CHAPTER 1

General Introduction
Introduction

During the 1980s, forty years after the end of the Second World War, the first clinical studies appeared in Israel and in other parts of the world describing the effects of Nazi persecution on later-life coping of Jewish child Holocaust survivors. Many of these studies resulted from interviewing the now adult child survivors in Israel and abroad for testimonies for oral history projects or for reparations purposes (Bergmann & Jucovy, 1982). About the same time, other clinicians carried out follow-up studies on the welfare of war orphans who managed to survive the ordeals of concentration camps and hiding, and received well documented post-Holocaust after-care (Hemmingdinger & Krell, 2000; Keilson, 1992; Moskovitz, 1983; see also Chapter 3). Even so, it took a long while (in fact till today) before the plight of the surviving children was acknowledged by themselves and their immediate environment. They had grown up in the shadow of the aftermath of the Holocaust, with its clinical focus mainly on the suffering of adult concentration camp survivors, and on their impossible task of dealing with the massive grief for those who were murdered.

During the last 20 years, child Holocaust survivors, although often found to have succeeded in adapting well socially (Krell, 1993, Suedfeld, 2002), were also recognized by clinicians and researchers as being affected deeply by their Holocaust experiences (Dasberg, 2001; Kestenberg & Gampel, 1983; Krell, 1985; Mendelsohn, 1996; Tauber, 1996).

Studies on child survivors as a rule include persons born between 1927 and 1945. On Capitulation Day, May 8, 1945, they were aged several months to 18 years. The youngest, born between 1935 and 1944, had often endured persecution, losses, separations, maltreatment, neglect and starvation during their first and most formative years. No specific, systematic research exists focusing exclusively on the effects of their Holocaust experience and its aftermath. As they are now reaching old age, which has proved to be a crucial stage in the experience of older Holocaust survivors before them (Aarts & Op den Velde, 1996), the time has come to study the consequences of Nazi persecution on the present state of health of these youngest survivors. Their peri-Holocaust experiences are different from older child survivors, both from trauma-experiential and child-developmental points of view, since they had no experience or recollections of a world that was more peaceful and benevolent to enhance the development of basic trust (Bowlby, 1988; Erikson, 1950; Sandler, 1960).
Three cohorts

In this set of studies we differentiate among three age cohorts. The oldest cohort consists of survivors born between 1935 and 1937; the second between 1938 and 1940 and the third between 1941 and 1944. This division reflects the background of progressively diminishing safety (Sandler, 1960) into which they were born. Survivors born during the first years of the Nazi regime were affected by their families’ exposure to anti-Semitism and discriminative measures, which increasingly impeded their safety and their physical, social and economic living circumstances. The younger of these child survivors were born during persecution, when families disintegrated under death threat.

Research questions

In this series of studies the following research questions were addressed.

1. The older age-cohorts were, as a rule, exposed longer to the horrors of the Nazi-regime, and keep more traumatic autobiographical memories. Do they, as a result, show more health, psycho-social, and post-traumatic stress-related complaints than a younger cohort?

2. The younger-age cohort missed out on the basic trust-enhancing experience of a relatively protected pre-war family life. They have probably suffered more stress-regulatory problems during critical early life periods, receiving less undivided perinatal maternal attention and attunement. Do they, as a result, show more health, psycho-social and post-traumatic stress-related complaints than an older-age cohort?

We expected the older child survivors, born before the war, to report a higher level of (age-related) physical health complaints and psycho-social problems than the younger ones. On the other hand, we expected the older cohort to report post-traumatic stress complaints to the same extent as the younger cohorts.

3. Are there any environmental or developmental factors which help the child survivors to cope with early childhood deprivations and enable them to adapt relatively well, despite everything they experienced?

