[g]		35.7[g]		26.5[g]
Middle stratum of society	213	0.4[c]				
II: Violent experience and context of violence						
Lived in a refugee camp in home country	65		9.9[f]			
Lived in a refugee camp outside home country <36 month ago	271		16.9[g]	24.7[g]		44.4[g]
Death in the family at age 3–6 years	59		13.2[g]	6.7[e]		7.2[e]
Death in the family <12 month ago	5		0.04[c]			
Father died	19		→∞[c]	→∞[d]		→∞[c]
Separated from father >one month	184		2.5[a]	5.0[g]		4.9[f]
Separated 0–11 month old	80		4.3[b]			
III: Present life context						
Age at examination		0.8[f#]	0.8[g#]	0.8[g#]	8[f#]	0.8[g#]
Number of siblings in Denmark					1.3[b#]	
Mother scolds the child more	80				4.0[e]	4.6[c]
Mother talks more with the child	192				2.4[c]	2.9[c]

* Extended model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience and context of violence,* significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parent(s), sibling(s) left in home country, hindrance of school and play participation, parents' occupation and economical situation prior to escape; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. # OR denotes the per year (per sibling) probability increase as concerns the dependent variable. [a] $P < 0.10$; [b] $P < 0.05$; [c] $P < 0.025$; [d] $P < 0.01$; [e] $P < 0.005$; [f] $P < 0.001$; [g] $P < 0.0005$.

responsibility in the family and 'father engaged in manual work' were negative predictors (OR 0.2, $P < 0.0005$ and OR 0.4, $P < 0.01$). 'Both parents in Denmark' lost significance in the combined model, while 'child informed of parents' torture' was found to be a significant positive predictor for future anxiety in the extended regression analysis (OR 3.0, $P < 0.05$).

Future anxiety was thus primarily determined by experience of organised violence (past), while current life context (past-present) was less important and background factors (past-past) even less so. Strong predictors were 'lived in refugee camp outside home country', 'mother detained', 'father tortured after the birth of the child', 'mother hits or punishes child more', and in the extended model 'father disappeared'. Strong modifying factors were 'child detained', 'mother cuddles child more', and in the extended analyses 'increased responsibility'.

Separation Anxiety

Children whose father had been subjected to torture before they were born (Table 38) had a somewhat increased risk of separation anxiety (RR 1.2), while

Table 35. *Significant predictors of future anxiety in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Past-past (background)	RR	Past (violent experience)	RR	Past-present (present life context)	RR
*Nationality**		*Violent life circumstances**		*Family structure**	
Iraqi	0.7[d]	Lived in a refugee camp		Father not present in Denmark	1.4[b]
Iranian	1.7[d]	outside home country	2.6[b]	One parent not present in DK	1.4[b]
*Ethnicity**		*Loss**		*Change in parents' behaviour**	
Kurds	0.7[b]	Death of a family member	0.7[c]	Father hits/punishes more	1.6[b]
Strata of society		*Witnessing events of violence**		Father cuddles the child more	0.7[b]
highest	1.0	Arrest of a family member	1.3[b]	Father talks more with the child	0.6[d]
middle	0.5[c]	*Direct exposure**		Mother hits/punishes more	1.7[e]
lowest	0.8	Beaten/kicked by official	2.1[e]	Mother cuddles the child more	0.6[d]
		*Family exposure**		Mother talks more with the child	0.7[b]
		Parent(s) tortured	1.5[d]	*Information to the child**	
		Father tortured	1.3[b]	Parent(s) beaten	1.5[b]
		Father tortured after child's birth	1.6[d]	Parent(s) tortured	1.5[b]
		Father exposed to organised violence after child's birth	1.5[d]		
		Mother detained	1.7[e]		
		Mother tortured	1.9[e]		
		Mother tortured after child's birth	2.0[e]		
		Mother exposed to organised violence after child's birth	1.7[d]		

* P-values by comparison of one group to all others. [a] $P \sim 0.05$; [b] $P < 0.05$; [c] $P < 0.01$; [d] $P < 0.005$; [e] $P < 0.0005$; [f] $P < 0.0001$.

schooling entailed a somewhat diminished risk (RR 0.8–0.9).

Fourteen of 35 possible experiences were found positively associated with separation anxiety in the bivariate analyses. While children who had lived in a refugee camp outside their home country had 2½ times the risk of separation anxiety compared to other children (82.6% *vs.* 33.3% among other children, $P < 0.0001$), the risk associated with the other experiences was increased by less than 1½ times (RR 1.1–1.4).

Inverse relationship was shown between separation anxiety and the age of the child at the time of the study, such that children aged 7–11 had slightly reduced risk, and children aged 12–15 further reduced risk compared to children between 3 and 6. The risk of separation anxiety was slightly increased (RR 1.2–1.3) if the mother or father hit the child more at the time of the study than had previously been the case.

In the multiple logistic regression (Table 39) the most important positive predictors for separation anxiety were found to be Syrian nationality, father's death and father's changed behaviour towards hitting more (all with OR→∞, $P < 0.025$), stay in refugee camp outside home country (OR 18.7, $P < 0.0005$)

and mother's changed behaviour towards hitting more (OR 7.2, $P < 0.025$). Other positive predictors were witnessed bombing, parent(s) tortured, father cuddles child more, and child informed of reasons for escape. Increasing age at the time of the study and 'both parents in Denmark' were negative predictors. Two predictors were not significant in the final combined model: separation from father for more than one month (correlated with age, r_s 0.2, $P < 0.01$; Syrian nationality, r_s 0.2, $P < 0.01$; both parents in Denmark, r_s −0.2, $P < 0.001$; father cuddles child, r_s −0.2, $P < 0.001$; child informed of reasons for escape, r_s 0.2, $P < 0.01$) and mother tortured after the birth of the child (witnessed bombing, r_s 0.2, $P < 0.001$; parents tortured, r_s 0.3, $P < 0.001$; mother hits or punishes child more, r_s 0.2, $P < 0.01$). Sensitivity and specificity for the risk scale are illustrated in Figure 10.

When additional relevant information was included in yet another multiple logistic regression (Table 40), 'hindrance of play' and 'mother has an occupation' were found to be significant positive predictors in the final combined model (OR 5.1, $P < 0.0005$ and OR 5.4, $P < 0.001$), whereas 'witnessed bombing at age 7–11' was found to be a negative predictor (OR 0.2, $P < 0.025$). Furthermore, four predictors lost their

Table 36. *Significant multiple logistic regression* estimates (odds ratio, OR) of future anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model				
		I Background OR	II Violent experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Iranian	32	3.7[e]				
Middle stratum of society	213	0.4[f]		0.3[f]		0.4[f]
II: Violent experience						
Lived in a refugee camp in home country	65		1.8[a]			
Lived in a refugee camp outside home country	287		3.6[a]	3.6[a]		9.2[d]
Death in the family after child's birth	144		0.5[d]	0.4[f]		0.4[f]
Detained	18		0.2[d]	0.2[b]		0.2[a]
Beaten/kicked by official	20		6.2[d]	6.2[d]		
Father tortured after child's birth	78		2.4[d]	2.6[d]		3.9[f]
Mother detained	61		4.7[f]	4.4[f]		4.9[f]
III: Present life context						
Both parents in Denmark	189				0.4[d]	0.4[d]
Mother hits/punishes the child more	47				3.4[f]	3.8[e]
Mother cuddles the child more	143				0.4[e]	0.3[f]
Child informed of parent(s) torture	38				2.1[a]	

* Simple model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience,* war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organized violence; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [a] $P < 0.05$; [b] $P < 0.025$; [c] $P < 0.01$; [d] $P < 0.005$; [e] $P < 0.001$; [f] $P < 0.0005$.

significance (both parents in Denmark, father hits child, father cuddles child, and child informed of reasons for escape) such that 'mother hits child' manifested itself as the strongest positive predictor for separation anxiety (OR 19.0, $P < 0.0005$).

Separation anxiety was thus equally determined by experience of organised violence (past) and present life context (past-present), whereas the importance of background factors (past-past) was limited. Strong predictors were 'lived in refugee camp outside home country', 'father dead', 'mother or father hits or punishes more' and in the extended model 'loss of opportunities for play' and 'mother has an occupation'. Increasing age was an important modifying factor.

Clinical Anxiety

Table 41 shows that Syrian children had a lower risk of clinical anxiety than did other children (38.5% *vs.* 68.1% among other children, $P < 0.05$) and that the same was true for children whose father had an education of 4–8 years as opposed to 0–3 years. Children of Christian parents and children born into families where a grandparent had died as a result of war or other forms of organised violence had a slightly increased risk of clinical anxiety (RR 1.3).

Of the 35 possible experiences of war and other forms of organised violence, 11 were found to be positively associated with clinical anxiety. Children who have lived under conditions of war and children
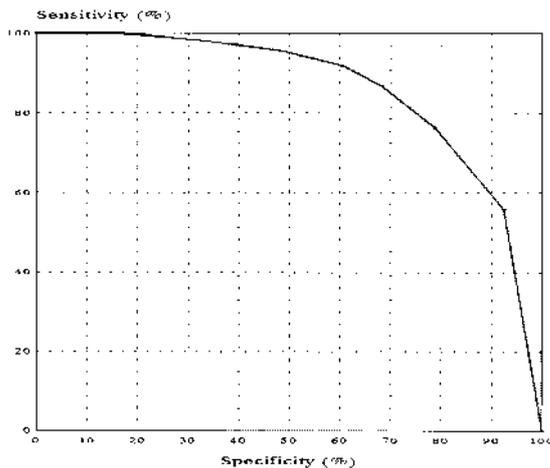
Fig. 10. Receiver Operating Curve based on multivariate risk of separation anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.

Fig. 11. Receiver Operating Curve based on multivariate risk of clinical anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.

who have lived in a refugee camp outside their home country had just over 1½ times greater risk of clinical anxiety than other children, while children who had been forced to move because of the war or persecution and children who had been beaten or kicked by an official had just below 1½ times greater risk than other children.

Children who came to Denmark with only one parent and children whose mother or father hit or punished them more at the time of the study than previously had a slightly higher risk of clinical anxiety than other children (RR 1.2–1.4).

In the multiple logistic regression (Table 42), the mother's changed behaviour in terms of hitting or punishing more was found to be the most significant predictor for clinical anxiety (OR 8.6, P<0.0005), while other positive predictors were 'mother tortured' (OR 2.8, P<0.05) and 'lived under conditions of war' (OR 2.5, P<0.05). The most significant negative predictors were mother scolds more (OR 0.3, P<0.005), middle stratum of society (OR 0.4, P<0.01) and both parents in Denmark (OR 0.4, P<0.01). Likewise, an increasing number of siblings in the family at the birth of the child was a negative predictor for clinical anxiety. Two predictors lost significance in the combined models: Muslim mother (correlated with Kurdish ethnicity, r_s 0.2, P<0.001) and witnessed torture, killing or intimidation of family member (mother hits or punishes child more, r_s 0.3, P<0.001). Figure 11 illustrates sensitivity and specificity for the risk scale.

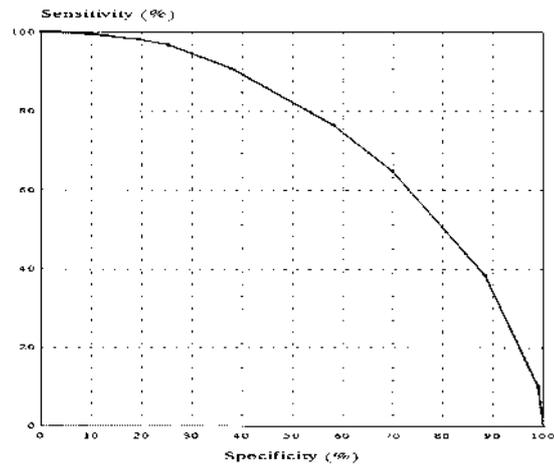In the extended multiple logistic regression (Table 43), the general predictor 'lived under condi-

tions of war' was replaced by 'lived under conditions of war less than 24 months ago' (OR 6.8, P<0.025) and by 'lived under conditions of war less than 36 months ago' (OR 0.3, P<0.005). Furthermore, 'lost opportunity for play for over one month' was found to be a significant positive predictor for clinical anxiety (OR 7.0, P<0.0005).

Clinical anxiety was thus determined to an almost equal extent by factors within all time segments. Strong predictors were 'mother hits/punishes the child more than before', 'lived under conditions of war' (this predictor was strengthened when the first occurrence was within two years prior to arrival in Denmark), 'mother tortured', and in the extended model 'loss of opportunities for play for over one month'. 'Mother scolds child more' was the strongest modifying factor.

DISCUSSION

The purpose of the study was among recently arrived asylum seeking refugees from the Middle East:

– to develop and evaluate a structured interview questionnaire for 1) identification of torture survivors among parents and 2) measurement of emotional symptoms and behavioural problems in the children,
– to map the prevalence of torture victims among parents, the type and extent of experiences of war and other forms of organised violence and the occurrence of emotional symptoms and behavioural problems in the children, and
– to identify risk indicators of anxiety and modifying factors for anxiety in the children.

Table 37. *Significant multiple logistic regression* estimates (odds ratio, OR) of future anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model				
		I Background OR	II Violent experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Iranian	32	3.7[f]				
Middle stratum of society	213	0.4[g]		0.3[g]		0.3[g]
II: Violent experience and context of violence						
Lived in a refugee camp outside home country	287		5.7[d]	4.5[c]		9.8[e]
Death in the family after child's birth	144		0.3[g]	0.2[g]		0.2[g]
<36 month ago	45		5.3[g]	5.1[f]		5.7[f]
Detained	18		0.1[d]	0.2[b]		0.2[a]
Beaten/kicked by official	20		11.9[g]	12.8[g]		7.0[c]
Beaten/12–15 years old	1		→0[c]	→0[e]		→0[e]
Father tortured after child's birth	78		4.2[g]	4.6[g]		4.6[g]
Mother detained	61		5.3[g]	5.0[g]		7.3[g]
Father disappeared	43		3.1[d]	2.7[c]		4.7[f]
Increased responsibility	69		0.3[g]	0.2[g]		0.2[g]
Father manual work	127		0.4[e]	0.4[e]		0.4[d]
Mother has an occupation	84		2.1[c]	2.1[b]		
III: Present life context						
Both parents in Denmark	189				0.4[e]	
Mother hits/punishes the child more	47				3.4[g]	2.7[c]
Mother cuddles the child more	143				0.4[f]	0.3[g]
Child informed of parent(s) torture	38				2.1[b]	3.0[b]

* Extended model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparents and parental torture before child's birth, school participation; *violent experience and context of violence,* significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parent(s), sibling(s) left in home country, hindrance of school and play participation, parents occupation and economical situation prior to escape; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. [a] $P<0.10$; [b] $P<0.05$; [c] $P<0.025$; [d] $P<0.01$; [e] $P<0.005$; [f] $P<0.001$; [g] $P<0.0005$.

Method

Generalisability

Asylum seeking refugee children from the Middle East constitute a selected group in relation to Middle Eastern children in general. Their families have chosen to leave their home country for reasons of war, persecution or other reasons. They have suc-ceeded in leaving their home country and furthermore have succeeded in arriving in a western country to seek asylum there, in this case Denmark. The group in question is not necessarily representative of Middle Eastern children in general, and the results cannot be generalised directly to children who have had the same experiences but have remained in their home country. It has not been possible to compare the population studied with the general population in

Table 38. *Significant predictors of separation anxiety in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Past-past (background)	RR	Past (violent experience)	RR	Past-present (present life context)	RR
*Violence against the family**		*Violent life circumstances**		*Child's age at interview*	
Father tortured	1.2[b]	Lived under conditions of war	1.4[d]	3–6 years	1.0
*School**		Taking shelter for bombing	1.2[b]	7–11 years	0.9[b]
Child been to school	0.9[a]	Lived in a refugee camp		12–15 years	0.7[e]
Child been to school > 4 years	0.8[d]	outside home country	2.5[f]	*Family structure**	
		*Loss**		One parent not present in Denmark	1.1[a]
		Death of father	1.3[b]	*Change in parents' behaviour**	
		*Witnessing events of violence**		Father hits/punishes the child more	1.3[c]
		Bombing	1.3[e]	Mother scolds the child more	1.2[b]
		Street shooting	1.2[b]	Mother hits/punishes more	1.3[d]
		Torture, killing, intimidation		Mother cuddles the child more	1.1[b]
		of a family member	1.2[d]		
		*Family exposure**			
		Parent(s) tortured	1.3[f]		
		Father detained	1.1[b]		
		Father tortured	1.2[d]		
		Mother detained	1.2[b]		
		Mother tortured	1.3[c]		
		Mother tortured after child's birth	1.3[c]		
		Mother exposed to organised violence			
		after child's birth	1.3[d]		

* P-values by comparison of one group to all others. [a] P ~ 0.05; [b] P < 0.05; [c] P < 0.01; [d] P < 0.005; [e] P < 0.0005; [f] P < 0.0001.

the home countries of those included in this particular study. This is due to the fact that in spite of inquiries in research libraries, it has not been possible to find scientific documentation concerning the social population structure in the countries addressed.

Nor will the population investigated be representative of refugee children in general, since social conditions and types of traumatic experience vary for the different refugee groups.

A third perspective allows Middle Eastern refugee children recently arrived in a Western European country to be regarded as the principal population. It is with respect to such a population that the findings—by virtue of the consecutive selection of participants in the study—can be generalised. In other words, the findings illustrate a frequently occurring problem in current Western European society.

Non-Participation

In order to estimate the possible selection bias due to non-participation (9.6%), a "complete" sample of

344 cases was constructed. The study population was divided into 12 groups based on gender, age, and Iraqi *versus* non-Iraqi nationality (2x3x2 groups), since age, gender, and nationality were also known in the population that discontinued participation in the study.

According to the population of non-participants' relative distribution over the 12 groups, the relevant number of cases from each group were randomly selected from the study group. These were combined with the 311 to constitute a sample of 344. After this, the bivariate analyses were repeated for three principal predictors ('lived in refugee camp outside home country', 'mother tortured', and 'one parent not in Denmark'). These analyses (Table 44) resulted in minimal changes regarding Relative Risk, while the level of significance was altered somewhat, entailing that the level was on each side of the 0.05% limit in three cases ('one parent not in Denmark' in relation to arousal, separation anxiety, and clinical anxiety).

Another way of assessing the possible extent of selection bias due to non-participation is to test, on

Table 39. *Significant multiple logistic regression* estimates (odds ratio, OR) of separation anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model I Background OR	II Violent experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Syrian	13	→∞[c]		→∞[b]		→∞[a]
II: Violent experience						
Lived in a refugee camp outside home country	287		10.8[e]	10.1[e]		18.7[e]
Father died	19		→∞[e]	→∞[e]		→∞[b]
Separated from father > one month	184		2.8[c]	2.5[a]		
Witnessing bombing	257		4.0[c]	4.6[e]		3.3[b]
Parent(s) tortured	159		2.6[c]	2.8[c]		2.7[b]
Mother tortured after child's birth	24		→∞[c]	→∞[a]		
III: Present life context						
Age at examination		0.9[d#]	0.8[e#]	0.8[e#]	0.9[c#]	0.8[e#]
Both parents in Denmark	189				0.3[e]	0.4[a]
Father hits/punishes child more	26				→∞[a]	→∞[a]
Mother hits/punishes child more	47				7.3[a]	7.2[a]
Father cuddles child more	143				3.5[d]	3.3[b]
Child informed of reason for escape	219				2.4[a]	2.5[a]

* Simple model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience,* war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organized violence; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [#] OR denotes the per year probability increase as concerns the dependent variable. [a] $P < 0.025$; [b] $P < 0.01$; [c] $P < 0.005$; [d] $P < 0.001$; [e] $P < 0.0005$.

the basis of an assumption of identical marginal proportions at full participation, the zero hypothesis at every possible distribution after inclusion of the 33 cases of non-participation in the 2x2 tables. Table 45 shows the maximum variation in X^2 values together with the values found in the present study. As can be seen, one or more possible distributions would, in about 1/3 of the analyses, alter the conclusion such that bivariate associations found significant would no longer be so (or vice versa). In most cases, however, the introduction of the 33 cases would not render the bivariate results insignificant.

From these two analytic strategies it seems reasonable to assume that selection bias due to non-participation is of limited importance.

Observation and Data Collection

Interviews with parents were chosen as the method in this study, both for identifying survivors of torture among parents and for identifying experiences of war and other forms of organised violence, as well as emotional symptoms and behavioural problems among the children. This method was chosen based partly on the literature consulted and partly on the assumption that interviews with the children regarding their experiences and reactions were not possible or were inappropriate because of their age, the family's situation as recently arrived refugees, and language problems.

Interviews were carried out by the same visiting

Table 40. *Significant multiple logistic regression* estimates (odds ratio, OR) of separation anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model				
		I Background OR	II Violent experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Syrian	13	→∞[d]		→∞[b]		→∞[c]
II: Violent experience and context of violence						
Lived in a refugee camp outside home country	287		5.9[d]	5.7[d]		7.6[d]
Father died	19		→∞[e]	→∞[e]		→∞[d]
Witnessing bombing	257		3.6[d]	4.2[d]		4.1[d]
7–11 years old	22		0.2[b]	0.3[a]		0.2[b]
Parent(s) tortured	159		3.7[f]	4.0[f]		4.1[f]
Mother tortured after child's birth	24		→∞[b]	→∞[a]		
Lost play opportunities	246		3.7[d]	4.0[e]		5.1[f]
Mother has an occupation	84		6.0[f]	4.9[e]		5.4[e]
III: Present life context						
Age at examination		0.9[d#]	0.8[d#]	0.8[f#]	0.9[d#]	0.8[d#]
Both parents in Denmark	189				0.3[f]	
Father hits/punishes child more	26				→∞[b]	
Mother hits/punishes child more	47				7.3[b]	19.0[f]
Father cuddles child more	143				3.5[e]	
Child informed of reason for escape	219				2.4[b]	

* Extended model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience and context of violence,* significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parent(s), sibling(s) left in home country, hindrance of school and play participation, parents' occupation and economical situation prior to escape; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [#] OR denotes the per year probability increase as concerns the dependent variable. [a] $P<0.05$; [b] $P<0.025$; [c] $P<0.01$; [d] $P<0.005$; [e] $P<0.001$; [f] $P<0.0005$.

nurse (or during her absence or illness, by the author) with the participation of a professional interpreter. Attempts to reduce interviewer effect included the use of a structured questionnaire with fixed answer categories that did not require the interviewer to assess answers while recording them as well as training, supervision, and close cooperation with the visiting nurse during the period of data collection. A factor of uncertainty was the translation of Danish questions into the appropriate language during the actual interview. However, this approach was regarded as the most considerate in view of the difficult situation the families were in. To ensure that questions could be easily translated and understood, the questionnaire was translated into Farsi and Arabic as a test and was revised before the study.

From clinical experience it was expected that most survivors of torture would prefer to discuss their experiences alone. Thus, the interviews were planned so as to allow for this. However, the result was that most participants chose to remain in the company of their spouses, also during the part of the interview

Table 41. *Significant predictors of clinical anxiety* in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Past-past (background)	RR	Past (violent experience)	RR	Past-present (present life context)	RR
Nationality[#]		*Violent life circumstances*[#]		*Family structure*[#]	
Syria	0.6[b]	Lived under conditions of war	1.6[d]	Father not present in Denmark	1.2[b]
Length of father's education		Residence change due to violence	1.4[d]	One parent not present in Denmark	1.2[b]
0–3 years	1.0	Lived in refugee camp		*Change in parent's behaviour*[#]	
4–8 years	0.7[b]	outside home country	1.5[b]	Father hits/punishes the child more	1.3[b]
9–12 years	1.0	*Witnessing events of violence*[#]		Father talks more with the child	0.8[b]
more than 12 years	0.8	Street shooting	1.2[b]	Mother hits/punishes the child more	1.4[d]
Fathers religion		House search	1.2[b]		
Muslim	1.0	Arrest of a family member	1.3[c]		
Christian	1.3[b]	Torture, killing, intimidation			
Mothers religion		of persons outside the family	1.2[c]		
Muslim	1.0	Torture, killing, intimidation			
Christian	1.3[b]	of a family member	1.3[c]		
Violence against the family[#]		*Direct exposure*[#]			
Grandparent's violent death	1.3[b]	Beaten/kicked by official	1.4[b]		
		Family exposure[#]			
		Mother tortured	1.3[b]		
		Mother tortured after child's birth	1.3[b]		

* Based on clinical validation of the standardized interview. [#] P-values by comparison of one group to all others. [a] $P \sim 0.05$; [b] $P < 0.05$; [c] $P < 0.01$; [d] $P < 0.005$; [e] $P < 0.0005$; [f] $P < 0.0001$.

addressing their experiences of torture. It seemed that the participants used the opportunity to tell both the interviewer and their spouse of their prison experiences. It could be argued that interviewing women in the company of their husbands could have reduced the prevalence of torture both in the structured interview (SI) and in the psychological interview (PI), because of the fear of stigmatisation. This effect is presumably limited, however, since only two women reported that they had been detained without being subjected to torture. Meanwhile, the women may have been subjected to other forms of abuse (rape in connection with house searches, for example) that were not discussed during the interview.

The questions concerning *torture* were asked after the questions about the children's psychological condition. The parents were eager to discuss their children, so a relation of trust could be established fairly rapidly. Identical questions about torture asked in a different context and in another order might not have led to the same results. The SI questions addressing specific forms of organised violence experienced during detainment or imprisonment were asked before the overall question of whether the person assessed that he/she had been tortured. In this way, the refugee was gradually led to the central issue. This procedure was chosen based on the clinical

experience that torture survivors may experience difficulties in discussing torture and therefore, if asked immediately and directly, erroneously deny its occurrence.

Symptom assessment was based on information provided by parents about the occurrence of specific forms of behaviour in their children. Although the questions were specific, the answers were influenced by the parents' own situation and by their assessment of what constitutes problematic behaviour. The fact that such a small number of symptoms is associated with age, may be caused by the fact that parents themselves have incorporated assessment of age in their answers instead of answering whether the behaviour actually took place. It is possible that parents of *younger children* were more generous in their acceptance of some forms of behaviour, because they regarded the behaviour as normal for the age level of the child. If parents did not categorise specific behaviour as a "symptom", they may have provided a negative answer regarding its occurrence, leading to too low a level of observed symptom frequency in younger children.

