

# CHILDHOOD BETWEEN TWO COUNTRIES

Resilience and mental well-being of Finnish remigrant children and adolescents

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OULU 2000



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*Abstract*

The objective of this thesis was to evaluate the effects of return migration on the mental well-being of Finnish children and adolescents in the short and long term. The thesis presents results on the prevalence of mental symptoms and how mental well-being is associated with social contacts and language use among returning migrants. The children and adolescents in this study had lived part of their lives in Sweden. Many Finnish young adults migrated to Sweden in search for work in the 1960s and 1970s, when job opportunities were better in Sweden than in Finland. In the 1980s the direction of migration flow changed, and many of the migrants moved back with their families.

The sample consisted all the 320 Finnish remigrant children who remigrated from Sweden to northern Finland in the years 1984 and 1985 and who attended comprehensive school after their remigration. A control group was formed by assigning each remigrant child a non-migrant counterpart of the same sex, age and class level in Finland. Information was gathered in three phases: In the first phase in 1986, questionnaires were sent to the children and their parents and teachers. In the second phase in 1992, questionnaires were sent to the adolescents and their parents, but not to the teachers, because many had already finished school. Thirdly, information on the hospital admissions of these children was obtained in the years 1986-96 from the Finnish Hospital Discharge Register (FHDR), which is held by the state.

The main outcome variables were obtained from Children's Depression Inventory (CDI) and Children's Behavioural Questionnaire for Parents (RA2) and Teachers (RB2). Remigrant children had more depression and behavioural disturbances than their native peers shortly after remigration. Six years later they still had more depression. During the 10-year period after remigration, 13 remigrants had had inpatient care because of a psychiatric diagnosis compared to only two controls with such a diagnosis. Age at remigration and sex had an influence on the manifestation of psychiatric symptoms after remigration. Especially preadolescent boys had more psychiatric symptoms shortly after migration. After remigration to Finland, the remigrants had equally many friends as their controls, but they still felt more lonely as long as six years after remigration. Simultaneous maintenance of both the native language and the second language together with the two cultures experienced in childhood enhanced the remigrant's mental well-being. However, the principle of one person - one language was essentially important.

*Keywords:* migration, mental health, social support, language

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This work is dedicated to my late parents.

Oulu, March 2000      Lauri Vuorenkoski



## **Abbreviations**

CI	confidence interval
CDI	Children's Depression Inventory (Kovacs)
RA2	Children's Behavioural Questionnaire for Parents (Rutter)
RB2	Children's Behavioural Questionnaire for Teachers (Rutter)
FHDR	Finnish Hospital Discharge Register
SES	Socio-economic status



## **List of original papers**

- I Vuorenkoski L, Moilanen I, Myhrman A, Kuure O, Penninkilampi V & Kumpulainen E (1998) Long-term mental health outcome of returning migrant children and adolescents. *Eur Child Adol Psychiatry* 7:219-224.
- II Vuorenkoski L, Kuure O, Moilanen I, Penninkilampi V & Myhrman A (2000) Bilingualism, school achievement and mental well-being - A follow-up study of return migrant children. *J Child Psychol Psychiatry* 41:261-266.
- III Vuorenkoski L, Penninkilampi V, Ebeling H & Moilanen I: Hospital admissions among returning migrant children and adolescents. *Int Migr Rev* (In press).
- IV Vuorenkoski L, Penninkilampi V, Ebeling H, Myhrman A & Moilanen I: Social support and mental well-being among returning migrant children (Submitted for publication).

Additionally, some previously unpublished data concerning protective factors is presented.



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## 1. Introduction

This study describes Finnish children and adolescents who have lived part of their lives in Sweden. The majority of them had moved to Sweden at an early age or had been born there and had then moved back to Finland at school age. Many young Finns migrated to Sweden in search for work in the 1960s and 1970s, when job opportunities were better in Sweden than in Finland. During the years 1966-75, a total of 182,000 Finnish people migrated to Sweden (Lasonen 1978a). In the 1980s, however, the situation changed and many Finns moved back with their families. In the years 1980-85, a total of 5,000 school-aged children remigrated from Sweden to Finland (Korkiasaari 1986). At the end of the 19<sup>th</sup> century, there was a similar large migration wave from Finland to North America.