Theoretical approaches to late consequences of early deprivations

While at the end of the 19th century research on the development of mental processes led to the insight that stress and traumata can cause disturbances in mental development (see for review of literature: Van der Kolk, Weisaeth, & Van der Hart, 1996), towards the second half of the 20th century mental trauma in early life began to achieve attention and understanding. Bowlby (1969/1982) noted how Freud only in his latest writings referred to the nature of trauma and thought that
children under the age of two were not vulnerable to traumatic experiences. Until
the 1940’s, most of the ideas about the effects of early childhood stress and trauma
had been gained retrospectively. Anna Freud was one of the first to directly
observe recently traumatized children (Freud & Burlingham, 1944). She noticed
that infants between 12 and 24 months of age reacted strongly to separations from
their mother or caregiver. According to her findings, adequate care and attention
could effectively and quickly remedy the symptoms. Bowlby (1960) perceived that
infants from the age of 6 months onwards are capable of grieving the loss of a
caregiver, and that traumatic separations at that age could prove detrimental to
future personal development. Stern (1985) concluded that the quality of attunement
and the “core-relatedness” between caregiver and infant from birth, next to
constitutional and genetically determined variables, influence the infant’s mental
health.

More recent research shows that the perinatal environment influences the
autonomic nervous system and neuro-endocrine functioning of the infant, shaping
responsivity to psychosocial stressors, and affecting resilience or vulnerability to
various forms of pathologies (Leckman, Feldman, Swain, Eicher, Thompson &
Mayes, 2004). A combination of stress susceptibility and psychosocial stressors is
associated with an increased risk for cardiovascular and endocrinial diseases
(Carney, Freedland & Veith, 2005). Research in developmental and evolutionary
biology found support for the concept of fetal programming (Philips & Jones,
2006). According to this concept, the risk of developing non-communicable chronic
diseases in adulthood is not only a result of genetic and lifestyle factors, but
may be an adaptation of the fetal organism to an expected postnatal environment
(Francis & Meaney, 1999; Gluckman & Hanson, 2004).

Health and stress research have often considered stress factors as negative
life events (McEwen, 2005). Noting an ambiguity in forms of stress, Antonovsky
(1979, 1987), “the father of the salutogenic paradigm” (Lindstrom & Eriksson,
2006), found it surprising that organisms were able to survive in spite of persistent
exposure to stressors and diseases; he concluded that chaos and stress were natural
conditions and part of life. In his opinion, the most important research question
after the Holocaust is: what kind of resources cause health (salutogenesis), rather
than: what are the reasons for disease (pathogenesis).

In this dissertation our research questions were guided by several theoretical
approaches:

Attachment theory

described close, protective relationships in terms of a biological concept. He
understood attachment systems as a correlate to the drive for food and sex, and as
a core form of relationship which exists in most mammals. He posited that parental sensitivity, the ability to be emotionally connected and being able to read signals of distress and fear provide, in terms of evolution, the best chance for a child to survive. The more the caregiver is able to reduce emotions of fear, anxiety and distress, the more the infant will feel an internal sense of security. Attachment behavior is elicited when the infant experiences distress, which endangers her “secure base” (Bowlby, 1988). Highly insecure attachment of a disorganized nature is considered one of the risk factors for the development of psychopathology; secure attachment may contribute to the development of emotional resilience (Greenberg, 1999).

Repeated experiences of the manner in which caregivers handle emotional distress are combined into implicit memory, the latter forms expectations in social interactions and leads to specific organizational changes in the behavior of the infant and in its brain function (Ainsworth, Blehar, Waters & Wall, 1978; Main, 1995). In this way the infant creates an “Internal Working Model” (IWM) of attachment relationships, a gradual build-up of mental representations of interactions between self and attachment figures (Bowlby, 1973; Bretherton, 1990). The IWM is thought to form the basis for the child’s future approach to social interactions. Attachment researchers have classified the ways in which disruptions and loss of care affect attachment patterns, and how they influence the IWM (e.g. Main & Solomon, 1990).