Cultural notions of normal *versus* problematic behaviour may also have influence parental assessment of children. An attempt to minimise this effect has been made by limiting the population to Middle

Table 42. *Significant multiple logistic regression* estimates (odds ratio, OR) of clinical anxiety[#] in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model				
		I Background OR	II Violent experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Kurds	103	2.0[b]				1.9[a]
Mother muslim	279	0.4[a]				
Middle stratum of society	213	0.3[f]		0.3[e]		0.4[c]
Number of siblings at birth		0.8[d +]		0.8[d +]		0.8[d +]
II: Violent experience						
Lived under conditions of war	278		3.0[d]	3.2[d]		2.5[a]
Witnessing torture, killing or intimidation of family member	68		2.1[b]			
Mother tortured	33		3.0[b]	3.8[c]		2.8[a]
III: Present life context						
Both parents in Denmark	189				0.5[b]	0.4[c]
Mother scolds the child more	80				0.2[f]	0.3[d]
Mother hits/punishes the child more	47				14.4[f]	8.6[f]

* Simple model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience,* war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organized violence; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [#] Based on clinical validation of the standardized interview. [+] OR denotes the per sibling probability increase as concerns the dependent variable. [a] $P < 0.05$; [b] $P < 0.025$; [c] $P < 0.01$; [d] $P < 0.005$; [e] $P < 0.001$; [f] $P < 0.0005$.

Eastern refugees, who to some extent may be regarded as having cultural backgrounds with significant common denominators.

At the time of the study, the asylum seeking families lived in Danish refugee camps. Their current situation was thus still unstable and insecure, which may have influenced the parent's assessment of their children. An attempt has been made to reduce this effect by interviewing families soon after their arrival in Denmark at which point the relief of having reached at least temporary safety, is often greater than concern about the future.

Finally, it is possible that parents of children with many violent experiences would expect the children to be influenced psychologically and would thus observe more symptoms in their children and inversely ("signal bias"). In this way, assessment of causation hypotheses concerning traumatic experience would become self-affirming (bias away from the zero hypothesis). On the other hand, a tendency for parents to neglect emotional symptoms in their children could also be expected, because it would be painful for parents to acknowledge that they had not been able to protect their children or because the parents of the most traumatised children have often had equally traumatising experiences themselves, rendering them less capable of observing the problems of their children. Previous studies have documented a parental tendency to underreport children's emotional symptoms after traumatic experiences (50). Such a tendency entails reduced probability of finding an actual relationship (bias toward the zero hypothesis).

Observation Validity

Much psychological and medical research (e.g. occupational epidemiology (167) must be based more or

Table 43. *Significant multiple logistic regression* estimates (odds ratio, OR) of clinical anxiety[#] in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	No.	Model				
		I Background OR	II Violent experience OR	I–II combined OR	III Present life context OR	I–III combined OR
I: Background						
Kurds	103	2.0c		2.0c		2.1c
Mother muslim	279	0.4b				
Middle stratum of society	213	0.3g		0.2g		0.4d
Number of siblings at birth		0.8e +		0.8g +		0.8g +
II: Violent experience and context of violence						
Lived under conditions of war						
< 24 month ago	23		6.1c	9.5e		6.8c
< 36 month ago	78		0.4d	0.3f		0.3e
Witnessing torture, killing or intimidation of family member	68		2.4c			
" >two times 12–23 month old	1		→0b	→0c		→0c
Mother tortured	33		3.0b	4.4d		2.8a
Lost play opportunities>one month	227		5.0g	6.5g		7.0g
III: Present life context						
Age at examination				0.9c		
Both parents in Denmark	189				0.5c	0.4d
Mother scolds the child more	80				0.2g	0.2f
Mother hits/punishes the child more	47				14.4g	12.6g

* Extended model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience and context of violence,* significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parent(s), sibling(s) left in home country, hindrance of school and play participation, parents' occupation and economical situation prior to escape; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [#] Based on clinical validation of the standardized interview. [+] OR denotes the per sibling probability increase as concerns the dependent variable. [a] $P < 0.10$; [b] $P < 0.05$; [c] $P < 0.025$; [d] $P < 0.01$; [e] $P < 0.005$; [f] $P < 0.001$; [g] $P < 0.0005$.

less on retrospective anamnestic information. This inevitably produces problems of validity, as concurrent independent and objective observation is not possible. Expert assessment of anamnestic records is a frequently used technique for assessing and strengthening validity in such situations. A blinded, semi-structured, in-depth psychological interview was conducted with a section of the population in the epidemiological study in order to establish a *clinical reference* concerning the torture of parents and the children's psychological situation.

The clinical reference concerning *parents' torture* was based on the internal consistency between the victim's account and reported psychological reactions and the reactions that could be observed during the interview. It could be argued that refugees could be "acting", based on their knowledge of torture methods and psychological reactions after torture.

Table 44. *Selected predictors of anxiety in the research sample (N=311) and a constructed full size sample (N=344).*

Predictor	Nightmare 311 RR	344 RR	Re-experience 311 RR	344 RR	Arousal 311 RR	344 RR	Regressive anxiety 311 RR	344 RR	Future anxiety 311 RR	344 RR	Separation anxiety 311 RR	344 RR	Clinical anxiety 311 RR	344 RR
Refugee camp outside home country	→∞[c]	→∞[c]	3.1[d]	3.3[e]	2.4[c]	2.4[c]	1.6[f]	1.7[f]	2.6[b]	2.7[c]	2.5[f]	2.6[f]	1.5[b]	1.6[c]
Mother tortured	2.4[c]	2.3[d]	1.6[d]	1.6[d]	1.7[e]	1.7[e]	1.1	1.1	1.9[e]	1.8[d]	1.3[e]	1.3[d]	1.3[b]	1.3[c]
One parent not present in Denmark	2.0[d]	2.0[d]	1.4[c]	1.4[d]	1.2	1.3[b]	1.1	1.0	1.4[b]	1.4[b]	1.1[a]	1.1	1.2[b]	1.2

[a] P~0.05; [b] P<0.05; [c] P<0.01; [d] P<0.005; [e] P<0.0005; [f] P<0.0001

However, it is a clinical experience that talking about torture provokes reactions in the torture survivor which may be observed by a skilled professional. This renders undiscovered "acting" less probable. As it may cause reactions of some similarity, exposure to other forms of organised violence may to some extent confound such observations.

Using the clinical assessment as criterion, misclassification concerning the torture of parents was found to be 10.8%. As sensitivity was higher than specificity, misclassification tends toward classifying torture survivors as non torture survivors, which may have entailed a bias towards the zero hypothesis in the predictive analyses. This was particularly the case regarding mothers.

No previously published studies on the validity of the testimony of exposure to torture have been found. Reliability studies have shown that torture survivors may change their stories if interviewed more than once, primarily as a result of improved memory, i. e. more events are remembered (136,144,145). In the current context, anamnestic change may have resulted in an under-estimation of the prevalence of torture as assessed by the structured interview (SI) and by the psychological interview (PI). Memory improvement has not necessarily affected the precision of the SI, as both interviews were carried out within a few weeks of each other. If the SI did initiate memory improvement as such, this would contribute to the number of false negatives in the SI, i.e. to an underestimation of SI sensitivity as compared to PI assessment and thus to a decrease of the predictive value of a positive SI statement.

The delimitation remains unclear between exposure that could be considered torture and what could be termed ill-treatment without being torture. Differences concerning refugee and examiner concepts of torture may lead to false positives as well as false negatives. Due to the anxiety-loaded atmosphere of imprisonment (e.g. case number 1, p. 33), any ill-treatment may subjectively be experienced as torture. Conversely, actual torture may be denied based on the comparisons with the experience of other prisoners (e.g. case number 2, p. 33). Moreover, good agreement was found between exposure to specific forms of organised violence and the refugee's own assessment of being tortured, as well as between the comprehensive SI assessment of torture and the PI assessment.

In the present study there seems to exist a rather universal, transcultural agreement on what is and what is not torture, probably due to the fact that torture is constituted by deliberate psychological and physical violence characterised by certain intentional

Table 45. χ^2 *in crosstabulations of selected predictors of anxiety in the research sample (N=311) and in the full samples* (N=344) resulting in maximum and minimum associations.*

Predictor	Nightmare χ^2	Re-experience χ^2	Arousal χ^2	Regressive anxiety χ^2	Future anxiety χ^2	Separation anxiety χ^2	Clinical anxiety χ^2
Refugee camp outside home country:							
N=311, research sample	6.1	11.0	7.1	23.3	6.3	32.1	5.2
N=344, maximum	6.6	12.8	8.6	32.6	7.5	38.8	7.6
N=344, minimum	2.3	7.6	4.5	20.3	3.6	27.3	3.6
Mother tortured:							
N=311, research sample	10.0	10.4	12.3	0.6	12.7	7.3	5.4
N=344, maximum	17.1	13.2	15.5	0.8	16.6	8.2	6.7
N=344, minimum	7.8	6.6	8.3	0.01	9.0	2.5	2.2
One parent not present in Denmark:							
N=311, research sample	8.5	7.7	3.2	1.4	5.8	3.8	4.3
N=344, maximum	14.5	17.0	10.8	2.7	16.5	6.8	8.9
N=344, minimum	4.5	1.6	0.002	0.1	1.3	0.5	0.1

* The possible distributions in the full sample given the same marginal proportions as in the research sample.

aspects. Moreover, the torture concepts seem to be rather identical in lay people and in health professionals. Thus, structured interview techniques appear valid for use in estimating the frequency of torture.

The examination of the *children's anxiety symptoms* was not conducted for the purpose of establishing an actual psychiatric diagnosis. In light of the living conditions prior to and during the escape, obtaining valid information about the onset and duration of specific symptoms in the children was not deemed possible.

Most of the 12 specific anxiety symptoms were associated with the psychological interview result (Table 11). Some were not, partly because the number of symptom bearers was small. Meanwhile, when symptoms were combined in the multiple logistic regression, only five of the 12 anxiety symptoms were found to be significantly associated with the PI, one of them negatively ('clings to parents').This suggests that simple cumulation of scores, as applied in most studies, is not a valid indicator for anxiety. Only two published validity studies using empirically weighted symptom scores were identified. Both used the global scale CBCL (149,156). None of these found significant improvement through weighting, but as CBCL assesses overall mental health, direct comparison is not possible with the anxiety specific assessment used in the present study.

After the psychological interview (PI) with the parents of the 99 children, the children were assessed as either symptomatic or not symptomatic. There is the risk that this assessment, based on clinical experi-

ence and theoretical knowledge, may have been influenced by the knowledge gained during the interview of the family situation and of the children's experiences. Knowledge of these factors may subconsciously have increased the probability of assessing a child as having anxiety, thus introducing a "signal bias" away from the zero hypothesis. Symptom weights were constructed based on interviews about the 99 children and then transferred to the full sample. Therefore, it is highly likely that a possible "signal bias" from the 99 children would occur in the rest. To reduce this bias, PI questions were asked about the children's emotional reactions before questions about ill-treatment of parents.

The empirically weighted anxiety scale cannot be generalised to other child populations without further investigation, since the multivariate weights will depend, among other things, on symptom frequency in the particular population.

It was decided, for each specific anxiety symptom, to divide the children into those who were directly categorised as symptomatic and those with the answer categories 'no', 'don't know' and unanswered. This division involves a risk of lower symptom frequency than warranted and thereby a tendency to bias toward the zero hypothesis.

Because of the many hypotheses, many analyses were carried out. This means that some of the sub-results may be coincidental—though not because of a "statistical fishing trip" (168). The predictor model was assembled on the basis of a theoretical conceptualisation of the circumstances studied. Of course, it cannot be precluded that another model of analysis

would have led to different results. However, the temporal sequence will remain decisive under any circumstances. I have not been able to identify published studies with a corresponding sequence based analysis. Other studies have juxtaposed exposures or simply carried out a bivariate analysis. In both cases, significant information will have been lost or distorted.

Prevalence of Adult Torture Survivors

Published studies of the prevalence of torture survivors are few. Moreover, the prevalence will expectedly change from time to time across culture and political environment. In a multi-ethnic group of 187 refugees who arrived in Sweden, Nordström and Persson (169) estimated, based on the general medical examination on arrival, that 25% had been tortured. Based on information from 12 Western treatment centres, Baker (170) estimated a prevalence of 5–30% in multi-ethnic refugee groups. The actual prevalence (28%) is thus in agreement with previous findings. Gender differences have not been documented in unselected refugee populations, but most patients referred for treatment at rehabilitation centres are men.

Experiences of War and Other Forms of Organised Violence

The most frequent types of specific violence-related events were 'lived in refugee camp outside home country' (92%), 'lived under conditions of war' (89%) and 'been on the run with parents' (89%). Fifty-one percent of the children had a tortured parent, 20% had lost one parent, and 60% had been separated from one parent for more than a month. The most important recurring patterns of experience were 'War context' and 'Witnessed violent events', which explained 21% and 13% of the variation, respectively.

National and ethnic differences found concerning types of experience seemed credible in relation to the political context of the countries in question. As in previous studies (78, 90, 102), these children had also experienced a significant number of violent events. This, in itself, constitutes a general health problem, as many of these children repeatedly have experienced situations characterised by shock, terror, and anxiety.

Purpose and methodology varies in published research results, rendering comparison difficult. Macksoud (78) describes the war-related experiences of 2,220 children living in Lebanon aged 3–16. The average child had experienced 6 of 28 possible specific

war-related events (9 of 17 among the Lebanese children in the present study). While the frequency of war experience was comparable to the present study, more Lebanese children in the present study had witnessed violent events and had lost parents. This seems understandable in light of the fact that the present study is concerned with a refugee population. In their study of war-related experiences in 54 Kuwaiti 8–21 year-olds, Nader & Pynoos (90) found that the average child had been exposed to 5 of 10 possible types of events and that none had been exposed to less than two events. Comparable figures on Kuwaiti children from the present study were 8.5 of 17 possible war- or violence-related experiences. Furthermore, they had a higher number of witnessing experiences, and more children had been detained or beaten in the present study than in the study conducted in Kuwait after the Iraqi invasion in 1990–91 (90). This difference can be understood partly on the basis of the difference in population type, partly on the selection bias in the Kuwaiti study (see page 16–17).

Emotional Symptoms and Behavioural Problems

The highest prevalence of emotional symptoms was found with regard to anxiety, as 67% of the children were assessed as having clinical anxiety. Prevalence of specific anxiety symptoms varied between 4% (concentration difficulties during storytelling) and 65% (fear of being alone) at level 2 (symptom 'frequent'/'intense'). Nightmares were experienced by almost 1/5 of the children. The most frequent depressive symptom at level 2 was 'cries easily' (almost half of the children), while just over half of the children demonstrated aggressive behaviour in the form of 'easily upset and angry'.

Comparison with other studies is complicated by the difference in methods, the difference in the theoretical conceptualisation of symptoms, and the difference in the age levels of the populations studied. In a study of refugee children aged 2–15 in Sweden, Hjern (102) found that approximately 55% suffered from anxiety, that 35% had depressive symptoms, and that 27% demonstrated aggressive behaviour 4 months after arriving in Sweden. He further found that 55% of the children experienced difficulty sleeping (in the present study 20% often found it difficult to fall asleep, and 18% woke up frequently at night). The prevalence of nervous symptoms such as nail-biting and finger-sucking was approximately twice as high in Hjern's study. The same was true for headaches, stomachaches, and enuresis. Cohn et al. (106) also found an anxiety prevalence of just

below 60% and a prevalence of sleep disturbances, head- and stomachaches, and enuresis at least twice as high as in the present study. Whereas the study by Cohn et al. was carried out in a clinical population, which could explain high symptom prevalence, Hjern's study population is not clinical. One explanation for the high prevalence of certain symptoms may be that the children are younger in the studies of Hjern and Cohn et al. Another explanation may be that the parents in the present study have only recently arrived in Denmark, where they first of all are relieved to have arrived safely, thus underestimating problems, and secondly are afraid of not being granted permission to stay, thus not possessing the energy to observe problems. Finally, the difference may reflect the increase in symptom occurrence over time, an increase which both Hjern (102) and Cohn et al. (107) have documented.

Anxiety

Risk Indicators for Anxiety

The purpose of the predictor analysis was to identify risk indicators for prevalent anxiety symptoms and to identify modifying factors for anxiety in the children in recently arrived refugee families from the Middle East. It was expected that both conditions of war and other forms of organised violence, as well as *specific events and changes of life conditions* (e.g. witnessing violence, loss, separation, and detention) would be related to anxiety, which could currently be observed in the children.

Five of the seven anxiety concepts were constructed from the diagnostic criteria for PTSD and separation anxiety (51, 52, 70). Thus, a definitional type of approach has been chosen, without having examined symptom consistency with regard to each constructed anxiety concept. Furthermore, the analyses were performed in relation to a specific symptom (nightmares). Whether children generally had or did not have anxiety may be assessed in two ways: through division into children with at least one of the types of anxiety mentioned above or, as in the present study, by constructing, empirically, a concept of anxiety based on the validation study (clinical anxiety). These anxiety concepts are not mutually independent, since the same specific anxiety *symptom* may be a part of different anxiety *concepts*. Significant association was thus seen between most of the concepts.

This distinction between different anxiety concepts was chosen not only in an attempt to ensure incorporation of previous forms of presumed trauma-related anxiety, but also in order to identify, through analysis of association, both the most predominant determinants of anxiety, and the most predominant forms of anxiety, thus *alternating between the articulation of causal patterns and the articulation of effect patterns.*

The results of the bivariate analyses were often significant, while the number of predictors was reduced when a multivariate method was used and even further reduced when results from each period (background, trauma complex, present life context) were combined. This may to some extent be explained by the mutual correlations of the predictors. When background factors (e.g. nationality and ethnicity) were included in the final combined models, these factors indicate that there are causes which have not been more precisely drawn into the study. In some cases, predictors ended up being included in the final combined models, even though they were only based on very few observations. Consequently, the reclassification of just one child would significantly alter the model. Such predictors are not attributed great significance, regardless of the fact that they achieved statistical significance in the analyses. Furthermore, it is possible that the models have been overloaded in the extended analyses, thus explaining the less understandable findings.

Table 46 provides an overview of significant predictors in the combined multivariate models of the simple analyses. Some predictors have been combined, where related, in order to maintain a comprehensive view (e.g. 'parents tortured', 'mother tortured', 'father tortured' and 'father exposed to organised violence'). An identified relationship, though possessing high significance and possibly even constituting a strong risk indicator, may not necessarily be generally important, because the event/condition concerned may occur only rarely. OR is thus an expression of the strength of the causal relation and AR of its consequence with respect to the population.

In tables 47–54, OR and AR have been produced for the most significant risk indicators and modifying factors. The most frequent general relationships are schematically presented in Figure 12. This overview is based on the combined multivariate models from both the simple and the extended models.

Ethnicity, particularly Kurdish ethnicity, was found to be a significant, recurrent risk indicator for present anxiety (Table 47). Kurdish living conditions, as described on pages 4–5 have long been characterised by collective persecution, including repeated attempts of genocide. In spite of linguistic and religious differences, the Kurds maintain a strong concept of ethnicity related to specific geographical areas. Their right to

Table 46. *Overview of significant* risk indicators# of anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

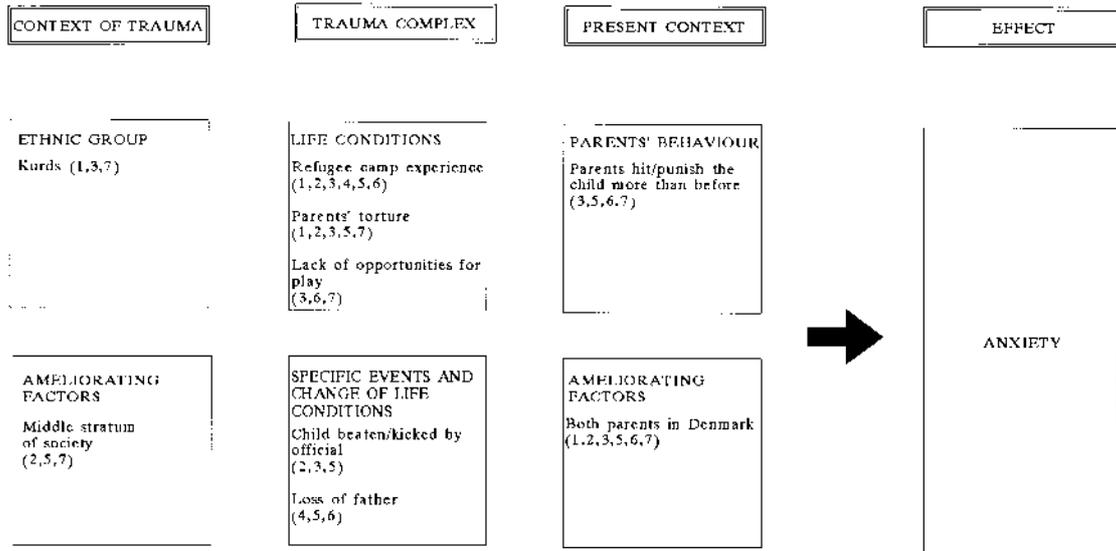| Risk indicator	No. of anxiety types associated with	P-values	OR	AR
Background				
Kurdish ethnicity	3	0.05–0.0005	1.9–3.5	
Palestinian ethnicity	1	0.0005	12.7	
Syrian nationality	1	0.025	→∞	
Grandparents' violent death before child's birth	1	0.005	5.4	
Been to school	1	0.025	2.3	
Father: years educated	1	0.0005	1.1+	
Middle stratum of society	3	0.05–0.0005	0.4–0.5	
Prior Kuwait residence	1	0.005	→0	
Number of siblings at birth	1	0.005	0.8+	
Violent experience				
Lived in a refugee camp outside home country	6	0.05–0.0005	3.9–→∞	0.7–→1
Parent(s) tortured	6	0.05–0.0005	2.0–5.5	0.2–0.6
Beaten/kicked by official	2	0.05–0.005	4.5–9.4	0.2–0.3
Father died	2	0.01	→∞	→1
Separation(s) from parent(s)	2	0.005	3.2–4.4	0.2–0.6
Witnessing violence	2	0.01	2.6–3.3	0.5–0.7
Residence change due to violence	1	0.005	2.8	0.6
Lived under war condition	1	0.05	2.5	0.6
Parent(s) detained	2	0.0005	0.2–4.9	
Detained	2	0.05	0.2–0.3	
Lived in a refugee camp in home country	1	0.0005	0.3	
Death in the family after child's birth	1	0.0005	0.4	
Present life context				
Parent(s) hit/punish the child more	4	0.025–0.0005	3.8–→∞	0.3–→1
Child informed of reason for escape	2	0.025–0.0005	2.5–3.5	
Mother talks more with the child	1	0.025	2.6	
Parent(s) cuddle the child more	2	0.01–0.0005	0.3–3.3	
Mother scolds the child more	2	0.005	0.3–5.5	
Both parents in Denmark	6	0.025–0.001	0.3–0.4	
Age	2	0.0005	0.8+	

* P ≤ 0.05. # Based on the combined simple models. + OR denotes the per year or the per sibling probability increase as concerns the dependent variable.

inhabit these areas is, however, not fully recognised, and a Kurdish nation which could serve to anchor ethnic identity does not exist. Also, attempts to communicate an ethnic, cultural heritage to the younger generations have been repressed over the years in the countries where the Kurds lived, for example by forbidding them to use their own language. This history of persecution must necessarily also affect relationships between parents and children and thereby the psychological development of the child.

Example 1

A mother arrives in Denmark with her 7 year-old daughter. They come from Iranian Kurdistan, but the daughter was born in Iraq. Since the birth of the daughter, the family has moved from one Kurdish camp to another, as both the mother and father were active in the Kurdish resistance movement. Therefore, the daughter has repeatedly experienced the breaking of bonds with people to whom she had become attached. The father frequently participated in active combat, while the mother remained with the daughter. The mother kept her daughter with her 24 hours a day because of the risk of sudden bombing. There were no opportunities for play with other children. After the end of the Iran/Iraq war in 1988, the family fled to Turkey due to Saddam Hussein's systematic attacks on Kurds in Iraq. The father returned to Kurdistan some years later to participate

| CONTEXT OF TRAUMA | TRAUMA COMPLEX | PRESENT CONTEXT | EFFECT |

ETHNIC GROUP
Kurds (1,3,7)

AMELIORATING FACTORS

Middle stratum of society (2,5,7)

LIFE CONDITIONS
Refugee camp experience (1,2,3,4,5,6)

Parents' torture (1,2,3,5,7)

Lack of opportunities for play (3,6,7)

SPECIFIC EVENTS AND CHANGE OF LIFE CONDITIONS
Child beaten/kicked by official (2,3,5)

Loss of father (4,5,6)

PARENTS' BEHAVIOUR
Parents hit/punish the child more than before (3,5,6,7)

AMELIORATING FACTORS

Both parents in Denmark (1,2,3,5,6,7)

ANXIETY

#Numbers in parentheses indicate associated types of anxiety: 1. Nightmares; 2. Re-experience; 3. Arousal; 4. Regressive anxiety; 5. Future anxiety; 6. Separation anxiety; 7. Clinical anxiety.

Fig. 12. Frequent risk indicators* for anxiety# in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.

*Based on the combined simple and the combined extended models.

Table 47. *Ethnicity as risk indicator* of anxiety in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Type of anxiety	Ethnic group	
	Kurds OR	Palaestinians OR
1. Nightmare	3.5[b]	
2. Re-experience		
3. Arousal	2.9[d]	
4. Regressive anxiety		12.7[c]
5. Future anxiety		
6. Separation anxiety		
7. Clinical anxiety	1.9[a]	

* Combined simple model. [a] $P < 0.05$; [b] $P < 0.005$; [c] $P < 0.001$; [d] $P < 0.0005$.

in the struggle, while the mother and daughter fled to Denmark. At the present time they have no knowledge of the fate of their father/husband.

The daughter currently has difficulty leaving the mother and is hesitant in establishing interaction with other people in the camp for fear of having to move from camp to camp also here in Denmark. She talks a lot about death, about the future, about the situation of the Kurds, about persecution, and about the fate of her father. She sleeps poorly and has frequent nightmares, among other things about her mother being killed.