Migration brings several obstacles to the lives of individuals. This is especially true of migrants who move between environments which differ markedly from one another. These migrants must learn to adapt to a different, alien environment where the people, language, customs and society may differ notably from the environment where they originally came from. Moreover, the difficulty of migration is not only experienced by the migrants but also by the local native population, who must learn to accommodate the migrants and to adapt to individuals from a different culture.

Children who migrate make up a special group among migrants. Usually, the parents decide about migration, and the children only follow them. This gives advantage to the parents, for whom migration serves a function in life (such as career promotion or a desire to experience something new or escape problems at the place of origin). Children may benefit from this through their parents.

Secondly, children are still at a developing stage and their identity may not have fully integrated. Though adults may also have identity problems, they usually have stronger identities anchored to their place of origin. The parents have, in this case, Finnish identities and have better contacts to Finland and Finnish people. Many migrant children do not have these experiences. They migrate while their identity is still developing. A strong identity may make it easier to adapt to the new environment and develop a "migrant's identity" based on the original identity.

Thirdly, the destination culture may have markedly different meanings for children and parents. Migrant children have built their identities partly through the Swedish environment at school. This causes a pressure to assimilate to the host culture (i.e. to reject the culture of

the parents and to accept the host culture), and there may ultimately be two different cultures in one family, that of the children and that of the parents. The parents have an identity already, but the children's identity is still shaping and the destination culture will have a markedly greater impact on their identities. One solution to this is to divide one's identity into two different parts: that of home and that of school and friends (Seppälä 1983).

An important question in this situation is how these two spheres of the environment develop. What is the style of acculturation: did the children assimilate, integrate (accepting both cultures) or, in worst case, marginalize (Berry & Kim 1988) in the Swedish society? In other words, how do children manage to cope with the tension of two cultures? The need to have preserved their Finnish roots and Finnish identity is obvious in remigration.

Many of the children of the present study had been born in Sweden or migrated there at an early age. Returning to Finland meant homecoming for the parents, but had a different meaning for the children. For them, Finland may have been a foreign country where they had no connections, especially if they could not speak or write Finnish fluently. In this situation, there is the inherent danger that these children may drop between two cultures.

## **2. Review of the literature**

### **2.1. Life events and children**

In this study, remigration is considered a major life event in human life. One approach to studying stresses and adversities is developmental psychopathology, which gives special attention to the individual variance in the responses to stress and adverse life events. The key notion of developmental psychopathology is that some children are seemingly resilient to the adversities of life (Masten *et al.* 1990). It is a broad research approach that uses both developmental and psychopathological perspectives to discover the mechanisms and processes that explain psychiatric symptoms (Rutter 1988, Burack 1997).

Different ways of adaptation to similar adversities are due to individual characteristics and the context in which the individual is living. Different persons receive, perceive, process and attach different meanings to adversities (Kazdin *et al.* 1997). The paths from influence to outcome have been described with two concepts: multifinality and equifinality (Harrington *et al.* 1996, Feiring & Lewis 1996, Richters 1997, Sroufe 1997, Cicchetti & Toth 1998). Multifinality means that diverse outcomes are likely to result from a single source of influence, while equifinality means that the same outcome may rise from different sources of influence. The pathways are not revealed by simply documenting different factors independently, but we must study the interrelations between these factors (Harter & Whitesell 1996). We must also notice that human beings are individuals and not structurally homogeneous (Richters 1997).

Developmental psychopathology tries to discover the dynamics of intrapersonal and interpersonal processes and mechanisms likely to lead to pathology. The key elements consist of adverse life events, age differences, temporal continuities/discontinuities, continuities/discontinuities between normality and pathology, interaction of different factors and mechanisms (social and intraindividual) and situational specificity/pervasiveness of the symptoms (Rutter 1988). This dynamic interplay of the different factors which constitute a holistic view of the child and his/her environment is described by the transactional model (Cicchetti & Toth 1997). The transactional model assumes that biological, emotional, cognitive, linguistic and representational factors are interrelated and that they constitute a

mutually interacting system. The child is not only influenced by the environment, but the environment is also influenced by the child.

Thus, the aim is not only to identify risk factors but also to describe the chain of events by which such factors lead to disorders (Rutter 1988). It is not sufficient to isolate the risk factors, but we also must determine the ways in which they operate over time and the reasons why the outcomes vary from individual to individual. Special attention should be given to atypical populations (such as migrants). Information about the paths of atypical populations also helps to understand the processes of normal populations (Burack 1997).