Concerning insecure attachments, three different categories of attachment behaviors are distinguished: avoidance, ambivalence and disorganization. In avoidant attachment, the child expects rejection by the caregiver when he or she would show negative emotions, and adapts to the relationship by avoiding or minimizing the expression of negative emotions and thus avoiding the anticipated rejection. In ambivalent attachment, attachment behavior is shaped by the uncertainty about the response of the caregiver, who is inconsistently responsive to the child’s attachment needs. The child maximizes the expression of negative emotions in order to draw the parent’s attention, and is unable to endure even short periods of separation out of a basic insecurity about the return of the parent when he or she is needed. Disorganized attachment reveals itself by the (momentary) absence of an organized attachment strategy because the caregiver is at the same time a source of fear and the only potential haven of safety. Paradoxical behaviors such as freezing and disorientation are displayed in situations of traumatizing, neglectful and frightening care; the infant is placed in a irresolvable conflict when seeking protection from a frightening care provider, as for example in an abusive relationship.

In the context of attachment relationships between caregiver and child during the Holocaust, Bar-On, Eland, Kleber, Krell, Moore, Sagi, et al. (1998) made
the important comment that attachment theory transcends the clinical categories of interpreting favorable and unfavorable child-rearing circumstances and allows for the perception of a continuum in adaptive behavior. In elaboration of Bowlby’s ethological perspective that protection of the young promotes survival of the species, Belsky (e.g. 1999; 2006) shows how in dangerous rearing conditions parents will adapt their attachment patterns toward their children to a template which prioritizes the children’s survival over a secure attachment mode. Indeed, following the Biblical example of Yoheved, the mother of Moses, many Jewish parents during the Holocaust persecution perceived it necessary to cease sensitive, responsive care-giving. They had to sever proximity-seeking behaviors and secure attachment patterns, and to entrust their children to often completely anonymous strangers. In acting this way their children’s lives could be saved, but their attachment relationships could become severely compromised.

Attachment theory offers an elucidating model for interpreting and understanding the influence of Holocaust-related separations and losses on relationships in later life. From this perspective a recent study provided new understanding of how unresolved loss or other Holocaust-related trauma continues to influence trauma perceptions and adaptive styles of child survivors in Israel until today (Sagi, Van IJzendoorn, Joels et al., 2002).

**Stress regulation**

The regulation of stress has become understood as a protective modality against environmental threats, and is mainly mediated by the autonomic nervous system and the neuro-endocrine limbic hypothalamic-pituitary-adrenocortical (LHPA) system. In animal and human species the quality of maternal care at the start of life has been found to have a dramatic impact on later stress reactivity and anxiety (Priebe, Romeo, Francis et al., 2005). Pre-clinical studies found that early life stress induces at later life stages a hyper(re)activity of corticotropin-releasing factor (CRF) systems, which cause alterations in other neurotransmitter systems, and result in increased stress responsiveness (Strand, 1999). In humans, high levels of stress response- regulating maternal hormone (the corticotropin-releasing hormone) at the time of pregnancy are thought to negatively affect fetal development (Glynn, Wadhwa & Sandman, 2000). Persistent sensitization of central nervous system (CNS) circuits resulting from early life stress may represent the underlying biological substrate of increased vulnerability to subsequent stress, as well as to the development of depressions, anxiety and impulse control disorders (Heim & Nemeroff, 2001, Vermetten & Bremner 2002). Severe traumatic experiences are thought to increase the risk of stress-induced impairment of brain growth, and impediment of memory encoding, storage and retrieval from the brain (see for review: De Bellis, 2005; Siegel, 2001). Siegel (2001) postulates that
traumatic memories remain unresolved because of a blockage in the pathway towards a consolidation of these memories into a coherent narrative of the self. Unresolved trauma or grief is thus regarded as a lack of cortical consolidation of a traumatic period in a person’s life story; it remains isolated from normal integrative functioning and interferes with the development of a coherent sense of self (see also Sagi, Van Ijzendoorn, Joels et al., 2002).