Future studies must further elucidate the ways in which the psychological development of Kurdish children is influenced by Kurdish living conditions and history.

A significant background factor reducing the risk of anxiety was *middle stratum of society*. Middle class families may, to a certain extent, avoid both the negative attention (e.g. envy) that upper class children could be exposed to and the problems experienced by lower class families in securing basic human needs (food, clothing, schooling). Identification of social strata was based solely on the parents' own assessment, and most (213 children) were presumed to belong to the middle class group.

Example 2

An Iraqi family with four children has almost always been well-off financially. The father owned a printing business in the home country and was a respected citizen. At one time, he was approached by a powerful political figure seeking his cooperation, allegedly for the purpose of obtaining part of his wealth. The father reluctantly agreed and initiated a specific project at the suggestion of the politician. Meanwhile, when the project was well under way, the father was taken off the project, his business destroyed and his

permission to print a number of publications revoked. When he protested, authorities searched the business in his absence and accused him of cooperating with the resistance because of the amount of printing paper they found. The family succeeded in escaping, but the state impounded everything of value. The father has later been informed that he has been sentenced to death in absentia.

After separating the specific war-related traumatic experiences and living conditions into the categories *life conditions*, and *specific events and changes of life conditions* (see page 10), it became clear that the former (prevalence) more than the specific events and changes of life conditions (incidence) constituted risk indicators for current anxiety. Having lived in a *refugee camp* outside one's home country was a significant, and in practice important, risk indicator for anxiety (Table 48). In most case the experience itself was most important, in a few cases risk was higher if the child's first experience of the camp took place within 2–3 years prior to arrival in Denmark. In the present study, the 287 refugee children who had lived in refugee camps came from various camps in the Middle East (over half of the children were Iraqi nationals, 1/3 were of Kurdish ethnicity, 1/3 of Palestinian ethnicity). Overall, life in such camps is characterised by insufficient material supplies (food, water, sanitation), although standards and living conditions differ. Daily life is influenced by unpredictable conditions regarding supplies and regarding law and order, giving many refugees a feeling of insufficient control over their own lives. Furthermore, accommodation in camps is temporary in nature, even in camps that have existed for more than one generation (Palestinian camps in Lebanon, for

example). Consequently refugees avoid becoming attached to the place. This might otherwise be achieved by completing construction or decorating, natural activities in residences not regarded as temporary. In this way refugees loose their sense of belonging. They remain in a situation which counteracts the continuity and coherence of existence, both of which are essential to the development and maintenance of personal identity. In addition, disempowerment and financial dependence upon others may entail a feeling of helplessness and humiliation, which in turn can be pacifying and inhibit appropriate coping.

Example 3

An Iraqi family with three children fled to a neighbouring country. The father had already spent 6 years in prison and had, prior to escape, frequently been threatened with renewed imprisonment. In the neighbouring country, the family lived in a refugee camp, where the fourth child was born. The camp provided shelter but no financial or other form of assistance. Thus, it was necessary for them to live off money sent by their families or earned through small jobs the father could find without an actual work permit. Both parents felt deep humiliation in being dependent upon the help of others. They felt powerless and unable to influence their situation. Their existence was uncertain in many respects. Firstly, financial assistance did not always reach them. Secondly, the father frequently had control appointments with authorities that threatened to send the family back to Iraq. Furthermore, the children were harassed by local children who regarded Iraqis as the enemy. The family lived under these conditions for several years before deciding to continue their flight, finally reaching Denmark.

Living conditions such as these influence parent/child interaction. Parental attention to children may be constricted, eventuating insecure attachment and thereby insufficient conditions for developing *basic confidence*. From the perspective of developmental psychology, this particular situation constitutes one in which natural, and under other circumstances appropriate, anxiety may become persistent (see page 13).

Table 48. *Experience of refugee camp outside home country as riskindicator* of anxiety and attributable risk in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Type of anxiety	OR	AR[#]
1. Nightmare	$\rightarrow \infty^{c}$	$\rightarrow 1$
2. Re-experience	3.9[a]	0.7
3. Arousal	6.9[c]	0.8
4. Regressive anxiety	18.0[d]	0.9
5. Future anxiety	9.2[b]	0.9
6. Separation anxiety	18.7[d]	0.9
7. Clinical anxiety		

* Combined simple model. [#] N = 287 exposed children
[a] P < 0.05; [b] P < 0.005; [c] P < 0.001; [d] P < 0.0005.

Example 4

A 5 year-old girl was born in a Palestinian refugee camp in Lebanon. Upon arrival in Denmark, she

had two younger siblings, and her mother was expecting her fourth child within a few weeks. She was born during an armed conflict in the refugee camp. The mother was not able to breast feed her, and no other form of milk was available during the first three months of her life. Due to political conditions, her family had lived in three different refugee camps during the first five years of her life. They had been forced to remain indoors for long periods of time because of armed conflict in the camps, and opportunities for play with other children had been few.

The parents describe the girl alternately as anxious, sad, and crying and as calm, active, and outgoing. They consider her mature and helpful, and explain that she handles many things independently. The parents do not feel that she thinks about previous traumatic experiences. Her language abilities are poorly developed, which her parents attribute to her lack of association with other children.

Under such circumstances parents may further become restrictive and authoritarian in their child-rearing methods in an attempt to protect the child and to ensure that the child does not become influenced by negative forces in their social surroundings (e.g. youth gangs or terrorist groups) (31). In the Palestinian refugee camps, children aged 12–13 may typically be sent to actual military training in camps far from their families, and children as young as 6 or 7 may carry weapons (171). At the same time, the child's experience of recurrent violent episodes (e.g. shooting, assault, looting, and raids) renders the processing of the individual experiences difficult and leads to a constant state of heightened alertness.

Another significant risk indicator for anxiety that must also be characterised as a life condition, is *growing up in a family affected by torture* (Table 49–50). The time of the torture (before or after the birth of the child) and whether the torture of the mother or the father was the most significant, varied for the different forms of anxiety.

Example 5

A Lebanese family comprising mother, father, 10 year-old boy, and 7 year-old girl. The father had been imprisoned and tortured several times during the children's lives. He has spent a total of 3 years in prison. While he was in prison, the mother and children experienced financial difficulties, the children missed their father a lot, and the mother experienced the insecurity as a severe problem. She often had to leave the children in order to work, and the son

Table 49. *Parental torture as riskindicators* of anxiety in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Type of anxiety	Tortured parent		
	Mother OR	Father OR	Either OR
1. Nightmare			2.6[b]
2. Re-experience	5.5[d]		
3. Arousal	4.1[c]		
4. Regressive anxiety			
5. Future anxiety		3.9[e]	
6. Separation anxiety			2.7[b]
7. Clinical anxiety	2.8[a]		

* Combined simple model. [a] P<0.05; [b] P<0.01; [c] P<0.005; [d] P<0.001; [e] P<0.0005.

Table 50. *Parental torture, attributable risk* of anxiety in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Type of anxiety	Tortured parent		
	Mother[#] AR	Father[+] AR	Either[□] AR
1. Nightmare			0.4
2. Re-experience	0.3		
3. Arousal	0.3		
4. Regressive anxiety			
5. Future anxiety		0.6	
6. Separation anxiety			0.5
7. Clinical anxiety	0.2		

* Combined simple model. [#] N=33 children (mother tortured)
[+] N=78 children (father tortured before the birth of the child)
[□] N=159 children (mother or father tortured).

attempted to help earn money toward buying the father's freedom from prison.

She and her husband have not discussed the torture directly, but she is sure that his mental health is a result of it. The father was altered mentally already after the first imprisonment, but particularly the last imprisonment, which lasted almost two years, left him in poor mental health. He is depressed, easily angered, and withdraws from family life. He also sleeps poorly, often cries out in his sleep, and has frequent nightmares.

Upon arrival in Denmark, the father was immedi-

ately detained for questioning. The two children reacted violently to this. At the time of the interview, they were still convinced that their father would be tortured and possibly executed. The mother's assurances that this would not happen could not convince them. They have no reason to believe that imprisonment in Denmark is different from imprisonment in Lebanon. None of them are able to spend time alone, and particularly the oldest child is afraid of the dark and refuses to sleep alone. Previously, he was a bright student, but is now passive and appears to be indifferent. Both children are easily frightened and are scared when they see soldiers or policemen in uniform.

Example 6

A Palestinian family comprising mother, father, and three children (ages 3, 5, and 7) arriving in Denmark from Lebanon. Before the children were born, the husband had been imprisoned for just over a year. He spent most of this time in a small cell and was frequently tortured. He was, for example, forced into a car tire, whipped, suspended and had water poured on him while sleeping. Furthermore, he was threatened with torture of his family. He still dreams of the torture and wakes up with strong anxiety and the feeling that his jaws are locked such that he cannot open his mouth. He constantly hears the sound of a car engine running inside his head. In addition, he is very irascible, affecting the entire family, and he feels that he does not have proper interaction with his wife and children.

The two oldest children, in particular, are in poor mental health, sleep poorly at night, and wake up with frequent nightmares. Furthermore, they panic when they hear shooting from the military training camp nearby or the sound of aeroplanes. Neither of them will sleep in the dark.

While studies of children of torture survivors indicate that they have a number of emotional symptoms, including anxiety (see page 19), it has not been possible to find previous studies involving this aspect *in combination with* other types of experiences of organised violence.

The general pattern revealed that torture of the mother entered into the predictor models more frequently, and with greater weight, than did torture of the father. The mental health of mothers in general (103), or the depression of mothers specifically (82,129), appear to be significant predictors for the mental health condition of children in studies of their reactions to war and other forms of organised viol-

ence. In the present study, no direct measure was used for the mother's psychological state. However, the fact that torture involves a series of psychological sequelae (sleep disturbances with frequent nightmares, chronic anxiety, depression, impaired memory, lack of concentration, and altered perception of self) has been documented in a number of studies (see 135 for an overview). Most studies have been conducted in predominantly male populations. Studies of clinical populations of female torture survivors indicate that they suffer from the same psychological sequelae as do the men, but that they are more likely to have been exposed to sexual torture than are men. Consequently, in addition to the sequelae mentioned above, women will often develop sexual problems (172,173). It is conceivable that because of their own psychological problems, mothers have not been present and responsive enough to the needs of their child during the process of child-rearing, effecting an insecure attachment. From the perspective of developmental psychology, this situation is seen to provoke and maintain anxiety in particular (see page 13). The prevalence of insecure attachment has been found to be greater in children with depressive mothers than in other children (72), but there is no documentation showing that the same is true for children growing up with mothers who have been tortured and suffer psychological sequelae. The present findings suggest that this might be the case.

Example 7

A Kurdish/Iraqi mother arriving in Denmark with her 7 year-old son. She has been active in the Communist party and has lived with her son in a third country for many years in connection with her education. Prior to the birth of her son, she was imprisoned two times in Iraq because of her political work. She was beaten, threatened, and humiliated, and detained for 6 months in a tiny cell. Her father was executed because all of his children were politically active. After imprisonment she had poor mental health. She was tired, experienced difficulty sleeping at night, and woke up frequently with nightmares. Today, 15 years after the assaults, she still has dreams about her experiences in prison. Memories intrude several times during the day, and she feels that she cannot control her "nerves", which results in the fact that she frequently hits her son, although she knows it is not right.

She describes her son as anxious, crying, and nervous. He is constantly afraid that she will punish

him. He often says he is ill, when he is not. The mother interprets this as an appeal for her to take better care of him. He wants to play with other children, but his mother usually keeps him indoors, because she is afraid that older children will have a bad influence on him. He misses his father, whom he has not seen in 1½ years, and asks about him often. He and his mother often discuss the political situation in Iraq, the resistance, her experiences, and the execution of the grandfather.

The hypothesis assumed that attending school would have a modifying effect on anxiety. This hypothesis could not be confirmed. On the contrary, having attended school was a risk indicator for nightmares. School circumstances have not been investigated, and it is possible that schooling must meet certain qualitative criteria in order to have this modifying effect on anxiety. The following excerpt from a conversation with a 15 year-old boy, carried out after one of the psychological interviews, demonstrates that attending school can, in fact, be a strain when the child is exposed to political pressure and propaganda incongruous with the parents' convictions.

Example 8

Boy: Then we arrived in (the neighbouring country). First we lived in one camp, then we moved to our own house. We stayed there for many years. I went to school, but that was not very good.

Int: In what way was it not good?

Boy: The others told us that we came and took their food. And they also said that it was our fault that prices had gone up. My father could not work. It was very difficult for us. I had some friends from outside of town. They were all right. In school they wanted me to pray. It wasn't because of praying, but because they wanted me to help them do things. They wanted me to help a sort of police that went around at night controlling people. I refused every time. So finally I was thrown out of school.

Int: Did you know that you risked being thrown out of school when you refused to do what they told you to?

Boy: No, I did not know that. But there were others who were thrown out because they weren't citizens of the country. So I expected that I would be thrown out at some point, but I didn't know that it would be for that reason.

Children may also be stigmatised in the eyes of other children if they belong to an ethnic or religious minority or if a family member is imprisoned because of political activity.

Having *lost opportunities for play and interaction with peers*, a secondary consequence of living under conditions of war, appeared to be a risk indicator for prevalent anxiety (this circumstance was only included in the extended analyses). Interaction with other children can help the child relate to and process violent experience or it can provide them with a ''break'' while they participate in activities relevant for their age.

Specific events and changes of life conditions (incidence) were found to be of lesser importance for the child's present anxiety. Since only parents were interviewed, it cannot be ruled out that ignorance of the child's actual experiences may have been of some importance. Meanwhile, the fact that the child had been *beaten or kicked by an official*, was found to be a risk factor. Nonetheless, this risk indicator was of less practical importance (Table 51) because of the limited number of children (20) who, according to their parents, had experienced this.

Example 9

An 11 year-old Iraqi was kidnapped and abused by a member of the people's army when he was on his way home from school one day. He was detained for the purpose of forcing the father to report for active service in the war. When the father appeared before the people's army seeking the release of his son, he found him in a state of panic and anxiety. The boy later explained that he was convinced that he would be sent far away from his family and that he would never see them again. The boy was released, but the

Table 51. *Child beaten or kicked by official as risk indicator of anxiety and attributable risk in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Type of anxiety	OR	AR[+]
1. Nightmare		
2. Re-experience	9.4[a]*	0.3
3. Arousal	4.5[a]*	0.2
4. Regressive anxiety		
5. Future anxiety	7.0[a#]	0.3
6. Separation anxiety		
7. Clinical anxiety		

* Combined simple model. # Combined extended model.
[+] 0N = 20 exposed children. [a] P < 0.05.

anxiety did not disappear. After being detained he frequently woke up at night screaming. After arriving in Denmark, his drawings, play, and dreams still reflect thoughts about war and assault. He talks a lot about his experiences, although his specific experiences while detained remain unclear. He also talks a lot about an uncle who was executed, and about his fear that the family will be sent back to Iraq. Sudden sounds or movements can startle him. He often sits and stares emptily into the air for a long time. His parents are extremely worried about his development.

Example 10

The father of a 14 year-old Iranian boy reports how he and his son were stopped by the police in their home country one day when driving in their car. When the father had spoken with the police officers for a while, the boy also got out of the car to see what was happening. The police shoved him to the ground and beat him, breaking his two front teeth. After this episode the boy became withdrawn and refused to go to school. Presently, he has frequent nightmares, is often sad and isolates himself from other children. According to the father, the boy keeps his problems to himself in an attempt to forget the event.

Being beaten or kicked by an official characteristically only caused anxiety in a form specific to the PTSD diagnosis (re-experience, arousal, and future anxiety). This supports the assumption that specific delimited experiences of violence can be understood within the PTSD framework, whereas the effects of growing up in a prolonged violent context are best understood from a broader perspective of developmental psychology. This aspect can possibly be further elucidated through an analysis of predictors for other types of emotional symptoms and behavioural problems. However, longitudinal studies observing symptom development are also necessary.

The *loss of the father* was a risk indicator for regressive anxiety and separation anxiety (Table 52). These constitute the only two forms of anxiety for which younger age increased the risk of anxiety. This is understandable developmentally, because the mourning (both of the child and of the mother) can lead to the loss of developmental skills already acquired as the child regresses to the security of earlier developmental phases (regressive anxiety) and the fear of also losing the mother can increase (separation anxiety).

Example 11

A 13 year-old Iranian girl arrives in Denmark with her mother. The father died when the girl was about

Table 52. *Loss of father as riskindicator of anxiety and attributable risk in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Type of anxiety	Died[+]		Disappeared[□]	
	OR	AR	OR	AR
1. Nightmare				
2. Re-experience				
3. Arousal				
4. Regressive anxiety	→∞[a]*	→1		
5. Future anxiety			4.7[c#]	0.3
6. Separation anxiety	→∞[b]*	→1		
7. Clinical anxiety				

* Combined simple model. # Combined extended model.
[+] N = 19 exposed children. [□] N = 43 exposed children.
[a] $P < 0.01$; [b] $P < 0.005$; [c] $P < 0.001$.

4 years old. There are two older sisters, one married living in Iran, another living in a third country.

The mother reports that both the eldest daughter and the father were imprisoned at the same time because of their political activities. Both were released after a time, but the father was hospitalised immediately, and the mother and youngest daughter saw him just before he died. The cause of death was not determined, but according to the mother, his body showed clear signs of having been tortured. The mother was subsequently imprisoned for two weeks, and threats were made concerning her and the children. The children were expelled from school, and because they were being harassed by the authorities, the family had to go into hiding for some time before fleeing to Denmark

The girl is presently anxious, sad, and worried. She cries often, especially when talking about her father. The anxiety is evidenced through her fear of being alone, needing to sleep near her mother, and her fear of the dark. She has difficulty falling asleep and frequently wakes up with nightmares. She is always unhappy and does not play with other children. Both mother and daughter fear the future.

Meanwhile, having a "missing" father caused future anxiety. When a parent disappears, the child is left in an emotional no-man's land. The child cannot mourn the "death" of the father, which would serve to release energy for moving onward in life (174). It becomes difficult for the child to imagine a realistic future. Thus, the child may focus on how he/she magically might contribute to bringing the father back. The significance of having lost the mother could not be investigated, since only one

child had a mother who had disappeared, and one had a mother who had died.

In other studies, *witnessing experiences* have proved significant in relation to the child's psychological development, particularly when the child has witnessed the abuse of family or friends (33). In the present study, only the experiences 'witnessed bombing' and 'witnessed shooting' (less specific, more diffuse witnessing experiences) were risk indicators for certain forms of anxiety (re-experience and separation anxiety, respectively).

Example 12

A 6 year-old Iranian girl, born and raised in Kuwait, witnessed nightly bombings during the Iraqi occupation of Kuwait (the year before her arrival in Denmark). Her parents report that she was very frightened at the time (e.g. she woke up at night screaming for hours without allowing them to calm her). Presently she wakes up frequently with nightmares and tells her parents that someone is trying to strangle her. Generally she talks a lot about war, weapons, and soldiers. The family lives in a refugee camp, next to a military camp. When the girl sees a weapon or a person in uniform, she thinks her family is going to be killed. Sudden sounds startle her, a reaction that her parents feel is related to the bombings during the war. She clings to her mother and insists, among other things, on sleeping in the bed with her mother.

Parents' current behaviour towards their children was a risk indicator for anxiety when the mother or father hit or punished the child more than they had done prior to arriving in Denmark (Table 53). The children often came to the Danish refugee camps directly from situations of war and violence. In this context they are particularly dependent upon the help of their parents in understanding and making sense of events. When they are rejected by being hit and punished by their parents, it is natural for their anxiety to become greater. This parental reaction may be explained by the pressure they too are under and does not necessarily mean that they, in general, use physical punishment more than other parents. Under-reporting (parents assess their own behaviour) may be the reason that relatively few children are presently hit/punished more by their parents than previously (26 children have mothers answering yes to this question, 47 children have fathers answering yes). However, another reason could be that parents truly are relieved at having arrived in Denmark and thus feel less psychological pressure at the beginning of the possibly lengthy and mentally straining stay

Table 53. *Parents hit or punish the child more than before as riskindicators* of anxiety and attributional risk in 311 Middle Eastern refugee children aged 3–15, Denmark, 1992–93.*

Type of anxiety	Mother[#]		Father[+]	
	OR	AR	OR	AR
1. Nightmare				
2. Re-experience				
3. Arousal			10.0[c]	0.4
4. Regressive anxiety				
5. Future anxiety	3.8[b]	0.3		
6. Separation anxiety	7.2[a]	0.5	→∞[a]	→1
7. Clinical anxiety	8.6[c]	0.5		

* Combined simple model. [#] N = 26 exposed children. [+] N = 47 exposed children. [a] P < 0.05; [b] P < 0.001; [c] P < 0.0005.

in the refugee camp while waiting to be granted asylum.

In two instances, the relationship between changed parental behaviour and anxiety was the opposite of what would be expected. Thus 'mother talks to child more' was associated with regressive anxiety and 'father cuddles child more' with separation anxiety. It is characteristic that this is the case precisely for the two infantilising forms of anxiety. This is conceivably the result of parental over-involvement based on their own emotional needs without regard to the child's situation as a person in his/her own right. As is also shown in clinical studies of the children of Holocaust survivors, this can complicate the child's development of independence (111). Over-involvement may also influence parents' perception of their child. They may view the child as being symptomatic, when this is not necessarily the case. Finally, it is possible that particular types of symptoms cause parents to be more preoccupied with their child.

As was expected, arrival in Denmark in the company of *both parents* was a modifying factor (Table 54). All things considered, being two adults facilitated the meeting of outer demands (police interrogation, accommodation, daily chores e.g. fixing meals and doing laundry) as well as the interaction with and care of the child.

Gender and age at the time of the study were of limited importance for the anxiety reaction. In other studies, female gender (82, 87, 108) and young age (87,108) have appeared to be significant predictors for anxiety or emotional symptoms in general. Meanwhile, the number of possible predictors was

Table 54. *Two-parents family as modifying factor**
against anxiety in 311 Middle Eastern refugee children
aged 3–15, Denmark, 1992–93.

Type of anxiety	Both parents in Denmark OR
1. Nightmare	0.3[d]
2. Re-experience	0.4[c]
3. Arousal	0.4[c]
4. Regressive anxiety	
5. Future anxiety	0.4[c]
6. Separation anxiety	0.4[a]
7. Clinical anxiety	0.4[b]

* Combined simple model. [a] $P<0.05$; [b] $P<0.01$; [c] $P<0.005$; [d] $P<0.001$.

considerably lower in the studies cited than in the present study, and specific experiences of war and other forms of organised violence were only incorporated to a limited extent. As mentioned on page 63, there may be a tendency toward registering symptom frequencies for younger children as lower than actually warranted. In cases where age was of importance in the present study, younger children showed more symptoms than older children.

Contrary to the hypothesis, providing the child with *direct information* about assault on parents was found to cause anxiety to some degree. This may be due to the fact that information is only helpful when parents simultaneously assist the child in making sense of the information provided. If such support is not provided, the child may be in a worse situation than had he/she not been informed of the events in the first place.

Example 13

During the interview, with his two children age 6 and 11 present, the father in an Iraqi family details his experiences of torture. The interviewers attempts to stop his account were not successful. His account is hectic, jumps from place to place, and he appears to be engrossed in his own story and psychological state. The children listen passively. The mother reports that this situation has arisen repeatedly and that neither she nor her husband have been able to assist the children in processing the knowledge they are provided with in this manner. The children are described as generally anxious. Both have frequent nightmares, and their parents experience them as being constantly on guard.

In most cases the child's age at the first violent

experience and the time that had elapsed since this experience was of less importance than the fact that *the experience had taken place at all*. Thus, it was not possible to identify a time when the child was particularly vulnerable to violent experience. This may partly be the result of the fact that some of the age groups at times were quite small.

Risk Indicators among Anxious and Non-Anxious Children

Figure 13 provides a comprehensive overview of the predictor patterns for the seven types of anxiety reactions based on the combined multivariate models in the simple analyses. Tables 55–61 illustrate the prevalence of the risk indicators figuring in the seven different predictor patterns for anxious and non-anxious children, respectively.

Children with *nightmares* (Table 55) differed from other children in relation to a number of background factors and in relation to several types of organised violence. They had attended school more frequently than other children and they were more frequently part of a family in which a grandparent had died because of the war or another form of organised violence. Furthermore, children with nightmares typically had a parent who had been tortured and had typically been separated from their mothers for some time.

Table 55. *Prevalence of significant* risk indicators[#]*
among children with and without nightmares, in 311
Middle Eastern refugee children aged 3–15 years
Denmark, 1992–93.

Risk indicator	Children with nightmare %	Children without nightmare %
Background		
Kurdish ethnicity	39.0	31.7
Grandparents' violent death before child's birth	16.9	5.2
Been to school	62.7	49.2
Prior Kuwait residence	0.0	10.3
Violent experience		
Lived in a refugee camp outside home country	100.0	90.5
Parent(s) tortured	67.8	47.2
Separation(s) from mother	22.0	5.6
Present life context		
Both parents in Denmark	44.1	64.7

* $P\leq0.05$. [#] Based on the combined simple model.

Experiences of organised violence were frequent among anxious children, regardless of the type of anxiety. However, only for children with *re-experience* were these experiences almost the sole factor differentiating them from other children (Table 56). As re-experience is the type of anxiety most directly associated with traumatic experiences, this is quite understandable. Children with re-experience had, more frequently than others, been beaten or kicked by an official. It is also interesting that children with this specific trauma-related anxiety reaction differ considerably from other children in having lived under *conditions* influenced by organised violence (parents tortured, refugee camp, forced relocation). One would expect that witnessing experiences would also carry significance for re-experience, but only witnessing street shooting distinguished these children from others.

Children with *arousal* differed from other children primarily in relation to experiences of organised violence and present life context (Table 57). The frequency of their being beaten or kicked by an

Table 56. *Prevalence of significant* risk indicators[#] among children with and without re-experience, in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Risk indicator	Children with re-experience %	Children without re-experience %
Background		
Middle stratum of society	64.1	72.8
Violent experience		
Residence change due to violence	84.3	67.1
Lived in refugee camp in home country	18.3	23.4
Lived in a refugee camp outside home country	97.4	87.3
Mother tortured	16.3	5.1
Father exposed to organised violence after child's birth	36.6	24.1
Father detained	52.3	67.1
Child detained	6.5	5.1
Beaten/kicked by official	11.1	1.9
Witnessing street shooting	78.4	59.5
Present life context		
Both parents in Denmark	52.9	68.4

* P≤0.05. [#] Based on the combined simple model.