Firstly, an ecological-transactional approach is presented, which describes the transactions of different factors in the environment. Secondly, different concepts of developmental psychopathology (risk factors, resilience, protective and vulnerability mechanisms, key turning points in life and negative chain reactions) are discussed. Special importance has here been given to the development of pathology.

### ***2.1.1. Ecological-transactional model***

In the ecological-transactional model, the environment of an individual is seen as being composed of several coexisting layers (Bronfenbrenner 1979, Cicchetti & Toth 1997). These levels range, in a hierarchic order, from proximal to distal relative to the individual. The factors (permanent or transient) that have an influence on children (risk, protective and vulnerability factors) are classified as belonging to these different levels. The interactions between the factors are defined by this hierarchy. A factor at a given level influences the other factors at that level, but may also influence outcomes and processes at the adjacent levels. Together, these factors dynamically influence the organisation of the intraindividual system by, for example, promoting or preventing a depressotypic organisation, in which depression is part of the intraindividual organisation (Cicchetti & Toth 1998). The power of interaction depends partly on the distance between the levels of factors in the hierarchy: more proximal levels have the most direct effect on the child's development.

The most distal level is the *macrosystem*, which consists of the beliefs and values of the culture. For example, the beliefs of minorities, the family constellation and the nature of society are implicit at this level. The macrosystem has primarily only an indirect influence, which is mediated by the exosystem and the microsystem. The second level is the *exosystem*, which includes the communal environment in which the child lives (such as school, peer group, neighbourhood, services and other formal and informal support systems). The third level is called the *microsystem*, and it is the immediate environment of the child (especially family but also other close people, such as the closest friends). The most proximal level is *ontogenic development*. At this level, the most critical determinant of eventual adaptation or maladaptation is the negotiation of the central tasks of each developmental period (Cicchetti & Toth 1997). This level has an important influence on, for example, the development of self-confidence and secure attachment relationships. The microsystem is usually the level with the most powerful influence on the child's resilience, as it provides support or, in the worst case, adversities. When this level fails to provide protection, the

other levels, such as the exosystem (support services by the community), have a key role (Cicchetti & Toth 1997).

### **2.1.2. Risk factors**

One approach to the development of psychopathology is risk factor research (Kazdin *et al.* 1997). It focuses attention to the relations between the preceding conditions and the outcomes in an attempt to understand the factors on which the relations depend, the mechanisms and processes through which the relationships operate and the ways in which these can be altered. A risk factor is defined as a characteristic, experience, or event that is associated with and enhances the outcome (Kazdin *et al.* 1997). According to Kazdin and others, there are three key features in the risk factor concept: 1) It is a relational concept (risk factors are related to the outcome), 2) this relation is conditional, and 3) risk factor is a processual concept, because it somehow influences, initiates or alters the critical processes within a person's life or social environment.

Four different relationships have been outlined between the antecedent and the outcome in risk factor research (Kraemer *et al.* 1997). *Correlation*, which implies an association between two factors without any assumption of a temporal or directional relation. *Risk factor*, which has been shown to precede the outcome and to be associated with an increase in the likelihood of the outcome. *Marker*, which is a risk factor that is not causally involved in the outcome. *Causal risk factor*, which is a risk factors with a proved causal relationship between the risk factor and the outcome. Correlations are merely preliminary steps in the process of exploring the true dynamics between different factors, and the goal of risk factor research is to understand the factors that *cause* or produce the outcome (Kazdin *et al.* 1997). The final stage is to investigate how risk factors combine with each other, the factors that influence the risk factor – outcome relation and the multiple paths that may lead to a particular outcome (Kazdin *et al.* 1997).

### **2.1.3. Resilience**

The concept of resilience stems out of the notion that by studying a stress or adversity in life, we find that some people are vulnerable to this adversity, whereas others are able to overcome it. In other words, resilience reflects the individual variations in the response to risk (Rutter 1987, Masten *et al.* 1990, Rutter 1999) and is used to refer to the children who, under circumstances of some adversity, develop normally and remain mentally healthy (Aro 1994). Resilience is not a single attribute of a child, but rather a dynamic process that changes from time to time and is different depending on the circumstances (Sroufe 1997). Resilience may reside equally well in the social context as within the individual (Rutter 1993).