During the transitional phase at the start of old age, which the younger child Holocaust survivors have now reached, they may become more vulnerable to stress-related and LHPA system-regulated health impairments, in particular immunological diseases (Kiecolt-Glaser & Glaser, 2001). They also may become more vulnerable to what Dasberg has described as the “adult child survivor syndrome” (Dasberg, 2001). Stress-related symptoms like excessive crying, feelings of anxiety and panic, nightmares, loss of emotional control and affect regulation, depressions, somatic complaints, and feelings of isolation and loneliness have been found to become more profuse in help-seeking Holocaust survivors (Brom, Durst & Aghassy, 2002) than in other populations of aging survivors of trauma (Port, Engdahl & Frazier, 2001).

How much stress (re)activation in child Holocaust survivors could be attributed to Holocaust survivor experiences? Maybe a reflection of the emotional stress still affecting participants in our study is expressed through their answers to questions concerning three shocking events, which were included in the Shocking Events questionnaire, as part of our study: (1) the death of a close relative, (2) surviving the Holocaust, and (3) the Yom Kippur War, which counts as the most dramatic event in Israel’s war history (Schlosberg, 2005). Many of our respondents were involved in this war as (partners of) reservists in active duty. The Shocking Events Scale contains two measurements of emotional impact of each event: The difficulty of the event at the time it happened, and its influence today. The results depicted in Figure 1 show a high similarity between the present influence of the impact of the death of a close relative and the impact of the Holocaust, while it seems that the influence of the Yom Kippur War has been much more resolved. Thus, we must conclude that from the perspective of the child survivors the impact of the Holocaust is still very much existent, even after more than half a century. Note that several of the youngest participants, who did not remember the Holocaust, rated its difficulty at the time as non-existent (0).
From a different perspective, the salutogenic theory of Antonovsky (1979, 1987) offers a valuable contribution to further understanding of the differential effects of early childhood deprivation on later life. While conducting an epidemiological study on psycho-somatic problems in the menopause of women in Israel, Antonovsky, an American-born Israeli medical sociologist, found to his surprise that some concentration camp survivors had succeeded in maintaining good health and leading a good life despite all they had gone through (Antonovsky,
Maoz, Dowty et al. 1971). Hence, he raised the question: what is it that creates health, as opposed to: what are the causes of disease. The result, a salutogenic model, describes the process of staying in good health in spite of the exposure to stressors, which are regarded as endemic to the human condition and do not always seem to upset homeostasis. Accordingly, stressors can be considered salutary, neutral, as well as pathogenic.; persons are understood to move on a continuum of ease-disease. Antovovskiy’s ideas have been confirmed by McEwen (1998, 2005), who emphasizes that apart from damaging effects of chronic stress, the attempts of the different body systems to cope with stressors provide protection by allowing adaptation in the face of acute stress.

The salutogenic model focuses on aspects of problem-solving, and of finding solutions for problems. It identifies generalized resistance resources (GRRs), including, *inter alia*, material support, cognitive abilities, ego identity, social support, commitment and cohesion to one’s cultural roots, religion and philosophy, and genetic and constitutional properties. It also identifies a global and pervasive Sense of Coherence (SOC) in individuals, groups, populations or systems, as a capacity to successfully manage the infinite number of complex stressors encountered in any situation, independent of whatever is happening in life. The SOC is constructed around its key components: comprehensibility – the cognitive component; manageability – the instrumental or behavioral component; and meaningfulness – the motivational component (Lindstrom & Eriksson, 2006). The SOC is perceived as flexible, not constructed around a fixed set of mastering strategies, like the classic coping strategies (Antonovsky, 1993). SOC is supposed to be a learning experience; childhood and adolescence are viewed as crucial points in the development of a person’s SOC. By young adulthood, a SOC in its basic form is suggested to have developed and to have become relatively stable throughout adulthood. Empirical research over the last 15 years has provided some evidence for Antonovsky’s claim that the SOC can be perceived as a universal mechanism, applicable in various cultures (Eriksson & Lindström, 2005). In the current study, Antonovsky’s model and measure were used to trace sources of resilience in child survivors in order to examine pathogenesis as well as salutogenesis.