Table 57. *Prevalence of significant* risk indicators[#] among children with and without arousal symptoms, in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Risk indicator	Children with arousal %	Children without arousal %
Background		
Kurdish ethnicity	40.4	26.7
Violent experience		
Lived in a refugee camp outside home country	96.6	88.5
Mother tortured	17.1	4.8
Father exposed to organised violence after child's birth	41.1	20.6
Beaten/kicked by official	11.6	1.8
Present life context		
Both parents in Denmark	55.5	65.5
Father hits/punishes more	13.0	4.2
Child informed of reason for escape	80.8	61.2

* P≤0.05. [#] Based on the combined simple model.

Table 58. *Prevalence of significant* risk indicators[#] among children with and without regressive anxiety, in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Risk indicator	Children with regressive anxiety %	Children without regressive anxiety %
Background		
Palestinian ethnicity	32.3	2.4
Violent experience		
Lived in a refugee camp outside home country	95.2	73.8
Father died	7.1	0.0
Separated from father more than one month	61.3	45.2
Present life context		
Mother scolds the child more	28.3	9.5
Mother talks more with the child	64.3	45.2

* P≤0.05. [#] Based on the combined simple model.

official was higher than for other children. The same was true for having a parent who had been tortured, being hit or punished more by their father after
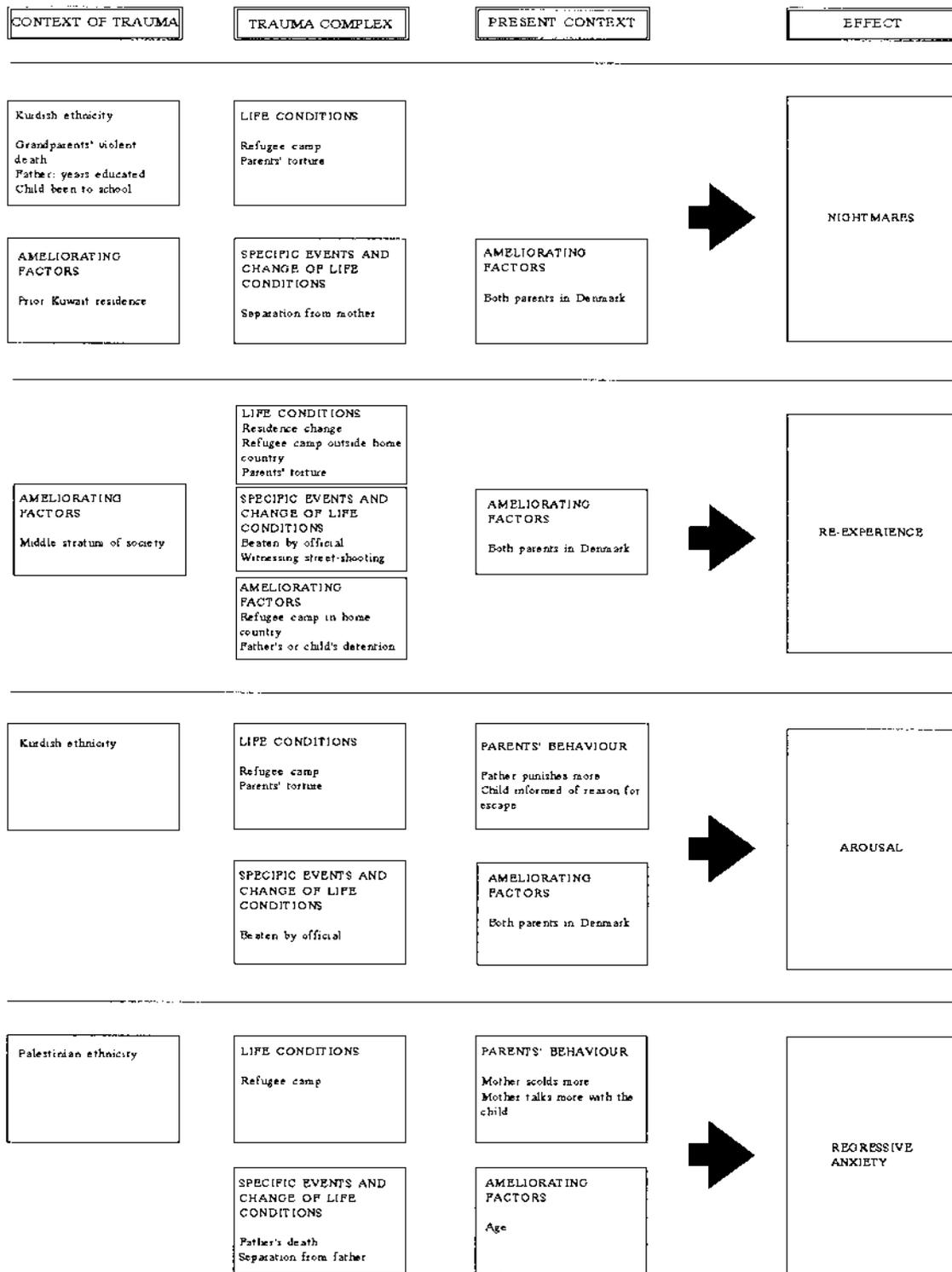
| CONTEXT OF TRAUMA | TRAUMA COMPLEX | PRESENT CONTEXT | EFFECT |

Kurdish ethnicity

Grandparents' violent death
Father: years educated
Child been to school

LIFE CONDITIONS

Refugee camp
Parents' torture

NIGHTMARES

AMELIORATING FACTORS

Prior Kuwait residence

SPECIFIC EVENTS AND CHANGE OF LIFE CONDITIONS

Separation from mother

AMELIORATING FACTORS

Both parents in Denmark

AMELIORATING FACTORS

Middle stratum of society

LIFE CONDITIONS
Residence change
Refugee camp outside home country
Parents' torture

SPECIFIC EVENTS AND CHANGE OF LIFE CONDITIONS
Beaten by official
Witnessing street-shooting

AMELIORATING FACTORS
Refugee camp in home country
Father's or child's detention

AMELIORATING FACTORS

Both parents in Denmark

RE-EXPERIENCE

Kurdish ethnicity

LIFE CONDITIONS

Refugee camp
Parents' torture

PARENTS' BEHAVIOUR

Father punishes more
Child informed of reason for escape

AROUSAL

SPECIFIC EVENTS AND CHANGE OF LIFE CONDITIONS

Beaten by official

AMELIORATING FACTORS

Both parents in Denmark

Palestinian ethnicity

LIFE CONDITIONS

Refugee camp

PARENTS' BEHAVIOUR

Mother scolds more
Mother talks more with the child

REGRESSIVE ANXIETY

SPECIFIC EVENTS AND CHANGE OF LIFE CONDITIONS

Father's death
Separation from father

AMELIORATING FACTORS

Age

Fig. 13. Overview of risk indicators* for different types of anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.

*Based on the combined simple models, see table 24, 27, 30, 33, 36, 39, 42.

CONTEXT OF TRAUMA	TRAUMA COMPLEX	PRESENT CONTEXT	EFFECT

AMELIORATING FACTORS

Middle stratum of society

LIFE CONDITIONS

Refugee camp
Mother's detention
Father's torture

PARENTS' BEHAVIOUR

Mother punishes more

AMELIORATING FACTORS

Death in the family
Child's detention

AMELIORATING FACTORS

Mother cuddles more
Both parents in Denmark

FUTURE ANXIETY

Syrian nationality

LIFE CONDITIONS

Refugee camp
Parents' torture

PARENTS' BEHAVIOUR

Parents punish more
Father cuddles more
Child informed of reason for escape

SPECIFIC EVENTS AND CHANGE OF LIFE CONDITIONS

Father's death
Witnessing bombing

AMELIORATING FACTORS

Age
Both parents in Denmark

SEPARATION ANXIETY

Kurdish ethnicity

LIFE CONDITIONS

War conditions
Mother's torture

PARENTS' BEHAVIOUR

Mother punishes more

AMELIORATING FACTORS

Middle stratum of society
Number of siblings at birth

AMELIORATING FACTORS

Mother scolds more
Both parents in Denmark

CLINICAL ANXIETY

Figure 13. (continued)

arrival in Denmark and having been informed of the reasons for leaving the home country.

Children with *regressive anxiety* (Table 58) differed from other children in relatively few areas. They were more frequently Palestinian, had more often lost their father, and many had been separated from their father for more than a month. Whereas the experiences of organised violence were thus primarily associated with the *father's situation*, it was the *mother's*

current behaviour (scolds more, talks more to child), that distinguished children with regressive anxiety symptoms from children without these symptoms. Increasing age reduced the risk of these anxiety symptoms, understandable from a developmental perspective.

Children with *future anxiety* differed from other children mainly in relation to experiences of organised violence, but their present life context also

Table 59. *Prevalence of significant* risk indicators*[#] *among children with and without future anxiety, in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Risk indicator	Children with future anxiety %	Children without future anxiety %
Background		
Middle stratum of society	56.7	76.6
Violent experience		
Lived in a refugee camp outside home country	96.9	89.1
Father tortured after child's birth	34.6	18.5
Mother detained	29.1	13.0
Child detained	5.5	6.0
Death in the family after child's birth	37.0	52.7
Present life context		
Both parents in Denmark	52.8	66.3
Mother hits/punishes the child more	23.6	9.2
Mother cuddles the child more	35.4	53.3

* P≤0.05. [#] Based on the combined simple model.

Table 60. *Prevalence of significant* risk indicators*[#] *among children with and without separation anxiety, in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Risk indicator	Children with separation anxiety %	Children without separation anxiety %
Background		
Syrian nationality	5.3	0.0
Violent experience		
Lived in a refugee camp outside home country	96.7	75.8
Parent(s) tortured	57.1	28.8
Father died	7.8	0.0
Witnessing bombing	86.5	68.2
Present life context		
Both parents in Denmark	58.0	71.2
Father hits/punishes the child more	10.6	0.0
Mother hits/punishes the child more	18.8	1.5
Father cuddles the child more	29.4	18.2
Child informed of reason for escape	72.2	63.6

* P≤0.05. [#] Based on the combined simple model.

differed in some ways from that of other children (Table 59). Their father had more frequently been tortured, their mother had been detained, and she hit or punished them more after arriving in Denmark than was the case previously.

Both experiences with organised violence and present life context distinguished children with *separation anxiety* from other children (Table 60). Typically, these children had witnessed bombings, and one of their parents had been tortured. Loss of father or having a father who hits or punishes more after arriving in Denmark occurred only among children with separation anxiety. Particular to these children was also that their mother hit or punished them more after arriving in Denmark, that their father cuddled them more than previously, and that they were more frequently informed of the reasons for leaving the home country. As mentioned above, parents' over-involvement based on their own needs may provide an explanation for the last two relationships.

Clinical anxiety was an expression of a general overall assessment of whether the child was anxious or not. Thus, it differed conceptually from the other forms of anxiety. These children distinguished themselves from other children in relation to factors within all three time segments (Table 61). They had fre-

quently lived under conditions of war, had a mother who had been tortured, and a mother who hit or punished them more after arriving in Denmark.

Summary

In a number of ways, parental factors were of great significance for children's present anxiety. It is conceivable that the torture of the parents (particularly of the mother) can lead to difficulties in being sufficiently emotionally present and responsive to the child's needs, while a rejecting behaviour toward the child upon arrival in Denmark may increase anxiety and fear of the unknown. As previous studies have shown, parental reactions and emotional condition are of importance regarding the child's reactions. The present study distinguishes itself from these previous studies by simultaneously studying and analysing children's experiences of war and other forms of organised violence as well as a series of specific family, social and demographic factors, including assault on parents.

Another significant result was the great importance

Table 61. *Prevalence of significant* risk indicators[#] among children with and without clinical anxiety[+], in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Risk indicator	Children with clinical anxiety %	Children without clinical anxiety %
Background		
Kurdish ethnicity	36.1	27.2
Middle stratum of society	63.9	77.7
Violent experience		
Lived under conditions of war	93.3	81.6
Mother tortured	13.5	4.9
Present life context		
Both parents in Denmark	56.7	68.9
Mother scolds the child more	24.0	29.1
Mother hits/punishes the child more	19.7	5.8

* $P \leq 0.05$. [#] Based on the combined simple model. [+] Based on clinical validation of the standardized interview.

of being raised under conditions presumed to entail a prolonged state of stress in relation to the significance of specific delimited violent experiences. A great deal of research regarding children's reactions to violence has been carried out strictly within the framework of the PTSD diagnosis. This research has been quite significant as it has resulted in recognition of the fact that children react emotionally to violent experience and may subsequently need help, a recognition which is relatively new (see page 11). Meanwhile, the results of the present study emphasise that maintaining a focus on children's reactions solely within a PTSD framework is not sufficient. Children's experience of and reactions to war and other forms of organised violence must, in addition, be investigated and interpreted from the perspective of developmental psychology.

CONCLUSION

Asylum seeking children from the Middle East have had many experiences of war and other forms of organised violence. Over half of the children studied were part of a family in which one or both parents had been tortured. The children frequently reacted with anxiety and with other symptoms of emotional instability.

Generally, there was significant relationship between the experience of organised violence (past) and present anxiety. There was also a relationship between present life context (past-present) and anxiety. Thus, the refugee situation is of importance but does not on its own explain the anxiety reactions of the children. Finally, there was a relationship between background factors (past-past) and present anxiety, but this relationship was more limited.

In accordance with the a priori hypotheses, it was found that having lived under conditions influenced by war and other forms of organised violence and specific violent experiences (separation, loss, witnessing experiences, and abuse) were related to anxiety. Generally, *life conditions* (specifically refugee camps and parent(s) tortured) were of greater importance than were *specific events and changes of life conditions*. This suggests that PTSD does not always provide the best framework for understanding children's reactions to violence. The age of the child at the first time of an experience and the time that has elapsed since this experience, were in most cases less significant than the *actual occurrence of the experience*. In this context, the trauma perspective is thus more important than the developmental perspective. Play and interaction with other children is generally a significant source of healthy development that is often restricted under conditions of war or other forms of organised violence. Such restriction were found to increase the risk of anxiety.

The family situation upon arrival in Denmark was also related to the child's present anxiety. When external circumstances become overwhelming and incomprehensible to children, they are dependent upon their parents' ability to create meaning and security. In accordance with this the child's anxiety was increased if he/she was met with rejection from parents (in the form of being hit and punished), and when both parents accompanied the child to Denmark anxiety was less than if the child had arrived with only one parent. The importance of discussions between parents and child regarding the parents' experiences and the reasons for escape was not clear. In certain cases, providing such information appeared to worsen the child's situation.

Having been beaten or kicked by an official was related to re-experience, arousal, and future anxiety, the three types of anxiety that are part of the PTSD diagnosis. The death of the child's father was specific to the two infantilising forms of anxiety, regressive anxiety and separation anxiety. However, the risk of these forms of anxiety diminished with increasing age in the study, in accordance with what would be expected.

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APPENDIX

Appendix Tables 1–34

Parent interview questionnaire
Validation interview questionnaire

Appendix Table 1. *Correlations* between 12 anxiety symptoms[#] in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
Re-experience:											
1. Nightmares											
2. Fears shooting	.03										
Arousal:											
3. Easily aroused	.20[d]	.22[d]									
4. Lack of concentration when watching TV	.07	−.04	.16[c]								
5. Lack of concentration when told a story	.16[c]	−.05	.12[a]	.36[f]							
Regressive anxiety:											
6. Fears sleeping without light	.20[d]	.14[a]	.27[f]	.15[b]	.10						
7. Fears being alone	.13[a]	.19[c]	.35[f]	.19[c]	.15[b]	.26[f]					
8. Fears strangers	.09	.10	.21[d]	.10	.08	.13[a]	.07				
9. Clings to parents	.11	.13[a]	.22[d]	.18[c]	.18[c]	.13[a]	.39[f]	.21[d]			
Future anxiety:											
10. Fears the future	.08	.15[b]	.19[c]	.13[a]	.15[b]	.14[b]	.10	.24[e]	.13[a]		
11. Fears death	.14[a]	.05	.13[a]	−.01	.03	.06	.09	−.01	.16[c]	.02	
12. Fears unknown situations	.28[f]	.09	.19[c]	.27[f]	.17[c]	.16[c]	.21[d]	.33[f]	.16[c]	.24[e]	.07

* Spearman's rank correlation coefficient r_s. [#] Symptom 'frequent' or 'intense'. [a] $P < 0.05$; [b] $P \leq 0.01$; [c] $P \leq 0.005$; [d] $P \leq 0.0005$; [e] $P \leq 0.00005$; [f] $P < 0.000005$

Appendix Table 2. *Anxiety symptom constellations for 311 Middle Eastern refugee children aged 3–15 years, Denmark 1992–93.*

	Prevalence of symptoms			
	At least one symptom		All symptoms	
	No.	%	No.	%
Re-experience (2 symptoms)	153	49.2	24	7.7
Arousal (3 symptoms)	146	46.9	6	1.9
Regressive anxiety (4 symptoms)	269	86.5	24	7.7
Future anxiety (3 symptoms)	127	40.8	2	0.6
Separation anxiety (4 symptoms)	245	78.8	7	2.3

Appendix Table 3. *Prevalence (%) of anxiety symptoms by gender and age at examination in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Prevalence*:														
			Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Males:	160	51.4	21.9	—	52.5	—	48.1	—	86.3	—	40.6	—	78.1	—	68.8	—
3–6 years old	75	46.9	20.0	1.0	52.0	1.0	48.0	1.0	93.3	1.0	41.3	1.0	86.7	1.0	74.7	1.0
7–11 years old	59	36.9	25.4	1.3	55.9	1.1	49.2	1.0	86.4	0.9	45.8	1.1	76.3	0.9	71.2	1.0
12–15 years old	26	16.3	19.2	1.0	46.2	0.9	46.2	1.0	65.4	0.7[e]	26.9	0.7	57.7	0.7[d]	46.2	0.6[c]
Females:	151	48.6	15.9	—	45.7	—	45.7	—	86.8	—	41.1	—	79.5	—	64.9	—
3–6 years old	63	41.7	12.7	1.0	36.5	1.0	44.4	1.0	90.5	1.0	42.9	1.0	87.3	1.0	61.9	1.0
7–11 years old	65	43.0	16.9	1.3	50.8	1.4	43.1	1.0	84.6	0.9	32.3	0.8	75.4	0.9	67.7	1.1
12–15 years old	23	15.2	21.7	1.7	56.5	1.5	56.5	1.3	82.6	0.9	60.9	1.4	69.6	0.8	65.2	1.1
Both:	311	100.0	19.0	—	49.2	—	46.9	—	86.5	—	40.8	—	78.8	—	66.9	—
3–6 years old	138	44.4	16.7	1.0	44.9	1.0	46.4	1.0	92.0	1.0	42.0	1.0	87.0	1.0	68.8	1.0
7–11 years old	124	39.9	21.0	1.3	53.2	1.2	46.0	1.0	85.5	0.9	38.7	0.9	75.8	0.9[b]	69.4	1.0
12–15 years old	49	15.8	20.4	1.2	51.0	1.1	51.0	1.1	73.5	0.8[d]	42.9	1.0	63.3	0.7[e]	55.1	0.8

* Among children with the characteristic (predictor). [a] $P \sim 0.05$ [b] $P < 0.05$ [c] $P < 0.01$ [d] $P < 0.005$ [e] $P < 0.0005$ [f] $P < 0.0001$

Appendix Table 4. *Significant predictors* regarding interview situation of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Prevalence[#]:												
			Nightmore %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Both parents present	163	52.4	14.7	1.0	41.1	1.0	45.4	1.0	85.9	1.0	36.8	1.0	76.1	1.0	61.3	1.0
Father present alone	12	3.9	25.0	1.7	75.0	1.8[b]	16.7	0.4[a]	58.3	0.7[b]	16.7	0.5	66.7	0.9	83.3	1.3
Mother present alone	136	43.7	23.5	1.6	56.6	1.4[c]	51.5	1.1	89.7	1.5	47.8	1.3[a]	83.1	1.1	72.1	1.2[a]
Child not present	215	69.1	18.1	1.0	49.3	1.0	47.0	1.0	82.3	1.0	37.5	1.0	73.0	1.0	64.7	1.0
Child present all the time	64	20.6	18.8	1.0	49.9	1.0	49.9	1.0	96.9	1.2[d]	37.5	1.0	92.2	1.3[d]	68.8	1.1
Child present some time	32	10.3	25.0	1.4	53.1	1.1	46.9	1.0	93.8	1.0	62.5	1.6[b]	90.6	1.2[b]	78.1	1.2
No siblings present	176	56.6	17.0	1.0	46.6	1.0	42.6	1.0	84.1	1.0	40.3	1.0	74.4	1.0	63.1	1.0
One sibling present	95	30.5	22.1	1.3[e]	51.6	1.1	49.5	1.2	88.4	0.9	44.2	1.1	82.1	1.1	71.6	1.1
Two siblings present	38	12.2	15.8	0.9	52.6	1.1	63.2	1.5[b]	97.4	1.2[b]	36.8	0.9	89.5	1.2[b]	76.3	1.2
Arabic spoken at interview	241	77.5	14.1	1.0	45.2	1.0	46.5	1.0	87.1	1.0	38.2	1.0	78.8	1.0	66.0	1.0
Kurdish spoken at interview	33	10.6	39.4	2.8[e]	69.7	1.5[c]	48.5	1.0	81.8	0.9	36.4	1.0	75.8	1.0	75.8	1.1
Farsi spoken at interview	32	10.3	37.5	2.7[d]	59.4	1.3	56.3	1.2	93.8	1.1	65.6	1.7[d]	87.5	1.1	68.8	1.0
Other languages spoken at interview	5	1.6	0.0	→0	40.0	0.9	0.0	→0	40.0	0.5[b]	40.0	1.0	40.0	0.5	40.0	0.6

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. [#] Among children with the characteristic (predictor). [a] P~0.05 [b] P<0.05 [c] P<0.01 [d] P<0.005 [e] P<0.0005 [f] P<0.0001

Appendix Table 5. *Significant predictors* regarding nationality and ethnicity of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Prevalence#:													
			Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Nationality																
Syrian	13	4.2	23.1	1.2	46.2	0.9	38.5	0.8	100.0	1.2	61.5	1.5	100.0	1.3	38.5	0.6[b]
Lebanese	22	7.1	9.1	0.5	72.7	1.5[b]	54.5	1.2	81.8	0.9	50.0	1.2	81.8	1.0	81.8	1.2
Iraqi	168	54.0	19.0	1.0	48.2	1.0	47.6	1.0	79.8	0.8[e]	33.3	0.7[d]	75.0	0.9	69.0	1.1
Iranian	32	10.3	37.5	2.2[d]	59.4	1.2	56.3	1.2	93.8	1.1	65.6	1.7[d]	87.5	1.1	68.8	1.0
Stateless Palestinians	75	24.1	13.3	0.6	41.3	0.8	41.3	0.8	98.7	1.2[e]	41.3	1.0	80.0	1.0	62.7	0.9
Ethnicity																
Palestinians	88	28.3	15.9	0.8	40.9	0.8	44.3	0.9	98.9	1.2[f]	46.6	1.2	81.8	1.1	61.4	0.9
Kurds	103	33.1	22.3	1.3	58.3	1.3[b]	57.3	1.4[b]	85.4	1.0	33.0	0.7[b]	77.7	1.0	72.8	1.1
Kuwait residence	26	8.4	0.0	→0[c]	42.3	0.8	46.2	1.0	85.6	1.0	30.8	0.7	76.9	1.0	57.7	0.9

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. # Among children with the characteristic (predictor). [a] P~0.05 [b] P<0.05 [c] P<0.01 [d] P<0.005 [e] P<0.0005 [f] P<0.0001

Appendix Table 6. *Significant predictors* regarding social factors of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Length of fathers education:																
0–3 years	40	12.9	12.5	1.0	67.5	1.0	55.0	1.0	97.5	1.0	50.0	1.0	90.0	1.0	75.0	1.0
4–8 years	68	21.9	11.8	0.9	36.8	0.5[d]	44.1	0.8	88.2	0.9	32.4	0.6	77.9	0.9	52.9	0.7[b]
9–12 years	90	28.9	20.0	1.6	57.8	0.9	46.7	0.8	86.7	0.9	48.9	1.0	77.8	0.9	77.8	1.0
more than 12 years	113	36.3	24.8	2.0	43.4	0.6[c]	46.0	0.8	81.4	0.8[b]	36.3	0.7	76.1	0.8	63.7	0.8
Length of mothers education:																
0–3 years	63	20.3	6.3	1.0	52.4	1.0	55.6	1.0	95.2	1.0	44.4	1.0	76.2	1.0	65.1	1.0
4–8 years	107	34.4	23.4	3.7[d]	57.9	1.1	38.3	0.7[b]	81.3	0.9[b]	34.6	0.8	81.3	1.1	70.1	1.1
9–12 years	83	26.7	20.5	3.2[b]	41.0	0.8	49.4	0.9	86.7	0.9	43.4	1.0	73.5	1.0	66.3	1.0
more than 12 years	58	18.6	22.4	3.5[b]	41.4	0.8	50.0	0.9	86.2	0.9	44.8	1.0	84.5	1.1	63.8	1.0
Fathers religion:																
Muslim	277	89.1	18.1	1.0	48.0	1.0	48.7	1.0	85.9	1.0	40.4	1.0	78.3	1.0	65.7	1.0
Christian	26	8.4	30.8	1.7	65.4	1.4	34.6	0.7	88.5	1.0	42.3	1.0	80.8	1.0	84.6	1.3[b]
Mothers religion:																
Muslim	279	89.7	17.9	1.0	47.7	1.0	48.7	1.0	86.4	1.0	40.9	1.0	78.9	1.0	65.2	1.0
Christian	30	9.6	30.0	1.7	66.7	1.4[b]	33.3	0.7	86.7	1.0	40.0	1.0	80.0	1.0	84.6	1.3[b]
Strata of society																
highest	26	8.4	42.3	1.0	61.5	1.0	57.7	1.0	84.6	1.0	61.5	1.0	84.6	1.0	80.8	1.0
middle	213	68.5	17.8	0.4[d]	46.0	0.7	44.6	0.8	83.1	1.0	33.8	0.5[c]	77.0	0.9	62.4	0.8
lowest	68	21.9	11.8	0.3[d]	54.4	0.9	50.0	0.9	100.0	1.2[d]	51.5	0.8	83.8	1.0	75.0	0.9

* Results are shown for all dependent variables when found significant for at least one. # Among children with the characteristic (predictor). [a] P~0.05 [b] P<0.05 [c] P<0.01 [d] P<0.005 [e] P<0.0005 [f] P<0.0001

Appendix Table 7. *Significant predictors* regarding family exposure before and family structure at the time of the birth of the child and childs' social life of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Prevalence#:												
			Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Grandparent's violent death	23	7.4	43.5	2.6[d]	60.9	1.3	47.8	1.0	95.7	1.1	43.5	1.1	78.3	1.0	87.0	1.3[b]
Father tortured	63	20.3	20.6	1.1	34.9	0.7[b]	52.4	1.1	93.7	1.1	36.5	0.9	88.9	1.2[b]	76.2	1.2
Mother tortured	9	2.9	55.6	3.1[b]	77.8	1.6	77.8	1.7	88.9	1.0	66.7	1.7	88.9	1.1	77.8	1.2
Child been to school	161	51.8	23.0	1.6	57.1	1.4[d]	47.2	1.0	83.2	0.9	42.7	1.1	74.5	0.9[a]	65.3	1.0
Child been to school >4 years	51	16.4	23.5	1.3	58.8	1.2	49.0	1.1	76.4	0.9[b]	37.3	0.9	62.7	0.8[d]	60.8	0.9

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. # Among children with the characteristic (predictor). [a] P~0.05 [b] P<0.05 [c] P<0.01 [d] P<0.005 [e] P<0.0005 [f] P<0.0001

Appendix Table 8. *Significant predictors regarding life circumstances related to war and organised violence of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Lived under conditions of war*	278	89.4	19.8	1.6	51.8	1.9[c]	48.6	1.5	87.8	1.2	42.1	1.4	81.3	1.4[d]	69.8	1.6[d]
Not exposed	33	10.6	12.1	1.0	27.3	1.0	33.3	1.0	75.8	1.0	30.3	1.0	57.6	1.0	42.4	1.0
0–11 month old	148	47.6	22.3	1.8	55.4	2.0[d]	45.9	1.4	89.2	1.2[b]	39.2	1.3	79.7	1.4[c]	73.0	1.7[d]
12–23 month old	26	8.4	23.1	1.9	50.0	1.8	53.8	1.6	96.2	1.3	46.2	1.5	88.5	1.5[c]	69.2	1.6[b]
24–35 month old	30	9.6	20.0	1.7	40.0	1.5	56.7	1.7	93.3	1.2	53.3	1.8	86.7	1.5[b]	66.7	1.6[a]
3–6 years old	53	17.0	18.9	1.6	52.8	1.9[b]	50.9	1.5	88.7	1.2	43.4	1.4	88.7	1.5[e]	66.0	1.6[b]
7–11 years old	16	5.1	0.0	→0	56.3	2.1[b]	50.0	1.5	56.3	0.7	43.8	1.4	62.5	1.1	68.8	1.6
Taking shelter for bombing*	234	75.2	20.9	1.6	52.6	1.3[b]	50.9	1.5[b]	89.3	1.1[b]	42.7	1.2	82.1	1.2[b]	67.9	1.1
Not exposed	77	24.8	13.0	1.0	39.0	1.0	35.1	1.0	77.9	1.0	35.1	1.0	68.8	1.0	63.6	1.0
0–11 month old	118	37.9	24.6	1.9[b]	60.2	1.5[d]	50.0	1.4[b]	94.1	1.2[d]	45.8	1.3	86.4	1.3[d]	72.9	1.1
3–6 years old	51	16.4	19.6	1.5	51.0	1.3	54.9	1.6[b]	86.3	1.1	41.2	1.2	82.4	1.2	64.7	1.0
Residence change due to violence*	235	75.6	20.4	1.4	54.9	1.7[e]	47.2	1.0	88.1	1.1	43.4	1.3	80.0	1.1	71.5	1.4[d]
Not exposed	76	24.4	14.5	1.0	31.6	1.0	46.1	1.0	81.6	1.0	32.9	1.0	75.0	1.0	52.6	1.0
0–11 month old	78	25.1	26.9	1.9[a]	47.4	1.5[b]	43.6	0.9	87.2	1.1	51.3	1.6[b]	82.1	1.1	62.8	1.2
12–23 month old	22	7.1	22.7	1.6	68.2	2.2[d]	54.5	1.2	86.4	1.1	63.6	1.9[c]	77.3	1.0	77.3	1.5[b]
3–6 years old	75	24.1	16.0	1.1	54.7	1.7[d]	50.7	1.1	90.7	1.1	36.0	1.1	82.7	1.1	73.3	1.4[c]
7–11 years old	29	9.3	13.8	1.0	69.0	2.2[d]	48.3	1.0	86.2	1.1	20.7	0.6	69.0	0.9	86.2	1.6[d]
Been on the run with the parents*	277	89.1	19.5	1.3	51.3	1.6[b]	48.7	1.5	87.4	1.1	41.5	1.2	79.8	1.1	68.6	1.3
Not exposed	34	10.9	14.7	1.0	32.4	1.0	32.4	1.0	79.4	1.0	35.3	1.0	70.6	1.0	52.9	1.0
12–23 month old	13	4.2	30.8	2.1	84.6	2.6[c]	61.5	1.9	100.0	1.3	61.5	1.7	92.3	1.3	76.9	1.5
3–6 years old	94	30.2	19.1	1.3	56.4	1.7[b]	51.1	1.6	94.7	1.2[b]	40.4	1.1	86.2	1.2[b]	73.4	1.4[b]
7–11 years old	60	19.3	18.3	1.2	61.7	1.9[c]	43.3	1.3	81.7	1.0	25.0	0.7	68.3	1.0	71.7	1.4
12–15 years old	14	4.5	14.3	1.0	50.0	1.5	64.3	2.0[b]	78.6	1.0	21.4	0.6	71.4	1.0	71.4	1.3
Lived in a refugee camp in home country*	65	20.9	18.5	1.0	43.1	0.8	46.2	1.0	96.9	1.2[c]	50.8	1.3	84.6	1.1	66.2	1.0
Not exposed	246	79.1	19.1	1.0	50.8	1.0	47.2	1.0	83.7	1.0	38.2	1.0	77.2	1.0	67.1	1.0
0–11 month old	49	15.8	20.4	1.1	40.8	0.8	46.9	1.0	100.0	1.2[d]	53.1	1.4[a]	93.9	1.2[c]	69.4	1.0
7–11 years old	6	1.9	0.0	→0	50.0	1.0	33.3	0.7	100.0	1.2	33.3	0.9	33.3	0.4[b]	66.7	1.0

Appendix Table 8. *(Continued)*.

Predictor	No.	%	Prevalence[#]:													
			Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Lived in a refugee camp outside home country*	287	92.3	20.6	→∞[b]	51.9	3.1[d]	49.1	2.4[c]	89.2	1.6[f]	42.9	2.6[b]	82.6	2.5[f]	68.6	1.5[b]
Not exposed	24	7.7	0.0	1.0	16.7	1.0	20.8	1.0	54.2	1.0	16.7	1.0	33.3	1.0	45.8	1.0
24–35 month old	6	1.9	33.3	→∞[b]	50.0	3.0	50.0	2.4	66.7	1.2	83.3	5.0[d]	66.7	2.0	83.3	1.8
3–6 years old	127	40.8	16.5	→∞[b]	45.7	2.7[c]	48.8	2.3[b]	91.3	1.7[f]	40.9	2.4[b]	88.2	2.6[f]	67.7	1.5[b]
7–11 years old	105	33.8	22.9	→∞[c]	58.1	3.5[e]	46.7	2.2[b]	89.5	1.7[e]	42.9	2.6[b]	80.0	2.4[f]	73.3	1.6[c]
12–15 years old	39	12.5	25.6	→∞[c]	61.5	3.7[d]	61.5	3.0[d]	87.2	1.6[d]	41.0	2.4[b]	74.4	2.2[d]	59.0	1.3

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. [#] Among children with the characteristic (predictor). [a] P~0.05 [b] P<0.05 [c] P<0.01 [d] P<0.005 [e] P<0.0005 [f] P<0.0001

Appendix Table 9. *Significant predictors regarding loss of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Prevalence[#]:														
			Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Death of a family member*	144	46.3	17.4	0.9	55.6	1.3[b]	48.8	1.1	87.5	1.0	32.6	0.7[c]	78.5	1.0	68.1	1.0
Not exposed	167	53.7	20.4	1.0	43.7	1.0	45.5	1.0	85.6	1.0	47.9	1.0	79.0	1.0	65.9	1.0
12–23 month old	20	6.4	30.0	1.5	70.0	1.6[b]	55.0	1.2	85.0	1.0	40.0	0.8	90.0	1.1	90.0	1.4[b]
3–6 years old	59	19.0	15.3	0.7	55.9	1.3	50.8	1.1	94.9	1.1	32.2	0.7[b]	81.4	1.0	72.9	1.1
7–11 years old	26	8.4	15.4	0.8	50.0	1.1	50.0	1.1	73.1	0.9	34.6	0.7	57.7	0.7[b]	53.8	0.8
Violent death of a family member*	35	11.3	20.0	1.1	65.7	1.4[b]	54.3	1.2	91.4	1.1	28.6	0.7	85.7	1.1	74.3	1.1
Not exposed	276	88.7	18.8	1.0	47.1	1.0	46.0	1.0	85.9	1.0	42.4	1.0	77.9	1.0	65.9	1.0
7–11 years old	7	2.3	28.6	1.5	85.7	1.8	85.7	1.9[a]	85.7	1.0	28.6	0.7	100.0	1.3	100.0	1.5
Death of father*	19	6.1	21.1	1.1	73.7	1.5[b]	52.6	1.1	100.0	1.2	31.6	0.8	100.0	1.3[b]	84.2	1.3
Not exposed	292	93.9	18.8	1.0	47.6	1.0	46.6	1.0	85.6	1.0	41.4	1.0	77.4	1.0	65.8	1.0
7–11 years old	5	1.6	20.0	1.1	100.0	2.1[b]	80.0	1.7	100.0	1.2	40.0	1.0	100.0	1.3	100.0	1.5
Violent death of father*	18	5.8	22.2	1.2	72.2	1.5[b]	55.6	1.2	100.0	1.2	33.3	0.8	100.0	1.3[b]	83.3	1.3
Not exposed	293	94.2	18.8	1.0	47.8	1.0	46.4	1.0	85.7	1.0	41.3	1.0	77.5	1.0	65.9	1.0
7–11 years old	5	1.6	20.0	1.1	100.0	2.1[b]	80.0	1.7	100.0	1.2	40.0	1.0	100.0	1.3	100.0	1.5
Father disappeared*	43	13.8	25.6	1.4	60.5	1.3	51.2	1.1	88.4	1.0	65.1	1.8[e]	83.7	1.1	67.4	1.0
Death or disappearence of a parent*	62	19.9	24.2	1.4	64.5	1.4[c]	51.6	1.1	85.5	1.1	54.8	1.5[b]	87.1	1.1	71.0	1.1
Sibling(s) left in home country*	28	9.0	25.0	1.4	53.6	1.1	67.9	1.5[b]	96.4	1.1	42.9	1.1	82.1	1.0	75.0	1.1

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. [#] Among children with the characteristic (predictor). [a] $P \sim 0.05$ [b] $P < 0.05$ [c] $P < 0.01$ [d] $P < 0.005$ [e] $P < 0.0005$ [f] $P < 0.0001$

Appendix Table 10. *Significant predictors regarding separation from parents of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Prevalence[#]:													
			Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Separation from father*	221	71.1	21.3	1.6	52.5	1.3	52.5	1.6[d]	90.5	1.2[d]	47.1	1.8[e]	84.6	1.3[f]	71.0	1.3[b]
Not exposed [+]	92	29.6	14.1	1.0	41.3	1.0	33.7	1.0	77.2	1.0	27.2	1.0	65.2	1.0	57.6	1.0
0–11 month old	85	27.3	17.6	1.2	50.6	1.2	49.4	1.5[b]	96.5	1.3[e]	44.7	1.6[b]	87.1	1.3[d]	70.6	1.2
12–23 month old	19	6.1	21.1	1.5	36.8	0.9	68.4	2.0[d]	84.2	1.1	47.4	1.7	84.2	1.3	68.4	1.2
24–35 month old	21	6.8	23.8	1.7	61.9	1.5	52.4	1.6	85.7	1.1	52.4	1.9[b]	85.7	1.3	81.0	1.4[b]
3–6 years old	60	19.3	25.0	1.8	53.3	1.3	53.3	1.6[b]	88.3	1.1	46.7	1.7[b]	85.0	1.3[c]	71.7	1.2
7–11 years old	29	9.3	24.1	1.7	62.1	1.5[a]	48.3	1.4	89.7	1.2	48.3	1.8[b]	79.3	1.2	65.5	1.1
Separation from father >one month*	184	59.2	19.6	1.1	50.0	1.0	49.5	1.1	89.7	1.1[b]	45.1	1.3	82.1	1.1	67.9	1.0
Not exposed	129	41.5	18.6	1.0	48.1	1.0	43.4	1.0	82.2	1.0	35.7	1.0	74.4	1.0	65.9	1.0
0–11 month old	80	25.7	18.8	1.0	52.5	1.1	53.5	1.2	96.3	1.2[d]	43.8	1.2	86.3	1.2[b]	70.0	1.1
12–23 month old	17	5.5	17.6	0.9	29.4	0.6	70.6	1.6[b]	82.4	1.0	47.1	1.3	82.4	1.1	64.7	1.0
Separation from mother*	27	8.7	48.1	3.0[f]	70.4	1.5[b]	51.9	1.1	85.2	1.0	51.9	1.3	88.9	1.1	77.8	1.2
Not exposed	284	91.3	16.2	1.0	47.2	1.0	46.5	1.0	86.6	1.0	39.8	1.0	77.8	1.0	65.8	1.0
3–6 years old	10	3.2	50.0	3.1[b]	60.0	1.3	70.0	1.5	90.0	1.0	70.0	1.8	90.0	1.2	80.0	1.2
Separation from both parents*	23	7.4	47.8	2.9[d]	69.6	1.5[b]	47.8	1.0	87.0	1.0	52.2	1.3	91.3	1.2	73.9	1.1

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. [#] Among children with the characteristic (predictor). [+] Two children have been separated from their father, but age at separation is missing. [a] P~0.05 [b] P<0.05 [c] P<0.01 [d] P<0.005 [e] P<0.0005 [f] P<0.0001

Appendix Table 11. *Significant predictors regarding the witnessing of violent acts of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Bombing*	257	82.6	20.2	1.6	51.4	1.3	49.0	1.3	88.7	1.2[b]	40.9	1.0	82.5	1.3[e]	67.7	1.1
Not exposed	54	17.4	13.0	1.0	38.9	1.0	37.0	1.0	75.9	1.0	40.7	1.0	61.1	1.0	63.0	1.0
0–11 months old	127	40.8	26.0	2.0[a]	60.6	1.6[c]	52.0	1.4	96.1	1.3[f]	43.3	1.1	89.8	1.5[f]	73.2	1.2
12–23 month old	23	7.4	26.1	2.0	52.2	1.3	52.2	1.4	91.3	1.2	47.8	1.2	91.3	1.5[c]	65.2	1.0
24–35 month old	26	8.4	32.1	1.8	42.3	1.1	53.8	1.5	92.3	1.2	53.8	1.3	88.5	1.4[b]	73.1	1.2
7–11 years old	22	7.1	0.0	→0	31.8	0.8	45.5	1.2	54.4	0.7	13.6	0.3[b]	45.5	0.7	54.5	0.9
Bombing >two times*	255	82.0	20.4	1.6	51.8	1.4[e]	49.4	1.4	88.6	1.2[b]	40.4	0.9	82.7	1.4[e]	67.8	1.1
Not exposed	56	18.0	12.5	1.0	37.5	1.0	35.7	1.0	76.8	1.0	42.9	1.0	60.7	1.0	62.5	1.0
0–11 months old	127	40.8	26.0	2.1[b]	60.6	1.6[d]	52.0	1.5[b]	96.1	1.3[f]	43.3	1.1	89.8	1.5[f]	73.2	1.2
12–23 month old	23	7.4	26.1	2.1	52.2	1.4	52.2	1.5	91.3	1.2	47.8	1.1	91.3	1.5[c]	65.2	1.0
24–35 month old	26	8.4	23.1	1.8	42.3	1.1	53.8	1.5	92.3	1.2	53.8	1.3	88.5	1.5[b]	73.1	1.2
7–11 years old	22	7.1	0.0	→0	31.8	0.8	45.5	1.3	54.5	0.7[a]	13.6	0.3[b]	45.5	0.7	54.5	0.9
Street shooting*	214	68.8	22.0	1.8[b]	56.1	1.6[e]	47.7	1.1	90.7	1.2[d]	42.1	1.1	82.2	1.2[b]	70.6	1.2[b]
Not exposed	97	31.2	12.4	1.0	34.0	1.0	45.4	1.0	77.3	1.0	38.1	1.0	71.1	1.0	58.8	1.0
0–11 month old	126	40.5	19.8	1.6	59.5	1.7[e]	49.2	1.1	95.2	1.2[f]	46.0	1.2	84.1	1.2[b]	74.6	1.3[b]
24–35 month old	15	4.8	20.0	1.6	46.7	1.4	46.7	1.0	100.0	1.3[b]	46.7	1.2	100.0	1.4[b]	60.0	1.0
3–6 years old	41	13.2	26.8	2.2[b]	46.3	1.4	43.9	1.0	82.9	1.1	36.6	1.0	78.0	1.1	61.0	1.0
7–11 years old	20	6.4	30.0	2.4	65.0	1.9[e]	50.0	1.1	70.0	0.9	25.0	0.7	65.0	0.9	80.0	1.4
Street shooting >two times*	210	67.5	22.4	1.9[b]	56.7	1.7[e]	47.6	1.0	90.5	1.2[d]	41.9	1.1	82.4	1.2[b]	71.0	1.2[b]
Not exposed	101	32.5	11.9	1.0	33.7	1.0	45.5	1.0	78.2	1.0	38.6	1.0	71.3	1.0	58.4	1.0
0–11 month old	125	40.2	20.0	1.7	59.2	1.8[e]	48.8	1.1	95.2	1.2[e]	45.6	1.2	84.0	1.2[b]	74.4	1.3[b]
24–35 month old	14	4.5	21.4	1.8	50.0	1.5	50.0	1.1	100.0	1.3	50.0	1.3	100.0	1.4[b]	64.3	1.1
3–6 years	39	12.5	28.2	2.4[b]	48.7	1.4	43.6	1.0	82.1	1.0	35.9	0.9	79.5	1.1	61.5	1.1
7–11 years	20	6.4	30.0	2.5	65.0	1.9[e]	50.0	1.1	70.0	0.9	25.0	0.6	65.0	0.9	80.0	1.4
House search*	188	60.5	20.7	1.3	51.6	1.1	49.5	1.1	89.4	1.1	44.1	1.2	81.9	1.1	71.8	1.2[b]
Not exposed	123	39.5	16.3	1.0	45.5	1.0	43.1	1.0	82.1	1.0	35.8	1.0	74.0	1.0	59.3	1.0
0–11 month old	39	12.2	28.2	1.7	61.5	1.4	41.0	1.0	92.3	1.1	51.3	1.4	89.7	1.2[b]	74.4	1.3
3–6 years old	71	22.8	21.1	1.3	50.7	1.1	56.3	1.3	95.8	1.2[c]	50.7	1.4[b]	84.5	1.1	76.1	1.3[b]
House search >two times*	140	45.0	21.4	1.3	56.4	1.3[b]	47.1	1.0	93.6	1.2[d]	47.9	1.4[b]	83.6	1.1	75.0	1.2[c]
Not exposed	171	55.0	17.0	1.0	43.3	1.0	46.8	1.0	80.7	1.0	35.1	1.0	74.9	1.0	60.2	1.0
0–11 month old	35	11.3	25.7	1.5	62.9	1.5[b]	40.0	0.9	91.4	1.1	54.3	1.5[b]	88.6	1.2	74.3	1.2
24–35 month old	17	5.5	17.6	1.0	64.7	1.5	47.1	1.0	100.0	1.2[b]	58.8	1.7[a]	88.2	1.2	88.2	1.5[b]
3–6 years old	54	17.4	20.4	1.2	55.6	1.3	53.7	1.1	98.1	1.2[d]	53.7	1.5[b]	85.2	1.1	77.8	1.3[b]
Arrest of family member*	77	24.8	15.6	0.8	48.1	1.0	64.9	1.6[e]	89.6	1.0	50.6	1.3[b]	83.1	1.1	79.2	1.3[c]
Not exposed	234	75.2	20.1	1.0	49.6	1.0	41.0	1.0	85.5	1.0	37.6	1.0	77.4	1.0	62.8	1.0
0–11 month old	11	3.5	27.3	1.4	63.6	1.3	72.7	1.8	100.0	1.2	72.7	1.9[b]	81.8	1.1	90.9	1.4
3–6 years old	31	10.0	12.9	0.6	38.7	0.8	64.5	1.6[b]	96.8	1.1	58.1	1.5[b]	90.3	1.2	67.7	1.1

Appendix Table 11. *(Continued)*.

Predictor	No.	%	Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Arrest of family member >two times*	30	9.6	20.0	1.1	63.3	1.3	73.3	1.7[d]	96.7	1.1	70.0	1.9[d]	73.3	0.9	90.0	1.4[d]
Not exposed	281	90.4	18.9	1.0	47.7	1.0	44.1	1.0	85.4	1.0	37.7	1.0	79.4	1.0	64.4	1.0
0–11 month old	9	2.9	22.2	1.2	66.7	1.4	88.9	2.0[b]	100.0	1.2	77.8	2.1[b]	77.8	1.0	100.0	1.6[b]
12–23 month old	2	0.6	0.0	→0	50.0	1.0	50.0	1.1	100.0	1.2	50.0	1.3	0.0	→0[b]	100.0	1.6
3–6 years old	11	3.5	18.2	1.0	63.6	1.3	63.6	1.4	100.0	1.2	72.7	1.9[b]	81.8	1.0	81.8	1.3
Torture, killing, intimidation of persons outside the family*	93	29.9	16.1	0.8	51.6	1.1	49.5	1.1	90.3	1.1	40.9	1.0	80.6	1.0	77.4	1.2[c]
Not exposed	218	70.1	20.2	1.0	48.2	1.0	45.9	1.0	84.9	1.0	40.8	1.0	78.0	1.0	62.4	1.0
0–11 month old	30	9.6	10.0	0.5	46.7	1.0	23.3	0.5[b]	90.0	1.1	46.7	1.1	76.7	1.0	66.7	1.1
3–6 years old	25	8.0	0.0	→0[b]	36.0	0.7	60.0	1.3	88.0	1.0	32.0	0.8	80.0	1.0	80.0	1.3
7–11 years old	22	7.1	31.8	1.6	72.7	1.5[b]	72.7	1.6[b]	90.9	1.1	36.4	0.9	81.8	1.0	90.9	1.5[c]
12–15 years old	2	0.6	0.0	→0	50.0	1.0	0.0	→0	50.0	0.6	50.0	1.2	0.0	0.0[a]	100.0	1.6
Torture, killing, intimidation of persons outside the family >two times*																
Not exposed	238	76.5	20.2	1.0	49.2	1.0	47.9	1.0	85.7	1.0	42.0	1.0	79.0	1.0	64.3	1.0
0–11 month old	30	9.6	10.0	0.5	46.7	0.9	23.3	0.5[b]	90.0	1.1	46.7	1.1	76.7	1.0	66.7	1.0
3–6 years	16	5.1	0.0	→0[b]	43.8	0.9	56.3	1.2	81.3	0.9	25.0	0.6	75.0	0.9	87.5	1.4
Torture, killing, intimidation of family member*	68	21.9	13.2	0.6	63.2	1.4[c]	58.8	1.3[b]	91.2	1.1	48.5	1.3	91.2	1.2[d]	80.9	1.3[c]
Not exposed	243	78.1	20.6	1.0	45.3	1.0	43.6	1.0	85.2	1.0	38.7	1.0	75.3	1.0	63.0	1.0
0–11 month old	9	2.9	22.2	1.1	77.8	1.7	66.7	1.5	88.9	1.0	77.8	2.0[b]	77.8	1.0	77.8	1.2
3–6 years old	26	8.4	11.5	0.6	57.7	1.3	61.5	1.4	96.2	1.1	46.2	1.2	96.2	1.3[b]	73.1	1.2
7–11 years old	14	5.4	7.1	0.3	57.1	1.3	64.3	1.5	85.7	1.0	28.6	0.7	92.9	1.2	92.9	1.5[b]
Torture, killing, intimidation of family member >two times*	27	8.7	22.2	1.2	85.2	1.9[f]	70.4	1.6[b]	96.3	1.1	81.5	2.2[f]	92.6	1.2	88.9	1.4[b]
Not exposed	284	91.3	18.7	1.0	45.8	1.0	44.7	1.0	85.6	1.0	37.0	1.0	77.5	1.0	64.8	1.0
0–11 month old	8	2.6	25.0	1.3	87.5	1.9[b]	62.5	1.4	87.5	1.0	87.5	2.4[c]	75.0	1.0	87.5	1.4
24–35 month old	3	1.0	66.7	3.6	100.0	2.2	66.7	1.5	100.0	1.2	100.0	2.7[a]	100.0	1.3	100.0	1.5
3–6 years old	11	3.5	18.2	1.0	90.9	2.0[d]	72.7	1.6	100.0	1.2	72.7	2.0[b]	100.0	1.3	90.9	1.4
7–11 years old	4	1.3	0.0	→0	75.0	1.6	100.0	2.2[b]	100.0	1.2	100.0	2.7[b]	100.0	1.3	100.0	1.5