**Research participants**

In the present set of studies 203 Israeli child Holocaust survivors living in the greater Jerusalem area participated. Following the regulations of the Israeli Ministry of Health, all participants signed forms of informed consent after they had received an explanation of the purpose of the study. To enable a non-convenience sampling procedure, all participants were recruited by means of a list of names of potential participants provided by the Israel Ministry of Interior’s Population
Registry Department. Regulations in Israeli laws concerning invasion of privacy were maintained. This list made it possible to reach Jerusalemites born between 1935 and 1944 in thirteen European countries occupied by Nazi-Germany, who emigrated to Palestine/Israel after 1945 (see Figures 1 and 2 for some background information on the sample). Since a cortisol component was introduced only after the first 70 interviews had been conducted, cortisol samples were taken only from the consecutive 133 participants.

The purpose of the study was to understand later-life influences of early traumatization as a result of Holocaust persecution; it seemed, therefore, important to understand not only under which circumstances the participants succeeded to survive, but also if they were accompanied by a hopefully responsive parent able to buffer exposure to the worst experiences. Table 1 represents the different ways in which the participants were saved. Many participants had survived under more than one of these circumstances.

![Figure 2: Participants’ year of birth](image)

![Figure 3: Number of Participants and country of birth](image)
At the time of their involvement in the study, participants were between 60 and 70 years of age; 62.6% were female, compared to 57.6% in the Jewish population of Israel aged 65-74. Of all the participants, 73.9% were married at the time of the study, 11.8% divorced, 8.9% had become widowed and 5.4% decided not to marry (see Table 2). Children had been born to 95.6% of the participants and 79.8% have grandchildren. The considerable difference in percentage of widowed participants (8.9) and the Israeli peer group closest in age (21.8) is related first to age difference (participants are 5 years younger; mortality rates rise very steeply at this age), and second to the difference in divorce percentages (11.8 for participants, 7.7 for Israeli peers).

The educational level of the participants is considerably higher than that of the average level of Israeli immigrants of their age from European and American countries (see Table 3). One should note that the level of education of the adult population of Jerusalem is higher than that of the rest of the country, as employment is mainly found in the civil service, institutions for higher secular and religious learning, and high-tech industries.

Table 1. Survival circumstances of participants

<table>
<thead>
<tr>
<th></th>
<th>alone</th>
<th>with 1 parent</th>
<th>with 2 parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghetto</td>
<td>21</td>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>Hiding with Gentile families</td>
<td>54</td>
<td>33</td>
<td>17</td>
</tr>
<tr>
<td>Hiding in a monastery</td>
<td>11</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Hiding in other institutions (e.g. hospital)</td>
<td>7</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Concentration camp</td>
<td>3</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Prison</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>In flight in the open (woods, mountains)</td>
<td>13</td>
<td>46</td>
<td>30</td>
</tr>
<tr>
<td>Siberia, Tashkent</td>
<td>0</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>12</td>
<td>23</td>
</tr>
</tbody>
</table>
Table 2: Marital status of participants and of same-age group Israeli peers; in percent*

<table>
<thead>
<tr>
<th></th>
<th>Married</th>
<th>Divorced</th>
<th>Widowed</th>
<th>Single</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants of the study</td>
<td>73.9</td>
<td>11.8</td>
<td>8.9</td>
<td>5.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Israeli peers aged 65-74</td>
<td>67.7</td>
<td>7.7</td>
<td>21.8</td>
<td>2.8</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* Brodsky et al., 2006

Table 3: Level of education of participants and of immigrants from European and American countries*; in percent