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. # Among children with the characteristic (predictor). [a] P 0.05 [b] P<0.05 [c] P<0.01 [d] P<0.005 [e] P<0.0005 [f] P<0.0001

Appendix Table 12. *Significant predictors regarding direct exposures to violence of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Prevalence[#]: Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Detained*	18	5.8	16.7	0.9	55.6	1.1	77.8	1.7[c]	83.3	1.0	38.9	0.9	94.4	1.2	72.2	1.1
Not exposed	293	94.2	19.1	1.0	48.8	1.0	45.1	1.0	86.7	1.0	41.0	1.0	77.8	1.0	66.6	1.0
7–11 years old	4	1.3	0.0	→0	50.0	1.0	100.0	2.2[b]	100.0	1.2	75.0	1.8	100.0	1.3	75.0	1.1
Detained >two days*	3	1.0	66.7	3.6	66.7	1.4	33.3	0.7	33.3	0.4[b]	0.0	→0	100.0	1.3	100.0	1.5
Beaten or kicked by official*	20	6.4	25.0	1.3	85.0	1.8[d]	85.0	1.9[e]	95.0	1.1	80.0	2.1[e]	90.0	1.2	90.0	1.4[b]
Not exposed	291	93.6	18.6	1.0	46.7	1.0	44.3	1.0	85.9	1.0	38.1	1.0	78.0	1.0	65.3	1.0
12–23 month old	4	1.3	25.0	1.3	100.0	2.1[b]	100.0	2.3[b]	100.0	1.2	100.0	2.6[b]	100.0	1.3	100.0	1.5
24–35 month old	3	1.0	33.3	1.8	100.0	2.1	100.0	2.3	100.0	1.2	100.0	2.6[a]	100.0	1.3	100.0	1.5
3–6 years old	7	2.3	28.6	1.5	85.7	1.8[a]	85.7	1.9[b]	100.0	1.2	71.4	1.9	85.7	1.1	100.0	1.5

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. [#] Among children with the characteristic (predictor). [a] $P \sim 0.05$ [b] $P < 0.05$ [c] $P < 0.01$ [d] $P < 0.005$ [e] $P < 0.0005$ [f] $P < 0.0001$

Appendix Table 13. *Significant predictors regarding parents imprisonment and torture of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Parent tortured*	159	51.1	25.2	2.0[d]	49.7	1.0	57.2	1.6[e]	90.6	1.1[b]	49.1	1.5[d]	88.1	1.3[f]	71.7	1.2
Father imprisoned*	186	59.8	18.8	1.0	43.0	0.7[c]	52.2	1.3[b]	87.6	1.0	43.0	1.1	82.8	1.1[b]	65.6	1.0
Father tortured*	143	46.0	21.0	1.2	45.5	0.9	55.9	1.4[d]	91.6	1.1[b]	46.9	1.3[b]	87.4	1.2[d]	70.6	1.1
Father tortured after childs birth*	78	25.1	24.4	1.4	57.7	1.2	64.1	1.6[e]	88.5	1.0	56.4	1.6[d]	84.6	1.1	74.4	1.2
Father exposed to organised violence after childs birth*	94	30.2	25.5	1.6[a]	59.6	1.3[b]	63.8	1.6[f]	88.3	1.0	54.3	1.5[d]	83.0	1.1	74.5	1.2
Not exposed	217	69.8	16.1	1.0	44.7	1.0	39.6	1.0	85.7	1.0	35.0	1.0	77.0	1.0	63.6	1.0
0–11 month old	20	6.4	35.0	2.2	55.0	1.2	55.0	1.4	95.0	1.1	55.0	1.6	85.0	1.1	85.0	1.3[a]
24–35 month old	13	4.2	30.8	1.9	69.2	1.5	76.9	1.9[c]	84.6	1.0	46.2	1.3	84.6	1.1	84.6	1.3
3–6 years old	38	12.2	18.4	1.1	57.9	1.3	63.2	1.6[c]	94.7	1.1	60.5	1.7[d]	86.8	1.1	73.7	1.2
7–11 years old	13	4.2	23.1	1.4	53.8	1.2	53.8	1.4	61.5	0.7[b]	46.2	1.3	69.2	0.9	53.8	0.8
Mother imprisoned*	61	19.6	31.1	1.9[c]	59.0	1.3	55.7	1.2	93.4	1.1	60.7	1.7[e]	90.2	1.2[b]	70.5	1.1
Mother tortured*	33	10.6	39.4	2.4[c]	75.8	1.6[d]	75.8	1.7[e]	90.9	1.1	69.7	1.9[e]	97.0	1.3[c]	84.8	1.3[b]
Mother tortured after childs birth*	24	7.7	37.5	2.2[b]	79.2	1.7[d]	79.2	1.8[d]	91.7	1.1	75.0	2.0[e]	100.0	1.3[c]	87.5	1.3[b]
Mother exposed to organised violence after childs birth*	37	11.9	32.4	1.9[b]	64.9	1.4[b]	67.6	1.5[c]	91.9	1.1	64.9	1.7[d]	97.3	1.3[d]	75.7	1.2
Not exposed	274	88.1	17.2	1.0	47.1	1.0	44.2	1.0	85.8	1.0	37.6	1.0	76.3	1.0	65.7	1.0
7–11 years old	10	3.2	50.0	2.9[b]	80.0	1.7[a]	70.0	1.6	100.0	1.2	70.0	1.9[b]	100.0	1.3	80.0	1.2
12–15 years old	5	1.6	40.0	2.3	80.0	1.7	80.0	1.8	80.0	0.9	100.0	2.7[c]	100.0	1.3	80.0	1.2

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. # Among children with the characteristic (predictor). [a] P~0.05 [b] P<0.05 [c] P<0.01 [d] P<0.005 [e] P<0.0005 [f] P<0.0001

Appendix Table 14. *Significant predictors* regarding the childs social life of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Hindered school participation	161	51.8	20.5	1.2	55.9	1.3[b]	47.8	1.0	85.1	1.0	38.5	0.9	77.0	1.0	68.9	1.1
Hindered school participation >one month	152	48.9	19.7	1.1	57.2	1.4[c]	48.0	1.0	84.9	1.0	38.8	0.9	77.0	1.0	69.7	1.1
Hindered play participation	246	79.1	19.1	1.0	53.7	1.7[c]	52.0	1.9[e]	89.8	1.2[d]	41.1	1.0	83.3	1.4[e]	74.4	1.9[f]
Hindered play participation >one month	227	73.0	20.3	1.3	55.5	1.7[e]	53.7	1.9[f]	90.7	1.2[e]	41.9	1.1	84.1	1.3[e]	75.8	1.8[f]
Increased responsibility	69	22.2	18.8	1.0	58.0	1.2	52.2	1.1	89.9	1.1	29.0	0.7[b]	82.6	1.1	75.4	1.2

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. # Among children with the characteristic (predictor). [a] P~0.05 [b] P<0.05 [c] P<0.01 [d] P<0.005 [e] P<0.0005 [f] P<0.0001

Appendix Table 15. *Significant predictorss* regarding time since exposure of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Lived under conditions of war:																
Maximum 11 month since	2	0.6	0.0	→0	0.0	→0	0.0	→0	0.0	→0[b]	100.0	2.5	0.0	0.0[b]	50.0	0.7
Maximum 23 month since	23	7.4	8.7	0.4	60.9	1.3	65.2	1.4	87.0	1.0	69.6	1.8[d]	91.3	1.2	91.3	1.4[c]
Maximum 35 month since	78	25.1	15.4	0.8	46.2	0.9	52.6	1.2	85.9	1.0	41.0	1.0	87.2	1.1[b]	64.1	0.9
Taking shelter for bombing:																
Maximum 23 month since	17	5.5	11.8	0.6	47.1	1.0	70.6	1.5[b]	94.1	1.1	58.8	1.5	100.0	1.3[b]	76.5	1.2
Maximum 35 month since	57	18.3	17.5	0.9	42.1	0.8	59.6	1.4[b]	87.7	1.0	31.6	0.7	87.7	1.1	63.2	0.9
Residence change due to violence:																
Maximum 11 month since	12	3.9	16.7	0.8	50.0	1.0	50.0	1.1	100.0	1.2	0.0	→0[d]	75.0	1.0	75.0	1.1
Maximum 23 month since	61	19.6	13.1	0.6	62.3	1.4[b]	50.8	1.1	93.4	1.1	23.0	0.5[d]	90.2	1.2[b]	82.0	1.3[e]
Maximum 35 month since	100	32.2	18.0	0.9	63.0	1.5[d]	53.0	1.2	88.0	1.0	31.0	0.7[b]	82.0	1.1	81.0	1.3[e]
Been on the run with the parents:																
Maximum 11 month since	59	19.0	13.6	0.7	45.8	0.9	42.4	0.9	86.4	1.0	22.0	0.5[d]	74.6	0.9	66.1	1.0
Maximum 23 month since	128	41.2	15.6	0.7	53.9	1.2	50.0	1.1	86.7	1.0	28.9	0.6[e]	82.0	1.1	72.7	1.2
Maximum 35 month since	158	50.8	20.3	1.1	56.3	1.3[b]	51.3	1.2	87.3	1.0	31.0	0.6[e]	79.7	1.0	73.4	1.2[b]
Refugee camp in home country:																
Maximum 11 month since	4	1.3	0.0	→0	100.0	2.1	0.0	→0	100.0	1.2	0.0	→0	0.0	→0[d]	100.0	1.5
Maximum 23 month since	5	1.6	0.0	→0	80.0	1.6	0.0	→0	80.0	0.9	0.0	→0	0.0	→0[e]	80.0	1.2
Maximum 35 month since	7	2.3	14.3	0.7	71.4	1.5	28.6	0.6	85.7	1.0	28.6	0.7	28.6	0.4[c]	71.4	1.1
Refugee camp outside home country:																
Maximum 11 month since	230	74.0	20.4	1.4	52.2	1.3	49.6	1.3	92.2	1.3[f]	41.7	1.1	85.2	1.4[f]	67.8	1.1
Maximum 23 month since	263	84.6	20.5	2.0	54.0	2.4[f]	50.6	1.9[d]	90.9	1.5[f]	41.4	1.1	84.4	1.8[f]	69.6	1.3[b]
Maximum 35 month since	271	87.1	21.4	8.6[d]	54.2	3.6[f]	50.2	2.0[d]	91.1	1.7[f]	42.1	1.3	84.1	2.0[f]	70.5	1.7[e]
Violent death of a family member:																
Maximum 35 month since	15	4.8	13.3	0.7	73.3	1.5	73.3	1.6[b]	93.3	1.1	33.3	0.8	86.7	1.1	73.3	1.1
Death of father:																
Maximum 35 month since	10	3.2	10.0	0.5	100.0	2.1[d]	80.0	1.7[a]	100.0	1.2	30.0	0.7	100.0	1.3	90.0	1.4

Predictor	No.	%	Prevalence[#]: Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Violent death of father:																
Maximum 35 month since	9	2.9	11.1	0.6	100.0	2.1[d]	88.9	1.9[b]	100.0	1.2	33.3	0.8	100.0	1.3	88.9	1.3
Separation from father:																
Maximum 11 month since	20	6.4	20.0	1.1	70.0	1.5[a]	35.0	0.7	90.0	1.0	35.0	0.8	60.0	0.7[b]	75.0	1.1
Maximum 35 month since	71	22.8	18.3	1.0	54.9	1.2	54.9	1.2	90.1	1.1	46.5	1.2	83.1	1.1	78.9	1.2[b]
Separation from father >one month:																
Maximum 11 month since	13	4.2	0.0	→0	61.5	1.3	23.1	0.5	84.6	1.0	23.1	0.6	46.2	0.6[c]	76.9	1.2
Separation from mother:																
Maximum 11 month since	7	2.3	57.1	3.2[b]	71.4	1.5	42.9	0.9	100.0	1.2	28.6	0.7	100.0	1.3	71.4	1.1
Maximum 23 month since	14	4.5	50.0	2.9[c]	71.4	1.5	50.0	1.1	92.9	1.1	57.1	1.4	92.9	1.2	71.4	1.1
Maximum 35 month since	19	6.1	47.4	2.8[d]	73.7	1.5[b]	47.4	1.0	94.7	1.1	52.6	1.3	94.7	1.2	73.7	1.1
Separation from mother and father:																
Maximum 11 month since	7	2.3	57.1	3.2[b]	71.4	1.5	42.9	0.9	100.0	1.2	28.6	0.7	100.0	1.3	71.4	1.1
Maximum 23 month since	14	4.5	50.0	2.9[c]	71.4	1.5	50.0	1.1	92.9	1.1	57.1	1.4	92.9	1.2	71.4	1.1
Maximum 35 month since	19	6.1	47.4	2.8[d]	73.7	1.5[b]	47.4	1.0	94.7	1.1	52.6	1.3	94.7	1.2	73.7	1.1
Witnessing violent acts																
Bombing:																
Maximum 35 month since	78	25.1	15.4	0.8	42.3	0.8	50.0	1.1	83.3	1.0	30.8	0.7[b]	82.1	1.1	61.5	0.9
Bombing >two times:																
Maximum 35 month	78	25.1	15.4	0.8	42.3	0.8	50.0	1.1	83.3	1.0	30.8	0.7[b]	82.1	1.1	61.5	0.9
Street shooting:																
Maximum 23 month since	32	10.3	15.6	0.8	40.6	0.8	56.3	1.2	90.6	1.1	25.0	0.6[a]	84.4	1.1	68.8	1.0
Maximum 35 month since	63	20.3	25.4	1.5	49.2	1.0	47.6	1.0	90.5	1.1	30.2	0.7[a]	88.9	1.2[b]	63.5	0.9
Street shooting >two times:																
Maximum 35 month since	61	19.6	26.2	1.5	50.8	1.0	47.5	1.0	90.2	1.1	31.1	0.7	88.5	1.2[b]	65.6	1.0
House search:																
Maximum 23 month since	59	19.0	13.6	0.7	44.1	0.9	61.0	1.4[b]	86.4	1.0	50.8	1.3	86.4	1.1	74.6	1.1
House search >two times:																
Maximum 23 month since	37	11.9	18.9	1.0	51.4	1.1	56.8	1.2	91.9	1.1	51.4	1.3	89.2	1.2	83.8	1.3[b]

Appendix Table 15. *(Continued)*.

Predictor	No.	%	Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Arrest of family member:																
Maximum 23 month since	36	11.6	11.1	0.6	44.4	0.9	72.2	1.7[d]	88.9	1.0	58.3	1.5[b]	91.7	1.2[b]	77.8	1.2
Maximum 35 month since	42	13.5	11.9	0.6	50.0	1.0	71.4	1.7[d]	90.5	1.1	50.0	1.3	92.9	1.2[b]	81.0	1.3[b]
Arrest of family member >two times:																
Maximum 23 month since	10	3.2	30.0	1.6	80.0	1.7	100.0	2.2[e]	100.0	1.2	100.0	2.6[e]	100.0	1.3	100.0	1.5[b]
Maximum 35 month since	10	3.2	30.0	1.6	80.0	1.7	100.0	2.2[e]	100.0	1.2	100.0	2.6[f]	100.0	1.3	100.0	1.5[b]
Torture, killing, intimidation of persons outside the family:																
Maximum 23 month since	34	10.9	23.5	1.3	55.9	1.2	73.5	1.7[d]	94.1	1.1	41.2	1.0	85.3	1.1	91.2	1.4[d]
Maximum 35 month since	53	17.0	22.6	1.2	54.7	1.1	62.3	1.4[b]	90.6	1.1	32.1	0.8	83.0	1.1	83.0	1.3[c]
Torture, killing, intimidation of persons outside the family >two times:																
Maximum 23 month since	22	7.1	22.7	1.2	50.0	1.0	77.3	1.7[d]	95.5	1.1	40.9	1.0	81.8	1.0	90.9	1.4[b]
Maximum 35 month since	39	12.5	20.5	1.1	51.3	1.0	59.0	1.3	89.7	1.0	28.2	0.7	79.5	1.0	82.1	1.3[b]
Torture, killing, intimidation of family member:																
Maximum 23 month since	30	9.6	10.0	0.5	60.0	1.2	66.7	1.5[b]	96.7	1.1	40.0	1.0	100.0	1.3[d]	86.7	1.3[b]
Maximum 35 month since	45	14.5	13.3	0.7	60.0	1.3	55.6	1.2	91.1	1.1	37.8	0.9	93.3	1.2[c]	82.2	1.3[b]
Torture, killing, intimidation of family member >two times:																
Maximum 23 month since	8	2.6	12.5	0.7	75.0	1.5	87.5	1.9[b]	100.0	1.2	87.5	2.2[c]	100.0	1.3	87.5	1.3
Maximum 35 month since	14	4.5	21.4	1.1	78.6	1.6[b]	71.4	1.6	100.0	1.2	71.4	1.8[b]	100.0	1.3[b]	85.7	1.3
Child detained:																
Maximum 23 month since	11	3.5	0.0	→0	45.5	0.9	81.8	1.8[b]	90.0	1.1	54.5	1.4	90.9	1.2	63.6	0.9
Maximum 35 month since	15	4.8	0.0	→0	46.7	0.9	80.0	1.8[c]	93.3	1.1	40.0	1.0	93.3	1.2	66.7	1.0
Child beaten or kicked by official:																
Maximum 23 month since	6	1.9	16.7	0.9	83.3	1.7	100.0	2.2[b]	100.0	1.2	100.0	2.5[d]	100.0	1.3	100.0	1.5
Maximum 35 month since	7	2.3	28.6	1.5	85.7	1.8	85.7	1.9[a]	85.7	1.0	85.7	2.2[b]	100.0	1.3	85.7	1.3

Predictor	No.	%	Prevalence[#]: Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Father exposed to organised violence:																
Maximum 23 month since	23	7.4	17.4	0.9	56.5	1.2	73.9	1.7[c]	82.6	1.0	56.5	1.4	78.3	1.0	69.6	1.0
Maximum 35 month since	35	11.3	25.7	1.4	62.9	1.3	68.6	1.6[c]	88.6	1.0	60.0	1.6[b]	85.7	1.1	74.3	1.1
Mother exposed to organised violence:																
Maximum 11 month since	5	1.6	40.0	2.1	100.0	2.1[b]	80.0	1.7	80.0	0.9	100.0	2.5[b]	100.0	1.3	80.0	1.2
Maximum 23 month since	24	7.7	33.3	1.9	66.7	1.4	75.0	1.7[d]	95.8	1.1	75.0	2.0[e]	100.0	1.3[c]	75.0	1.1
Maximum 35 month since	28	9.0	32.1	1.8	67.9	1.4[b]	75.0	1.7[d]	96.4	1.1	67.9	1.8[d]	100.0	1.3[d]	75.0	1.1

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. # Among children with the characteristic (predictor). [a] P ~0.05 [b] P<0.05 [c] P<0.01 [d] P<0.005 [e] P<0.0005 [f] P<0.0001

Appendix Table 16. *Significant predictors* regarding parents occupation and ecomomical situation before escape of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Fathers occupation:																
Any occupation	277	89.1	18.1	0.7	49.5	1.1	45.1	0.7	85.2	0.9	38.6	0.7[b]	78.0	0.9	67.6	1.0
Private enterprise	55	17.7	20.0	1.1	58.2	1.2	63.6	1.5[c]	92.7	1.1	36.4	0.9	85.5	1.1	74.5	1.1
Administrative work	95	30.5	23.2	1.4	48.4	1.0	43.2	0.9	76.8	0.8[d]	47.4	1.2	69.5	0.8[e]	65.3	1.0
Manual work	127	40.8	13.4	0.6[b]	46.5	0.9	38.6	0.7[b]	88.2	1.0	33.1	0.7[b]	81.1	1.1	64.6	0.9
Mothers occupation:																
Any occupation	84	27.0	15.5	0.8	45.2	0.9	48.8	1.1	95.2	1.1[c]	52.4	1.4[b]	91.7	1.2[d]	59.5	0.9
Economical problems	202	65.0	15.8	0.6[a]	48.5	1.0	42.1	0.8[b]	85.6	1.0	42.1	1.1	77.7	1.0	65.8	1.0

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. # Among children with the characteristic (predictor). [a] $P \sim 0.05$ [b] $P < 0.05$ [c] $P < 0.01$ [d] $P < 0.005$ [e] $P < 0.0005$ [f] $P < 0.0001$

Appendix Table 17. *Significant predictors* regarding family situation at the time of the examination of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Father not present in Denmark	118	37.9	25.4	1.7[b]	57.6	1.3[b]	53.4	1.2	89.0	1.0	49.2	1.4[b]	83.1	1.1	74.6	1.2[b]
One parent not present in Denmark	122	39.2	27.0	2.0[d]	59.0	1.4[c]	53.3	1.2	89.3	1.1	49.2	1.4[b]	84.4	1.1[a]	73.8	1.2[b]
Mother's father present in Denmark	21	6.8	9.5	0.5	19.0	0.4[d]	47.6	1.0	95.2	1.1	33.3	0.8	85.7	1.1	38.1	0.6[d]
Father's mother present in Denmark	17	5.5	17.6	0.9	29.4	0.6	0.0	→0[f]	88.2	1.0	23.5	0.6	76.5	1.0	41.2	0.6[b]
Father's father present in Denmark	12	3.9	25.0	1.3	33.3	0.7	0.0	→0[d]	100.0	1.2	25.0	0.6	83.3	1.1	33.3	0.5[b]

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. # Among children with the characteristic (predictor). [a] P∼0.05 [b] P<0.05 [c] P<0.01 [d] P<0.005 [e] P<0.0005 [f] P<0.0001

Appendix Table 18. *Significant predictors* regarding change in parent's behaviour towards the child at the time of the examination of anxiety symptoms in 311 Middle Eastern refugee children, aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Prevalence[#]:													
			Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Father scolds the child more	41	13.2	22.0	1.2	53.7	1.1	61.0	1.4[a]	95.1	1.1	51.2	1.3	87.8	1.1	63.4	0.9
Father hits/punishes the child more	26	8.4	11.5	0.6	46.2	0.9	73.1	1.6[c]	100.0	1.2[b]	61.5	1.6[b]	100.0	1.3[c]	84.6	1.3[b]
Father cuddles the child more	84	27.0	15.5	0.8	45.2	0.9	42.9	0.9	88.1	1.0	29.8	0.7[b]	85.7	1.1	63.1	0.9
Father talks more with the child	106	34.1	14.2	0.7	38.7	0.7[c]	37.7	0.7[b]	86.8	1.0	27.4	0.6[d]	74.5	0.9	58.5	0.8[b]
Mother scolds the child more	80	25.7	16.3	0.8	47.5	1.0	62.5	1.5[d]	95.0	1.1[c]	47.5	1.2	88.8	1.2[b]	62.5	0.9
Mother hits/punishes the child more	47	15.1	14.9	0.8	57.4	1.2	68.1	1.6[d]	95.7	1.1[b]	63.8	1.7[e]	97.9	1.3[d]	87.2	1.4[d]
Mother cuddles the child more	143	46.0	23.1	1.5	49.7	1.0	51.0	1.2	88.1	1.0	31.5	0.6[d]	83.9	1.1[b]	66.4	1.0
Mother talks more with the child	192	61.7	18.8	1.0	49.5	1.0	45.3	0.9	90.1	1.1[b]	35.9	0.7[b]	79.2	1.0	67.2	1.0

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. [#] Among children with the characteristic (predictor). [a] $P \sim 0.05$ [b] $P < 0.05$ [c] $P < 0.01$ [d] $P < 0.005$ [e] $P < 0.0005$ [f] $P < 0.0001$

Appendix Table 19. *Significant predictors* regarding information to the child of anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Predictor	No.	%	Prevalence[#]:													
			Nightmare %	RR	Re-experience %	RR	Arousal %	RR	Regressive anxiety %	RR	Future anxiety %	RR	Separation anxiety %	RR	Clinical anxiety %	RR
Reason for escape	219	70.4	18.3	0.9	50.7	1.1	53.9	1.8[e]	87.7	1.0	42.9	1.2	80.8	1.1	66.2	1.0
Parent(s) beatings	39	12.5	25.6	1.4	61.5	1.3	59.0	1.3	79.5	0.9	56.4	1.5[b]	79.5	1.0	74.4	1.1
Parent(s) torture	38	12.2	23.7	1.3	65.8	1.4[b]	55.3	1.2	84.2	1.0	57.9	1.5[b]	86.8	1.1	78.9	1.2

* P-values by comparison of one group to all others. Results are shown for all dependent variables when found significant for at least one. [#] Among children with the characteristic (predictor). [a] P~0.05 [b] P<0.05 [c] P<0.01 [d] P<0.005 [e] P<0.0005 [f] P<0.0001

Appendix Table 20. *Significant multiple logistic regression* estimates (odds ratio, OR) of anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant Predictor	N	Nightmare OR	Re-experience OR	Arousal OR	Regressive anxiety OR	Future anxiety OR	Separation anxiety OR	Clinical anxiety[#] OR
Background:								
Syrian nationality	13						→∞[c]	
Kurds	103	3.5[e]		2.9[g]				1.9[b]
Palestinians	88				12.7[f]			
Prior Kuwait residence	26	→0[e]						
Father: years educated		1.1[g+]						
Middle stratum of society	213		0.5[a]			0.4[g]		0.4[d]
Number of siblings at child's birth								0.8[e+]
Grandparent's violent death before child's birth	23	5.4[e]						
Been to school	161	2.3[c]						
Violent experiences:								
Lived under conditions of war	278							2.5[b]
Residence change due to violence	235		2.8[e]					
Lived in a refugee camp in home country	65		0.3[g]					
Lived in a refugee camp outside home country	287	→∞[f]	3.9[b]	6.9[f]	18.0[g]	9.2[e]	18.7[g]	
Death in the family after child's birth	144					0.4[g]		
Father died	19				→∞[d]		→∞[d]	
Separation(s) from mother	27	4.4[e]						
Separated from father > one month	184				3.2[e]			
Witnessing bombing	257						3.3[d]	
Witnessing street shooting	214		2.6[d]					
Detained	18		0.3[b]			0.2[b]		
Beaten/kicked by official	20		9.4[e]	4.5[b]				
Father detained	186		0.2[g]					
Father exposed to organised violence after child's birth	94		4.2[g]	2.0[c]				
Father tortured after child's birth	78					3.9[g]		
Mother detained	61					4.9[g]		
Mother tortured	33		5.5[f]	4.1[e]				2.8[b]
Parent(s) tortured	159	2.6[d]					2.7[d]	
Present life context:								
Age at examination					0.8[g+]		0.8[g+]	
Both parents in Denmark	189	0.3[f]	0.4[e]	0.4[e]		0.4[e]	0.4[c]	0.4[d]
Father hits the child more	26			10.0[g]			→∞[c]	

Significant Predictor	N	Nightmare OR	Re-experience OR	Arousal OR	Regressive anxiety OR	Future anxiety OR	Separation anxiety OR	Clinical anxiety# OR
Father cuddles the child more	143						3.3^d	
Mother hits the child more	47					3.8^f	7.2^c	8.6^g
Mother scolds the child more	80				5.5^e			0.3^e
Mother talks more with child	192				2.6^c			
Mother cuddles the child more	143					0.3^g		
Child informed of reason for escape	219			3.5^g			2.5^c	

* Predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience*, war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organized violence; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. # Based on clinical validation of the standardized interview. + OR denotes the per year (number) probability increase as concerns the dependent variable. ^a $P \sim 0.05$; ^b $P < 0.05$; ^c $P < 0.025$; ^d $P < 0.01$; ^e $P < 0.005$; ^f $P < 0.001$; ^g $P < 0.0005$

Appendix Table 21. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of nightmare in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model				
		I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Iranian	32	3.0[b] (1.2–7.3)				
Kurds	103	3.0[d] (1.5–6.2)		2.4[b] (1.2–4.9)		3.5[d] (1.6–7.4)
Prior Kuwait residence	26	→0[d]		→0[d]		→0[d]
Father: years educated		1.1[f#] (1.1–1.2)		1.1[f#] (1.1–1.2)		1.1[f#] (1.1–1.2)
Grandparent's violent death before child's birth	23	4.9[d] (1.8–13.1)		5.1[d] (1.9–13.8)		5.4[d] (1.9–15.5)
Been to school	161	2.4[c] (1.2–4.6)		2.4[c] (1.2–4.8)		2.3[b] (1.1–4.6)
II: Violent experience						
Lived in a refugee camp						
outside home country	287		→∞[d]	→∞[e]		→∞[e]
Separation(s) from mother	27		4.0[d] (1.7–9.3)	4.4[d] (1.7–11.6)		4.4[d] (1.6–11.8)
Parent(s) tortured	159		2.0[b] (1.1–3.8)	2.0[a] (1.0–4.0)		2.6[c] (1.3–5.3)
III: Present life context						
Gender: boy	160	2.1[b] (1.1–4.0)				
Both parents in Denmark	189				0.4[d] (0.2–0.8)	0.3[e] (0.1–0.6)

* Simple model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience*, war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organised violence; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [#] OR denotes the per year probability increase as concerns the dependent variable.
[a] P<0.05; [b] P<0.025; [c] P<0.01; [d] P<0.005; [e] P<0.001; [f] P<0.0005

Appendix Table 22. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of nightmare in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model				
		I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Iranian	32	3.0[b] (1.2–7.3)				
Kurds	103	3.0[d] (1.5–6.2)		2.5[c] (1.2–5.1)		3.5[d] (1.6–7.4)
Prior Kuwait residence	26	→0[d]		→0[d]		→0[d]
Father: years educated		1.1[f#] (1.1–1.2)		1.1[f#] (1.1–1.2)		1.1[f#] (1.1–1.2)
Grandparent's violent death before child's birth	23	4.9[d] (1.8–13.1)		5.2[d] (1.9–13.8)		5.4[d] (1.9–15.5)
Been to school	161	2.4[c] (1.2–4.6)		2.6[c] (1.3–5.1)		2.3[b] (1.1–4.6)
II: Violent experience and context of violence						
Lived in a refugee camp outside home country	287		→∞[d]	→∞[e]		→∞[e]
Separation(s) from mother	27		3.9[d] (1.7–9.2)	5.3[e] (2.0–13.7)		4.4[d] (1.6–11.8)
Parent(s) tortured	159		2.1[b] (1.1–3.8)			2.6[c] (1.3–5.3)
Father manual work	127		0.5[a] (0.3–1.0)			
III: Present life context						
Gender: boy	32	2.1[b] (1.1–4.0)		2.0[a] (1.0–4.0)		
Both parents in Denmark	189				0.4[d] (0.2–0.8)	0.3[e] (0.1–0.6)

* Extended model, predictors: *background,* nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience and context of violence,* significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parent(s), sibling(s) left in home country, hindrance of school and play participation, parents' occupation and economical situation prior to escape; *present life context,* gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [#] OR denotes the per year probability increase as concerns the dependent variable. [a] $P < 0.05$; [b] $P < 0.025$; [c] $P < 0.01$; [d] $P < 0.005$; [e] $P < 0.001$; [f] $P < 0.0005$

Appendix Table 23. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of re-experience in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model				
		I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Kurds	103	2.8^g (1.6–4.8)		2.1^d (1.2–3.8)		
Mother muslim	279	0.3^d (0.2–0.8)		0.4^b (0.2–1.0)		
Middle stratum of society	213	0.5^c (0.3–0.9)				0.5^a (0.3–1.0)
Mother tortured before child's birth	9	9.7^e (1.8–53.7)				
Been to school	161	4.5^g (2.0–10.5)				
II: Violent experience						
Residence change due to violence	235		2.5^d (1.3–4.9)	2.0^b (1.0–3.7)		2.8^e (1.4–5.7)
Lived in a refugee camp in home country	65		0.5^c (0.2–0.9)			0.3^g (0.1–0.6)
Lived in a refugee camp outside home country	287		3.9^c (1.2–13.1)			3.9^b (1.1–13.9)
Violent death in the family after child's birth	35		2.6^b (1.1–6.2)			
Witnessing street shooting	214		2.5^d (1.3–4.8)	2.9^f (1.6–5.4)		2.6^d (1.3–5.0)
Detained	18		0.2^c (0.1–0.7)	0.2^c (0.1–0.8)		0.3^b (0.1–1.0)
Beaten/kicked by official	20		8.5^e (2.0–36.4)	9.9^f (2.2–44.2)		9.4^e (2.0–44.4)
Father detained	186		0.2^g (0.1–0.4)	0.2^g (0.1–0.4)		0.2^g (0.1–0.4)
Father exposed to organised violence after child's birth	94		4.1^g (2.0–8.2)	3.1^f (1.6–6.3)		4.2^g (2.1–8.6)
Mother tortured	33		6.1^g (2.1–17.8)	7.7^g (2.7–22.2)		5.5^f (1.9–16.2)
III: Present life context						
Age at examination 3–6 years	138	2.5^b (1.1–5.7)				
Both parents in Denmark	189				0.5^d (0.3–0.9)	0.4^e (0.2–0.7)
Child informed of parents torture	38				2.1^b (1.0–4.2)	

* Simple model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience*, war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organised violence; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [a] P ∼ 0.05 [b] P < 0.05; [c] P < 0.025; [d] P < 0.01; [e] P < 0.005; [f] P < 0.001; [g] P < 0.0005

Appendix Table 24. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of re-experience in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model I Background OR	Model II Violent experience OR	Model I–II Combined OR	Model III Present life context OR	Model I–III Combined OR
I: Background						
Kurds	103	2.8^g (1.6–4.8)				
Mother muslim	279	0.3^d (0.2–0.8)				
Middle stratum of society	213	0.5^c (0.3–0.9)				
Mother tortured before child's birth	9	9.7^e (1.8–53.7)				
Been to school	161	4.5^g (2.0–10.5)				
II: Violent experience and context of violence						
Residence chance due to violence <36 month ago	100		4.3^g (2.2–8.4)	4.3^g (2.2–8.4)		4.0^g (2.0–7.9)
Lived in a refugee camp in home country	65		0.4^c (0.2–0.8)	0.4^c (0.2–0.8)		0.3^e (0.1–0.7)
Lived in a refugee camp in h.c. <12 month ago	4		→∞^{c}	→∞^{c}		→∞^{d}
Lived in a refugee camp outside home country	287		3.7^b (1.1–13.1)	3.7^b (1.1–13.1)		3.5^b (1.0–12.4)
Parent died/disappeared	62		3.3^e (1.6–7.0)	3.3^e (1.6–7.0)		
Witnessing street shooting	214		3.5^g (1.8–6.9)	3.5^g (1.8–6.9)		3.8^g (1.9–7.5)
Witnessing street shooting <24 month ago	32		0.3^d (0.1–0.7)	0.3^d (0.1–0.7)		0.3^c (0.1–0.9)
Detained	18		0.2^c (0.0–0.7)	0.2^c (0.0–0.7)		0.2^c (0.0–0.8)
Beaten/kicked by official	20		8.9^e (2.0–40.3)	8.9^e (2.0–40.3)		11.0^f (2.4–50.9)
Father detained	186		0.3^g (0.1–0.5)	0.3^g (0.1–0.5)		0.3^g (0.1–0.5)
Father exposed to organised violence after child's birth	94		4.7^g (2.3–9.6)	4.7^g (2.3–9.6)		4.6^g (2.2–9.4)
Mother tortured	33		7.4^g (2.5–22.2)	7.4^g (2.5–22.2)		6.5^g (2.2–19.7)
III: Present life context						
Age at examination 3–6 years	138	2.5^b (1.1–5.7)				
Both parents in Denmark	189				0.5^d (0.3–0.9)	0.3^g (0.2–0.6)
Child informed of parents torture	38				2.1^b (1.0–4.2)	

* Extended model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience and context of violence*, significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parent(s), sibling(s) left in home country, hindrance of school and play participation, parents' occupation and economical situation prior to escape; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. ^{a} P∼0.05; ^{b} P<0.05; ^{c} P<0.025; ^{d} P<0.01; ^{e} P<0.005; ^{f} P<0.001; ^{g} P<0.0005

Appendix Table 25. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of arousal in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model				
		I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Kurds	103	2.0[d] (1.2–3.2)		1.9[b] (1.1–3.3)		2.9[f] (1.6–5.2)
Mother tortured before child's birth	9	5.2[b] (1.1–25.7)				
II: Violent experience						
Taken shelter for bombing	234		3.7[f] (1.7–7.8)	3.7[f] (1.8–8.0)		
Residence chance due to violence	235		0.3[d] (0.1–0.7)	0.4[b] (0.2–0.8)		
Been on the run with the parents	277		2.7[a] (1.0–7.0)			
Lived in a refugee camp outside home country	287		3.4[b] (1.2–9.9)	3.6[b] (1.2–10.4)		6.9[e] (2.1–22.8)
Beaten/kicked by official	20		4.0[b] (1.1–14.8)	4.7[b] (1.3–17.4)		4.5[a] (1.0–19.5)
Father exposed to organised violence after child's birth	94		2.6[e] (1.5–4.5)	2.1[c] (1.2–3.8)		2.0[b] (1.1–3.6)
Mother tortured	33		4.3[d] (1.7–11.1)	4.5[e] (1.8–11.3)		4.1[d] (1.5–10.9)
III: Present life context						
Both parents in Denmark	189				0.6[b] (0.3–0.9)	0.4[d] (0.2–0.7)
Father hits/punishes more	26				5.5[f] (2.1–14.3)	10.0[f] (3.3–30.9)
Child informed of reason for escape	219				2.9[f] (1.7–5.0)	3.5[f] (1.9–6.5)

* Simple model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience*, war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organised violence; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [a] $P < 0.05$; [b] $P < 0.025$; [c] $P < 0.01$; [d] $P < 0.005$; [e] $P < 0.001$; [f] $P < 0.0005$

Appendix Table 26. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of arousal in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Kurds	103	2.0[d] (1.2–3.2)		1.8[a] (1.0–3.3)		2.6[d] (1.4–4.8)
Mother tortured before child's birth	9	5.2[b] (1.1–25.7)				26.6[f] (4.0–178.5)
II: Violent experience and context of violence						
Taken shelter for bombing	234		5.1[f] (2.3–11.5)	4.9[f] (2.2–11.1)		3.9[e] (1.7–9.2)
Residence chance due to violence	235		0.2[f] (0.1–0.5)	0.2[f] (0.1–0.5)		0.2[f] (0.1–0.5)
Lived in a refugee camp outside home country	287					4.8[b] (1.3–17.8)
Lived in a refugee camp outside home country <24 month ago	263		2.5[a] (1.1–5.9)	2.5[a] (1.1–5.9)		
Beaten/kicked by official	20		10.6[d] (2.0–57.6)	10.8[e] (2.1–56.0)		12.4[d] (2.1–73.4)
Beaten/kicked by official 12–15 years old	1		→0[d]	→0[d]		→0[e]
Father exposed to organised violence after child's birth	94		2.9[e] (1.6–5.3)	2.6[d] (1.4–4.9)		2.9[e] (1.5–5.5)
Mother tortured	33		3.9[d] (1.5–10.1)	4.4[d] (1.7–11.7)		
Sibling(s) left in home country	28		3.2[c] (1.3–7.9)	3.6[d] (1.4–8.8)		5.6[f] (2.1–14.7)
Lost play opportunities >one month	227		2.6[d] (1.3–5.1)	2.6[d] (1.3–5.1)		3.0[d] (1.5–6.0)
Father self-employed	55		2.7[c] (1.3–5.4)	2.5[b] (1.2–5.1)		
Economical problems prior to escape	202		0.5[c] (0.3–0.8)	0.5[b] (0.3–0.8)		0.4[c] (0.2–0.8)
III: Present life context						
Both parents in Denmark	189				0.6[b] (0.3–0.9)	
Father hits/punishes more	26				5.5[f] (2.1–14.3)	7.4[f] (2.3–23.6)
Child informed of reason for escape	219				2.9[f] (1.7–5.0)	3.5[f] (1.8–6.8)

* Extended model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience and context of violence*, significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parents', sibling(s) left in home country, hindrance of school and play participation, parents' occupation and economical situation prior to escape; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [a] P<0.05; [b] P<0.025; [c] P<0.01; [d] P<0.005; [e] P<0.001; [f] P<0.0005

Appendix Table 27. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of regressive anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model				
		I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Palestinian	88	17.5[f] (2.3–131.2)		22.3[f] (2.8–174.7)		12.7[e] (1.6–99.0)
Middle stratum of society	213	0.4[b] (0.1–0.9)				
II: Violent experience						
Lived in a refugee camp in home country	65		5.6[c] (1.2–25.4)			
Lived in a refugee camp outside home country	287		10.2[f] (3.6–28.7)	12.5[f] (4.1–37.7)		18.0[f] (5.4–60.8)
Death in the family after child's birth	144		2.5[b] (1.1–5.6)	2.3[a] (1.0–5.2)		
Father died	19		→∞[b]	→∞[c]		→∞[c]
Separated from father > one month	184		3.4[d] (1.6–7.5)	3.8[e] (1.7–8.7)		3.2[d] (1.4–7.4)
III: Present life context						
Age at examination		0.8[e#] (0.8–0.9)	0.8[e#] (0.7–0.9)	0.8[f#] (0.7–0.9)	0.8[e#] (0.7–0.9)	0.8[f#] (0.7–0.9)
Number of siblings in Denmark					1.3[a#] (1.0–1.7)	
Mother scolds the child more	80				4.0[d] (1.3–11.8)	5.5[d] (1.6–19.3)
Mother talks more with the child	192				2.4[b] (1.2–4.8)	2.6[b] (1.1–5.9)

* Simple model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience*, war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organised violence; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [#] OR denotes the per year (per sibling) probability increase as concerns the dependent variable. [a] P<0.05; [b] P<0.025; [c] P<0.01; [d] P<0.005; [e] P<0.001; [f] P<0.0005

Appendix Table 28. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of regressive anxiety symptoms in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model				
		I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Palestinian	88	17.5g (2.3–131.2)		35.7g (4.3–299.5)		26.5g (2.9–242.9)
Middle stratum of society	213	0.4c (0.1–0.9)				
II: Violent experience and context of violence						
Lived in a refugee camp in home country	65		9.9f (1.8–53.1)			
Lived in a refugee camp outside home country <36 month ago	271		16.9g (6.1–47.2)	24.7g (7.9–77.1)		44.4g (11.9–165.6)
Death in the family at age 3–6 years	59		13.2g (2.5–70.2)	6.7e (1.6–27.8)		7.2e (1.5–34.0)
Death in the family <12 month ago	5		0.04c (0.0–0.8)			
Father died	19		→∞c	→∞d		→∞c
Separated from father >one month	184		2.5a (1.0–6.4)	5.0g (2.0–12.8)		4.9f (1.8–12.8)
Separated from father 0–11 month old	80		4.3b (1.1–17.5)			
III: Present life context						
Age at examination		0.8f# (0.8–0.9)	0.8g# (0.7–0.9)	0.8g# (0.7–0.9)	0.8f# (0.7–0.9)	0.8g# (0.7–0.9)
Number of siblings in Denmark					1.3b# (1.0–1.7)	
Mother scolds the child more	80				4.0e (1.3–11.8)	4.6c (1.2–17.2)
Mother talks more with the child	192				2.4c (1.2–4.8)	2.9c (1.2–7.3)

* Extended model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience and context of violence*, significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parent(s), sibling(s) left in home country, hindrance of school and play participation, parents' occupation and economical situation prior to escape; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. # OR denotes the per year (per sibling) probability increase as concerns the dependent variable. [a] $P<0.10$; [b] $P<0.05$; [c] $P<0.025$; [d] $P<0.01$; [e] $P<0.005$; [f] $P<0.001$; [g] $P<0.0005$

Appendix Table 29. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of future anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model				
		I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Iranian	32	3.7[e] (1.7–8.1)				
Middle stratum of society	213	0.4[f] (0.2–0.6)		0.3[f] (0.2–0.6)		0.4[f] (0.2–0.6)
II: Violent experience						
Lived in a refugee camp in home country	65		1.8[a] (1.0–3.4)			
Lived in a refugee camp outside home country	287		3.6[a] (1.0–12.4)	3.6[a] (1.0–13.0)		9.2[d] (2.0–42.5)
Death in the family after child's birth	144		0.5[d] (0.3–0.8)	0.4[f] (0.2–0.7)		0.4[f] (0.2–0.6)
Detained	18		0.2[d] (0.0–0.6)	0.2[b] (0.1–0.8)		0.2[a] (0.1–0.8)
Beaten/kicked by official	20		6.2[d] (1.8–21.4)	6.2[d] (1.8–21.5)		
Father tortured after child's birth	78		2.4[d] (1.3–4.5)	2.6[d] (1.4–4.8)		3.9[f] (2.0–7.5)
Mother detained	61		4.7[f] (2.3–9.4)	4.4[f] (2.2–9.0)		4.9[f] (2.3–10.1)
III: Present life context						
Both parents in Denmark	189				0.4[d] (0.3–0.7)	0.4[d] (0.2–0.7)
Mother hits the child more	47				3.4[f] (1.7–6.6)	3.8[e] (1.7–8.4)
Mother cuddles the child more	143				0.4[e] (0.3–0.7)	0.3[f] (0.2–0.5)
Child informed of parent(s) torture	38				2.1[a] (1.0–4.4)	

* Simple model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience*, war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organised violence; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [a] $P < 0.05$; [b] $P < 0.025$; [c] $P < 0.01$; [d] $P < 0.005$; [e] $P < 0.001$; [f] $P < 0.0005$

Appendix Table 30. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of future anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model				
		I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Iranian	32	3.7[f] (1.7-8.1)				
Middle stratum of society	213	0.4[g] (0.2-0.6)		0.3[g] (0.2-0.6)		0.3[g] (0.2-0.6)
II: Violent experience and context of violence						
Lived in a refugee camp outside home country	287		5.7[d] (1.4-23.4)	4.5[c] (1.1-18.1)		9.8[e] (1.9-50.1)
Death in the family after child's birth	144		0.3[g] (0.1-0.5)	0.2[g] (0.1-0.4)		0.2[g] (0.1-0.4)
Death in the family < 36 month ago	45		5.3[g] (2.1-13.2)	5.1[f] (2.0-13.4)		5.7[f] (2.0-16.1)
Detained	18		0.1[d] (0.0-0.6)	0.2[b] (0.0-0.9)		0.2[a] (0.0-1.1)
Beaten/kicked by official	20		11.9[g] (2.6-54.1)	12.8[g] (2.7-60.4)		7.0[c] (1.4-35.0)
Beaten/kicked by official at 12-15 years old	1		→0[e]	→0[e]		→0[e]
Father tortured after child's birth	78		4.2[g] (2.1-8.5)	4.6[g] (2.2-9.5)		4.6[g] (2.1-9.8)
Mother detained	61		5.3[g] (2.3-12.2)	5.0[g] (2.3-11.1)		7.3[g] (3.1-17.1)
Father disappeared	43		3.1[d] (1.3-7.3)	2.7[c] (1.1-6.3)		4.7[f] (1.9-11.9)
Increased responsibility	69		0.3[g] (0.1-0.5)	0.2[g] (0.1-0.5)		0.2[g] (0.1-0.4)
Father manual work	127		0.4[e] (0.2-0.8)	0.4[e] (0.2-0.7)		0.4[d] (0.2-0.8)
Mother has an occupation	84		2.1[c] (1.1-4.1)	2.1[b] (1.1-4.2)		
III: Present life context						
Both parents in Denmark	189				0.4[e] (0.3-0.7)	
Mother hits the child more	47				3.4[g] (1.7-6.6)	2.7[c] (1.1-6.5)
Mother cuddles the child more	143				0.4[f] (0.3-0.7)	0.3[g] (0.2-0.5)
Child informed of parents torture	38				2.1[b] (1.0-4.4)	3.0[b] (1.0-9.1)

* Extended model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparents and parental torture before child's birth, school participation; *violent experience and context of violence*, significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parent(s), sibling(s) left in home country, hindrance of school and play participation, parents occupation and economical situation prior to escape; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [a] P<0.10; [b] P<0.05; [c] P<0.025; [d] P<0.01; [e] P<0.005; [f] P<0.001; [g] P<0.0005

Appendix Table 31. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of separation anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model				
		I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Syrian	13	→∞c		→∞b		→∞a
II: Violent experience						
Lived in a refugee camp outside home country	287		10.8e (3.6–32.1)	10.1e (3.3–30.2)		18.7e (4.9–71.3)
Father died	19		→∞e	→∞e		→∞b
Separated from father >one month	184		2.8c (1.4–5.6)	2.5a (1.2–5.1)		
Witnessing bombing	257		4.0c (1.8–9.0)	4.6e (2.0–10.7)		3.3b (1.3–8.1)
Parent(s) tortured	159		2.6c (1.3–5.2)	2.8c (1.4–5.5)		2.7b (1.3–5.7)
Mother tortured after child's birth	24		→∞c	→∞a		
III: Present life context						
Age at examination		0.9d# (0.8–0.9)	0.8e# (0.8–0.9)	0.8e# (0.7–0.9)	0.9c# (0.8–0.9)	0.8e# (0.7–0.9)
Both parents in Denmark	189				0.3e (0.1–0.6)	0.4a (0.2–0.8)
Father hits child more	26				→∞a	→∞a
Mother hits child more	47				7.3a (0.9–56.5)	7.2a (0.9–58.3)
Father cuddles child more	143				3.5d (1.6–7.6)	3.3b (1.4–7.8)
Child informed of reason for escape	219				2.4a (1.2–4.7)	2.5a (1.1–5.5)

* Simple model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience*, war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organised violence; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. # OR denotes the per year probability increase as concerns the dependent variable.
[a] $P < 0.025$; [b] $P < 0.01$; [c] $P < 0.005$; [d] $P < 0.001$; [e] $P < 0.0005$

Appendix Table 32. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of separation anxiety in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model				
		I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Syrian	13	→∞[d]		→∞[b]		→∞[c]
II: Violent experience and context of violence						
Lived in a refugee camp outside home country	287		5.9[d] (1.9–18.0)	5.7[d] (1.8–17.5)		7.6[d] (2.1–28.3)
Father died	19		→∞[e]	→∞[e]		→∞[d]
Witnessing bombing	257		3.6[d] (1.6–8.5)	4.2[d] (1.7–10.0)		4.1[d] (1.7–10.1)
Witnessing bombing at 7–11 years old	22		0.2[b] (0.1–0.8)	0.3[a] (0.1–0.9)		0.2[b] (0.1–0.7)
Parent(s) tortured	159		3.7[f] (1.8–7.6)	4.0[f] (1.9–8.3)		4.1[f] (2.0–8.7)
Mother tortured after child's birth	24		→∞[b]	→∞[a]		
Lost play opportunities	246		3.7[d] (1.7–8.3)	4.0[e] (1.8–9.0)		5.1[f] (2.2–12.1)
Mother has an occupation	84		6.0[f] (2.2–16.9)	4.9[e] (1.8–13.5)		5.4[e] (1.9–15.6)
III: Present life context						
Age at examination		0.9[d#] (0.8–0.9)	0.8[d#] (0.7–0.9)	0.8[f#] (0.7–0.9)	0.9[d#] (0.8–0.9)	0.8[d#] (0.7–0.9)
Both parents in Denmark	189				0.3[f] (0.1–0.6)	
Father hits child more	26				→∞[b]	
Mother hits child more	47				7.3[b] (0.9–56.5)	19.0[f] (2.3–159.4)
Father cuddles child more	143				3.5[e] (1.6–7.6)	
Child informed of reason for escape	219				2.4[b] (1.2–4.7)	

* Extended model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience and context of violence*, significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parent(s), sibling(s) left in home country, hindrance of school and play participation, parents' occupation and economical situation prior to escape; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. # OR denotes the per year probability increase as concerns the dependent variable. [a] $P<0.05$; [b] $P<0.025$; [c] $P<0.01$; [d] $P<0.005$; [e] $P<0.001$; [f] $P<0.0005$