<table>
<thead>
<tr>
<th></th>
<th>Grammar school</th>
<th>High school</th>
<th>Higher education</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants of the study</td>
<td>2.5</td>
<td>24.6</td>
<td>72.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Immigrants from Europe and America, aged 65-74</td>
<td>16.0</td>
<td>43.0</td>
<td>41.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* Brodsky et al., 2006

Vignette

In order to illustrate some of the Holocaust experiences of child survivors we present here a brief case study of one of our participants. Gisela* was born in 1937 in Lodz, Poland. Her brother was born two years later. The family was sent to the Lodz Ghetto in the spring of 1940. After some time they succeeded to escape to , and managed to keep alive in the forests of eastern Poland, where they kept hiding in holes. Gisela remembers how her father succeeded to keep the children’s spirit by telling stories, and teaching them Hebrew songs and poems. When the brother fell ill, the mother went to a nearby village to look for food and medication. That day, Nazi soldiers searched their hiding area. She, her father and brother were caught, and with others led to a pit, where they were shot. While her father and brother were killed, she fell, but stayed unhurt. After a night and day, she succeeded to crawl out of the pit and reach the nearest village, just like her father had told her to do in case of emergency. She was taken in by a* childless couple that took care of her. Several months after the end of the war her mother found her; she took her to Krakow where she worked in an orphanage. In 1947 they tried to reach

* Gisela gave her permission for using her story in this vignette.
Palestine, but the ship on which they sailed was caught by the British. They were sent to a detention camp for illegal Jewish emigrants in Cyprus. In 1948 they were brought to Israel. Gisela’s mother soon remarried. Gisela did not get along with her mother’s husband; she was taken in by a kibbutz, where she finished high school. She married at age 19, had 3 children, and now has 7 grandchildren. She recently suffered some major losses of close relatives.

When her second child went to elementary school, Gisela decided to study to become a nursery school teacher, and worked for many years as a kindergarten teacher. Today, although far beyond retirement age, she is still working and developing innovative kindergarten enrichment programs. She also lectures at high schools on her Holocaust past, and accompanies high school student groups at visits to concentration camps in Poland.

**Introduction to the three studies**

Chapter 2 of this dissertation examines the implications of early childhood exposure to the traumatic stress of Holocaust persecution and its aftermath for the adrenocortical system, with assessment of diurnal cortisol patterns and cortisol reactivity to a stressor.

We expect to find the youngest child survivors, who experienced the Holocaust at the most critical stage in their lives, to show a deviating diurnal cortisol pattern, related to suffering from PTSD, depression and physical illnesses. We also expect the youngest child survivors to show more elevated cortisol responses to a stressful challenge.

In Chapter 3 we investigate how exposure to Holocaust-related deprivation and post-war care arrangements affect the present well-being of the survivors. Our interest particularly concerns differences among the age groups in terms of physical health and various aspects of psycho-social functioning, including attachment styles, social belonging, post-traumatic stress symptomatology and depressive complaints.

Chapter 4 focuses on questions of what were the most severe traumatic experiences in early childhood during the Holocaust, how do they relate to post-traumatic stress at later age and how does sense of coherence affect traumatic experiences and post-traumatic stress. We examined whether the association between Holocaust experiences and post-traumatic stress was mediated by a sense of coherence (with more severe Holocaust experiences leading to a lower sense of coherence, and with a lower sense of coherence associated with more post-traumatic stress symptoms), or whether sense of coherence moderates the impact of Holocaust experiences on post traumatic stress symptoms. The latter possibility would attribute a protective quality/value to the sense of coherence.
It should be noted that the three studies are interrelated as they examine the same group of Holocaust child survivors, but each study also illuminates a specific aspect of their survival and current adaptation, with the first study focusing on neurobiological sequelae, the second study documenting the potentially protective role of post-war care arrangements, and the third study emphasizing the salutogenic coping mechanisms of the survivors.