Appendix Table 33. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of clinical anxiety*[#] *in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model				
		I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Kurds	103	2.0[b] (1.2–3.5)				1.9[a] (1.0–3.4)
Mother muslim	279	0.4[a] (0.1–1.0)				
Middle stratum of society	213	0.3[f] (0.2–0.6)		0.3[e] (0.2–0.7)		0.4[c] (0.2–0.8)
Number of siblings at birth		0.8[d +] (0.8–0.9)		0.8[d +] (0.7–0.9)		0.8[d +] (0.7–0.9)
II: Violent experience						
Lived under conditions of war	278		3.0[d] (1.4–6.3)	3.2[d] (1.5–6.8)		2.5[a] (1.1–5.7)
Witnessing torture, killing or intimidation of family member	68		2.1[b] (1.1–4.1)			
Mother tortured	33		3.0[b] (1.1–8.3)	3.8[e] (1.3–10.5)		2.8[a] (1.0–8.0)
III: Present life context						
Both parents in Denmark	189				0.5[b] (0.3–0.9)	0.4[c] (0.2–0.8)
Mother scolds child more	80				0.2[f] (0.1–0.5)	0.3[d] (0.1–0.6)
Mother hits child more	47				14.4[f] (4.8–43.6)	8.6[f] (2.7–27.6)

* Simple model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience*, war related living conditions, witnessing violent acts, loss of and separation from parent(s) and direct and parental exposure to organised violence; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [#] Based on clinical validation of the standardized interview. [+] OR denotes the per sibling probability increase as concerns the dependent variable. [a] $P<0.05$; [b] $P<0.025$; [c] $P<0.01$; [d] $P<0.005$; [e] $P<0.001$; [f] $P<0.0005$

Appendix Table 34. *Significant multiple logistic regression* estimates (odds ratio, OR), with confidence intervals in parenthesis, of clinical anxiety[#] in 311 Middle Eastern refugee children aged 3–15 years, Denmark, 1992–93.*

Significant predictors	N	Model				
		I Background OR	II Violent experience OR	I–II Combined OR	III Present life context OR	I–III Combined OR
I: Background						
Kurds	103	2.0^c (1.2–3.5)		2.0^c(1.1–3.7)		2.1^c (1.1–4.0)
Mother muslim	279	0.4^b (0.1–1.0)				
Middle stratum of society	213	0.3^g (0.2–0.6)		0.2^g (0.1–0.5)		0.4^d (0.2–0.8)
Number of siblings at birth		0.8^{e+} (0.8–0.9)		0.8^{g+} (0.7–0.9)		0.8^{g+} (0.7–0.9)
II: Violent experience and context of violence						
Lived under conditions of war						
<24 month ago	23		6.1^c (1.2–31.1)	9.5^e (1.8–51.2)		6.8^c (1.1–41.2)
<36 month ago	78		0.4^d (0.2–0.8)	0.3^f (0.1–0.6)		0.3^e (0.2–0.7)
Witnessing torture, killing or intimidation of family member	68		2.4^c (1.2–5.1)			
Witnessing torture, killing or intimidation of family member >two times 12–23 month old	1		→0^b	→0^c		→0^c
Mother tortured	33		3.0^b (1.0–8.9)	4.4^d (1.4–13.7)		2.8^a (0.9–8.7)
Lost play opportunities >one month	227		5.0^g (2.8–8.8)	6.5^g (3.5–12.1)		7.0^g (3.6–13.5)
III: Present life context						
Age at examination				0.9^{c+} (0.8–1.0)		
Both parents in Denmark	189				0.5^c (0.3–0.9)	0.4^d (0.2–0.8)
Mother scolds child more	80				0.2^g (0.1–0.5)	0.2^f (0.1–0.5)
Mother hits child more	47				14.4^g (4.8–43.6)	12.6^g (3.4–46.8)

* Extended model, predictors: *background*, nationality, ethnicity, parents' education (years), religion, social class, number of siblings at birth, violent death of grandparent(s) and parental torture before child's birth, school participation; *violent experience and context of violence*, significant predictors from previous logistic regression adding child's age at the time of exposure, intensity of exposure were appropriate and time since exposure, as well as disappearance of parent(s), sibling(s) left in home country, hindrance of school and play participation, parents' occupation and economical situation prior to escape; *present life context*, gender, age, family structure at examination, change in parental behaviour towards the child, child's information of family exposures and reason for escape. Steps of analysis: see text. [#] Based on clinical validation of the standardized interview. [+] OR denotes the per year (per sibling) probability increase as concerns the dependent variable. [a] $P<0.10$; [b] $P<0.05$; [c] $P<0.025$; [d] $P<0.01$; [e] $P<0.005$; [f] $P<0.001$; [g] $P<0.0005$

Rehabilitation and Research Centre for Torture Victims (RCT).

Danish Red Cross.

REFUGEE CHILDREN FROM THE MIDDLE EAST

Parent interview questionnaire

Interviewer: _____

Date: |__|__|__|__|__|__|
       year   month   day

Interview no: |__|__|__|__| |__|__|
           fam.   child

Instruction to the interviewer:

The interview situation:
The aim should be to interview the child's mother and father together about the family's background and the child. If it is only possible for one parent to be present, this should preferably be the mother. If possible, the parents should be interviewed separately about their experiences of violence. In any case, the aim should be that the child is not present during the part of the interview which deals with the parents' experiences of violence.

Ask what the child's name is and use it when appropriate.

If the parents are separated during the interview, then try to bring them together again at the end in order for the questions regarding the interview to be asked when they are together.

How to fill out the questionnaire
The answers are indicated in one of the following ways:
 – make a circle around the number of the relevant answer
 – write a number in the boxes
 – write a cross in the boxes

Answer options which are not relevant are to be left blank. Example: Information about sibling no. 3 in families with 2 children.
Put an 'x' in the left hand margin when you have filled out a question – also if it has been left blank. At the end, check that there is an 'x' next to all the questions before you say goodbye to the interviewees. Sentences marked 'comment' and written with *italics* are for your information and are not to be read aloud. All sentences which are to be read aloud are written in **bold**.

In the right hand margin of the questionnaire there is space for your comments. Make a note next to a question if you are not sure how the answer should be coded. Describe why you are in doubt. Also make a note if you feel that the interview situation changes, for example if one of the participants seems restless or depressed, walks around the room, cries or in any other way is clearly affected by the situation. Make a note if you feel that one or more of the questions are too stressful for the interviewees, something which they may indicate by answering 'I don't know'.

The words 'mother' and 'father' refer to the present family situation, regardless of whether these are biological parents or step parents, except if the contrary is clearly marked in the questionnaire.

Thank you for your help.
Edith Montgomery

Comments: *The questions on this page are background information. You can fill out some of them without asking the family*

---

1. **When did the family arrive in Denmark**: |__|__|__|__|__|__|
   yr   mth   day

---

2. **When did the family leave the home country**: |__|__|__|__|__|__|
   yr   mth   day

---

3. **The child's year and month of birth**: |__|__|__|__|
   yr   mth

---

4. The sex of the child:
   1. Boy
   2. Girl

---

5. Who is being interviewed?:
   1. Father
   2. Mother
   3. Both

---

6. Is the child present?
   1. Yes
   2. No
   3. During some of the interview (from qst.   to qst.   )

---

7. How many siblings are present? |__|__|
   no.

---

8. Into which language does interpretation take place?

---

9. (*If both parents are present*)
   Do both parents speak this language?
   1. Both parents speak this language
   2. Only the father speaks this language
   3. Only the mother speaks this language

---

10. Nationality   Father   Mother

                            |__|__|__| |__|__|__|

Codes:

30   Turkey
31   Lebanon
32   Syria
33   Jordan
34   Israel
35   Iraq
36   Iran
37   Saudi Arabia
38   Bahrain, United Arab Emirates, Kuwait, Oman, Qatar, North Yemen, South Yemen
43   Stateless Palestinians (UNWRA)
44   Other stateless regardless of former nationality
50   Morocco
51   Algeria
52   Tunisia
53   Egypt
54   Libya
99   Other country: _____

---

11. Ethnicity   Father   Mother

                       |__| |__|

    Codes:
    1   Palestinian
    2   Kurd
    3   Other: _____   _____

---

12. The social background of the parents

                               Father   Mother

    School, no. of yrs |__|__| |__|__|

    Education, no. of yrs |__|__| |__|__|

    In employment: No |__| |__|
                         Yes |__| |__|

    If yes, kind of employment: _____   _____

---

13. Present marital status of the parents:

                               Father   Mother

                               |__| |__|

    Codes:
    1.   Single
    2.   Married
    3.   Divorced/separated
    4.   Widow/widower

14. **What is your religion?**

	Father	Mother
	└─┘	└─┘

Codes:
1. Muslim
2. Christian
3. Jew
4. Other (what)   _____   _____
5. Has no religion/atheist

15. **Which stratum of society did you belong to in your home country?**
1. Upper
2. Middle
3. Lower

16. **During the last year before leaving your home country, did you ever have difficulties paying for food or clothes?**
1. Yes
2. No
3. Don't know

Now I am going to ask you some questions about your background and family.

Comment: *Add what you already know.*

---

17. **Where are the child's** *(say the relevant family members)*?

Family-member	Resi-dence	Age	Sex	Dead (year)	Cause of death
Biological father	|_|			|_|_|_|	|_|
Stepfather	|_|			|_|_|_|	|_|
Biological mother	|_|			|_|_|_|	|_|
Stepmother	|_|			|_|_|_|	|_|
Grandmother, mother's side	|_|			|_|_|_|	|_|
Grandfather, mother's side	|_|			|_|_|_|	|_|
Grandmother, father's side	|_|			|_|_|_|	|_|
Grandfather, father's side	|_|			|_|_|_|	|_|
Sibling no. 1	|_|	|_|_|_|	|_|	|_|_|_|	|_|
Sibling no. 2	|_|	|_|_|_|	|_|	|_|_|_|	|_|
Sibling no. 3	|_|	|_|_|_|	|_|	|_|_|_|	|_|
Sibling no. 4	|_|	|_|_|_|	|_|	|_|_|_|	|_|
Sibling no. 5	|_|	|_|_|_|	|_|	|_|_|_|	|_|
Sibling no. 6	|_|	|_|_|_|	|_|	|_|_|_|	|_|
Sibling no. 7	|_|	|_|_|_|	|_|	|_|_|_|	|_|
Sibling no. 8	|_|	|_|_|_|	|_|	|_|_|_|	|_|
Sibling no. 9	|_|	|_|_|_|	|_|	|_|_|_|	|_|
Sibling no.10	|_|	|_|_|_|	|_|	|_|_|_|	|_|

Codes:

Residence:	Sex:	Cause of death:
1 Sandholmlejr with the family	1 boy	1 illness/age
2 Sandholmlejr in prison	2 girl	2 armed conflict
3 elsewhere in Denmark		3 execution/torture
4 in the home country		4 suicide
5 in third country		5 other
6 not known		

---

18. **Has the mother been away from the child during his/her childhood because of war, imprisonment or persecution?**
    1. Yes
    2. No
    3. Don't know

    If yes, **for how long?**
    1. Over one month in total
    2. Maximum one month in total

    Age of the child the first time: |_|_|_|

---

19. **Has the father been away from the child during his/her childhood because of war, imprisonment or persecution?**
    1. Yes
    2. No
    3. Don't know

    If yes, **for how long?**
    1. Over one month in total
    2. Maximum one month in total

    Age of the child the first time: |___|___|___|

(If both parents have been away from the child)

20. **Have you (the mother and the father) been away from the child at the same time?**
    1. Yes
    2. No
    3. Don't know

    If yes, **for how long?**
    1. Over one month in total
    2. Maximum one month in total

    Age of the child the first time: |___|___|___|

Now I will ask questions about your child's living conditions before you came to Denmark.

21. **Has your child during its childhood**:

	Age at start of the first time (year)
Lived during war/armed conflict	|___|___|
Taken shelter during bombings	|___|___|
Residence change due to war/persecution	|___|___|
Been on the run with the parents	|___|___|
Lived in a refugee camp in the home country	|___|___|
Lived in a refugee camp outside the home country	|___|___|
Other	|___|___|

Describe: _____

22. **Has your child been exposed to:**

	Age first time (yrs)	Duration in total (mths or days)		
Detention	|_|_|_|	|_|_|_|_|	**or**	|_|_|_|
Beatings/kicks by an official	|_|_|_|			
Participated in war actions	|_|_|_|	|_|_|_|_|	**or**	|_|_|_|
Torture	|_|_|_|			
Other violations	|_|_|_|	|_|_|_|_|	**or**	|_|_|_|

Describe: _____

23. **Has your child been eye witness to:**

	Age first time time (yrs)	one-two times	more than two times
House search	|_|_|_|	|_|	|_|
Arrest of family member	|_|_|_|	|_|	|_|
Torture, killing, intimidation of family member	|_|_|_|	|_|	|_|
Torture, killing, intimidation of other than family	|_|_|_|	|_|	|_|
Street shootings	|_|_|_|	|_|	|_|
Bombing	|_|_|_|	|_|	|_|

Now I will ask some questions about your relationship with your child.

24. **Has your child had to take on increased responsibility for the family regarding practical tasks?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

25. **Has your child had to participate in the maintenance of the family by taking on paid work?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

26. **Has your child lost the opportunity to play and be with friends due to armed conflict or persecution?**
    1. Yes

       If yes, **for how long**:
       1. For more than one month in total
       2. Maximum one month in total
    2. No
    3. Don't know

27. **Has your child been to school?**
    1. Yes, age from–to: |__|__|__| — |__|__|__|
    2. No
    3. Don't know

28. **Has your child been prevented from going to school because of armed conflict or persecution?**
    1. Yes

       If yes, **for how long:**
       1. Over one month in total
       2. Maximum one month in total
    2. No
    3. Don't know

29. Do you scold your child more often now that you did before?

	Father	Mother
Yes	☐	☐
No	☐	☐
Don't know	☐	☐

30. Do you hit or punish your child more now that you did before?

	Father	Mother
Yes	☐	☐
No	☐	☐
Don't know	☐	☐

31. Do you cuddle your child more now than you did before?

	Father	Mother
Yes	☐	☐
No	☐	☐
Don't know	☐	☐

32. Do you talk more with your child now that you did before?

	Father	Mother
Yes	☐	☐
No	☐	☐
Don't know	☐	☐

Now I will ask some questions about your impression of your child's wellbeing.

33. Do you think that your child has been affected by what the family experienced before you arrived in Denmark?
1. Yes, very much
2. Yes, to some extent
3. No
4. Don't know

34. Can your child talk?
1. Yes
2. Yes, but with difficulties
3. No

35. Does your child play?
1. Daily, or almost daily
2. Sometimes
3. Seldom or never
4. Don't know

36. **Does your child like to play with other children?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

37. **Does your child dream about the events?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

38. **Has your child changed so that he/she now acts as if he/she was much younger than before you had to flee?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

    If yes: **How?**
    Describe: _____

39. **Does your child sometimes talk about the frightening events he/she had in the home country?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

40. *(Children 8 years and above)* **Can your child read?**
    1. Yes
    2. No

41. **Does your child sometimes have sleep problems?**

	Often	Some-times	Seldom or never	Don't know
Problems of falling asleep	⌑	⌑	⌑	⌑
Problems of staying asleep	⌑	⌑	⌑	⌑
Has nightmares	⌑	⌑	⌑	⌑

42. **Is your child sometimes afraid of sleeping in the dark?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

43. **Has your child lost interest in some of the things which he/she used to enjoy?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

44. **Does your child easily get upset or angry?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

45. **Is your child sometimes afraid to be alone, for example when it is going to sleep?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

46. **Does your child try to avoid talking about frightening events when you start talking about them?**
    1. Yes
    2. No
    3. We don't talk about them
    4. Don't know

47. **Does your child sometimes eat greedily?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

48. **Does it frighten your child when he/she hears shooting and explosions from the military area in Sandholm?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

49. **Does your child isolate him/herself more from his/her surroundings than he/she used to**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

50. **Does your child easily come in conflict with his/her siblings?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

51. **Is your child easily frightened if, for example, a door slams or a plate falls on the floor?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

52. **Does your child sometimes feel that the future is hopeless?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

53. **Does your child easily get into fights with his/her friends?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

54. **Does your child seem frightened or nervous when he/she is with people he/she doesn't know?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

55. **Does your child cry a lot?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

56. **Does your child sometimes break his/her own or other's belongings on purpose?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

57. **Does your child sometimes express fear that unpleasant things might happen in the future?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

58. **Does your child bite his/her nails?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

59. **Does your child suck his/her thumbs, a rug or similar?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

60. **Does your child sometimes seem sad or miserable?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

61. **Does your child sometimes dominate other children?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

62. **Does your child sometimes express fear of dying?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

63. **Does your child sometimes suffer from:**

	Often	Some-times	Seldom or never	Don't know
Headaches	☐	☐	☐	☐
Stomachaches	☐	☐	☐	☐
Wetting the bed	☐	☐	☐	☐
Wetting the pants	☐	☐	☐	☐
Faeces in the pants	☐	☐	☐	☐
Reduced appetite	☐	☐	☐	☐

64. Does your child trust other people?
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

65. **Does your child want to be with you all the time?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

66. **Does your child sometimes refuse to do as you say?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

67. **Does your child seem nervous or frightened in new, unknown situations?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

68. **Does your child have confidence that he/she can manage when he/she is given new tasks?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

69. **Do you think your child is very independent for his/her age?**
    1. Yes, very much
    2. Yes, to some extent
    3. No
    4. Don't know

70. **Does your child sometimes shout at you or hit you?**
    1. Daily, or almost daily
    2. Sometimes
    3. Seldom or never
    4. Don't know

71. **Is your child able to sit quietly and watch a children's broadcast on television?**
    1. Yes, always or usually
    2. Yes, sometimes
    3. Seldom or never
    4. Don't know

72. **Is your child able to sit quietly and listen while you read a story?**
    1. Yes, always or usually
    2. Yes, sometimes
    3. Seldom or never
    4. Don't know

I have no more questions about the wellbeing of your child

73. **Is there anything which I haven't asked you about, but which you think is important that I know about in order for me to understand your child's situation?**
    1. Yes
    2. No
    If yes, describe:

    _____
    _____
    _____
    _____

Comment: *Now come some questions about the father's experiences of organised violence. Try to speak to the father alone.*

---

74. *Who answers the questions in this section?*
    (to be indicated without asking)
    1.   The father
    2.   The mother
    3.   Both

---

75. **Have you (the father) been:**

	Yes	No	Don't know
Arrested or imprisoned in the home country	☐	☐	☐
If yes, **for how long**	☐☐☐	☐☐☐	☐☐☐
	yrs	mths	days

If yes to the above:

76. **I will now mention some things which people are often subjected to under arrest and imprisonment and ask you if you have been subjected to these things**.

    Comment: *Mention everything*

	Age of the child the first time (yrs)	Child not yet born
Beatings or kicks	☐☐☐	☐
Electrical shocks	☐☐☐	☐
Attempts at suffocation	☐☐☐	☐
Burning, for example with cigarettes	☐☐☐	☐
Suspension	☐☐☐	☐
Deprivation of food and drink	☐☐☐	☐
Cold	☐☐☐	☐
Threats against you or your family	☐☐☐	☐
Witnessing torture	☐☐☐	☐
Other	☐☐☐	☐

    Describe: _____

If Yes to one of the questions:

77. **Do you think that the things you (the father) have been subjected to is torture?**
    1.   Yes
    2.   No
    3.   Don't know

If No to all the questions:

78. **Have you (the father) been tortured?**
    1. Yes
    2. No
    3. Don't know

---

79. **Is there anything else you think it is important for us to know about your (the father's) situation?**
    1. Yes
    2. No
    3. Don't know

    If yes, **describe**:

    _____
    _____
    _____
    _____

Comment: *Now come some questions about the mother's experiences of organised violence. Try to speak to the mother alone.*

---

80. *Who answers the questions in this section?*
    (to be indicated without asking)
    1. The father
    2. The mother
    3. Both

---

81. **Have you (the mother) been:**

	Yes	No	Don't know
Arrested or imprisoned in the home country	⊔	⊔	⊔
If yes, **for how long**	⊔⊔⊔	⊔⊔⊔	⊔⊔⊔
	yrs	mths	days

---

82. **I will now mention some things which people are often subjected to under arrest and imprisonment and ask you if you have been subjected to these things.**

Comment: *Mention everything*

	Age of the child the first time (yrs)	Child not yet born
Beatings of kicks	|__|__|__|	|__|
Electrical shocks	|__|__|__|	|__|
Attempts at suffocation	|__|__|__|	|__|
Burning, for example with cigarettes	|__|__|__|	|__|
Suspension	|__|__|__|	|__|
Deprivation of food and drink	|__|__|__|	|__|
Cold	|__|__|__|	|__|
Threats against you or your family	|__|__|__|	|__|
Witnessing torture	|__|__|__|	|__|
Other	|__|__|__|	|__|

Describe: _____

If Yes to one of the questions:

83. **Do you think that the things you (the mother) have been subjected to is torture?**
    1. Yes
    2. No
    3. Don't know

If No to all the questions:

84. **Have you (the mother) been tortured?**
    1. Yes
    2. No
    3. Don't know

---

85. **Is there anything else you think it is important for us to know about your (the mother's) situation?**
    1. Yes
    2. No

    If yes, **describe:**

    _____
    _____
    _____
    _____
    _____

Comment: *If the parents both took part in the first part of the interview, but answered the last questions separately, then try to bring them together again at this point.*

The following three questions are only asked if the parents previously answered 'Yes' to having experienced that particular thing.

---

86. **Have you told your child:**

	Yes	No
That a member of the family has been in prison	☐	☐
That a member of the family has been beaten, kicked	☐	☐
That a member of the family has been tortured	☐	☐
The reason why you had to flee	☐	☐

There are no more questions about you or your child.

---

87. **What was it like for you to answer these questions?**
    Describe:

    _____
    _____
    _____
    _____

---

88. **Were there any questions which you found particularly difficult to answer?**
    Describe:

    _____
    _____
    _____
    _____

---

89. Were there any questions which you found irrelevant?
   Describe:

---

90. Do you have any questions?

Thank you for taking part
91. Can we contact you again if we would like to talk to you at a later point in time?
   1.   Yes
   2.   No

Questions to the health care worker, to be filled out after the interview.

---

92. How do you think the interview went?
   1.   Well
   2.   Fairly well
   3.   Not very well
   4.   Badly
   Comments:

---

93. How was the contact between you and the family?
   1.   Good
   2.   Quite good
   3.   Not so good
   4.   Bad
   Comments:

Rehabilitation and Research Centre for Torture Victims (RCT).

Danish Red Cross.

REFUGEE CHILDREN FROM THE MIDDLE EAST

Validation questionnaire

Interviewer: _____

Date: |__|__|__|__|__|__|
       year   month   day

Interview no: |__|__|__|__| |__|__|__|
            fam.   child

The psychological functioning of the child:

The parents start by describing which problems the child has, and how the family's experiences have influenced the child.

Subsequently, the parents are asked specifically about the following:

Anxiety:

In which situations does the child show anxiety. Examples which should be covered:

separation from the parents
strangers
death
darkness
that unpleasant experiences may happen again
things the parents don't think other children are afraid of
startle response

Depression:

Does the child show signs of depression, and if so to what extent. The following areas should be covered:

sad, resigned
feelings of inferiority
feelings of guilt
inhibition
tendency to cry
passivity
tendency to isolate him/herself
lack of self-confidence
lack of trust in others
pessimistic attitude to life

Aggression:

Are the child's aggressions expressed directly, and if so in which situations and towards whom. The following areas should be covered:

anger
defiance
temper tantrums
destructiveness
self-destructiveness
open conflicts with friends
conflicts with siblings

Nervousness:

Does the child generally seem to be nervous. The following areas should be covered:

nail biting
sucking of thumb
eating problems

Psychosomatic reactions:

Does the child express his/her difficulties through physical reactions. The following areas should be covered:

headaches
stomachaches
enuresis
encopresis
sleep problems

Regressive characteristics:

Does the child react in a way which is inadequate for his/her age. For example:

childish behaviour
dependent upon the parents
lack of concentration

Problems at school:

If the child has been going to school, were there then problems with for example:

learning
motivation
concentration

Generally about the child's behaviour:

How does the child handle difficulties:

extravertly or introvertly
actively or passively

Signs of PTSD:

Are there specific trauma related symptoms:

reliving traumas (in play, drawings, speech)
compulsory, repeated movement or action
avoidant behaviour (denial, numbing)
extreme vigilance
startle response
sleep problems
sudden behavioural changes
anxiety (of darkness, strangers, separation)
pessimistic attitude to the future
lack of self-confidence
lack of trust in others

Imprisonment and torture of the parents

Each of the parents is asked to tell whether they have been arrested and/or imprisoned, and what they have been subjected to during the arrest/imprisonment. Each tells his/her story with as few disruptions as possible.

If one or both of the parents have been tortured, he/she is asked which symptoms he/she had immediately after the torture and which symptoms he/she has now.

Whether they have been tortured or not is determined on the basis of their own statements combined with an evaluation of the connection between the alleged torture and torture sequelae.

'Monitoring the Health and Rehabilitation of Torture Survivors' (Søren Bøjholm et al., RCT 1992) and the DSM-III's diagnoses: 'PTSD and depression' are used as aids in this evaluation.

After the interview the following questions are to be answered spontaneously, and afterwards a detailed case for each child is written. Subsequently the questions are answered again:

	spontaneously	subsequently
95.		
Does the child show a level of **anxiety** unusual for his/her age:	⌞⌟	⌞⌟
Does the child show **depressive characteristics** to an extent which is unusual for his/her age:	⌞⌟	⌞⌟
Does the child show **aggressive characteristics** to an extent which is unusual for his/her age:	⌞⌟	⌞⌟
Does the child show **nervousness** to an extent which is unusual for his/her age:	⌞⌟	⌞⌟
Does the child have pain, which is to be understood as **psychosomatic**:	⌞⌟	⌞⌟
Does the child suffer from **enuresis** and/or **encopresis**:	⌞⌟	⌞⌟
Does the child have **sleep problems**:	⌞⌟	⌞⌟
Does the child show **regressive characteristics**:	⌞⌟	⌞⌟
(*For children who have been to school*) Has the child had **problems at school**:	⌞⌟	⌞⌟
Is the child's behaviour primarily **introvert**:	⌞⌟	⌞⌟
Is the child's behaviour primarily **passive**:	⌞⌟	⌞⌟
Are there signs of **PTSD**:	⌞⌟	⌞⌟

	spontaneously	subsequently
96.		
Has the mother been tortured:	⌞⌟	⌞⌟
Has the father been tortured:	⌞⌟	⌞⌟
Has the child itself been tortured:	⌞⌟	⌞⌟

97. Can I contact the family again?	yes	no