Rutter (1987, 1993) described resilience with six points: 1) A person's response to a stressor is influenced by the way in which he/she perceives the situation and by his capacity

to process the experience, attach meaning to it, and incorporate it into his belief system. 2) It matters greatly how people deal with adversities and life stressors. 3) People's ability to act positively is a function of their self-esteem and feelings of self-efficacy. 4) Secure and stable affectional relationships and success, achievement, and positive experiences as well as temperamental attributes are important. 5) Non-shared environmental influences tend to have a greater effect than shared ones. 6) An ability to cope successfully with stress situations can be strengthening: throughout life, it is normal to have to meet challenges and overcome difficulties. Resilience is not achieved only by avoiding stress, but also by encountering stress at a time and in a way that allows self-confidence and social competence to increase (Rutter 1985).

The quality of resilience is measured by how people deal with their life changes (normal or abnormal) (Rutter 1985). Resilience is a process through development which has an effect on these changes. Within the phenomenon of resilience, we can differentiate between two concepts: protective and vulnerability mechanisms, which catalytically modify the person's response to a risk situation (Rutter 1987). It has also been stressed that resilience in one domain does not imply resilience in another domain (Luthar 1997).

#### ***2.1.4. Protective mechanisms***

The concept of protective mechanism is more narrowly defined than that of resilience. Protective mechanisms modify the impacts of risk factors or risk situations (such as stressful life events) by lowering the risk of a maladaptive outcome. The effect is indirect, and there is some interaction between the protective mechanism and the risk factor. The process is catalytic in the sense that it modifies the effect of the risk factor instead of having a direct effect of its own (Rutter 1987). Thus, the protective mechanism has an effect only on the *interaction* with the risk factor.

Mechanisms which are protective in one case might not be that in other circumstances (Luthar 1997). Important modifiers of the meaning one attributes to or the way in which one cognitively reacts to an event is timing: developmental stage of the child and co-existing events (Rutter 1985).

How do protective mechanisms differ from positive experiences of life? Rutter (1985) states that protective mechanisms do not necessarily have any effect in the absence of stress, as their role is to modify the response to adversity rather than to foster normal development, and these mechanisms are not necessarily pleasurable. They may even be stressful events which have a protective effect when the person is faced by later adversities. Protective mechanisms are defined in terms of their effects rather than their hedonic qualities. An example from biology shows that some vaccines are infectious agents and may cause infection, but are still protective mechanisms against future infections (Rutter 1987).

According to Rutter (1987), there are four different mechanisms behind the protective processes: reduction of risk impact, reduction of negative chain reactions, establishment and maintenance of self-esteem and self-efficacy (which are promoted by good personal relationships, successful task accomplishment and positive turning points of life), and opening of opportunities. The reduction of risk impact has two different mechanisms: alteration of

the meaning of the risk variable for the child and alteration of the child's exposure to or involvement with a risk situation. By negative chain reaction, Rutter means that some risk experiences may produce long-term adverse sequelae. A different division was made by Kazdin (1997) based on the source of protection. He divided the factors which protect from conduct disorders despite existing risk factors into three categories: personal attributes of the child, family factors and external support.

Werner (1992, 1997) followed high-risk children in Kauai and found that those who overcame the adversities of childhood had attributes (temperament, social and cognitive skills) that helped them to select or construct actively their environment, reinforced and sustained their active approach to life and rewarded their special competencies and skills. It was also important that there were supportive adults, which, in turn, promoted self-esteem and self-efficacy. If resilient children did not get so much support from home, they got it from somewhere else (from their grandparents, siblings, friends or teachers). Additionally, their competencies, temperament and self-esteem had a stronger impact on their later life adaptation than the external sources of support.

### ***2.1.5. Vulnerability mechanisms***

Vulnerability mechanisms are opposite to protective mechanisms. They modify the impact of risk factors or risk situations (such as stressful life-events) by increasing the risk of maladaptive outcome. Are the concepts of protection and vulnerability merely two opposite poles of the same phenomenon? Is there, for example, any reason to call loneliness a vulnerability mechanism and good peer relations a protective mechanism? In many cases the division is not so clear. Rutter (1987) argues, however, that there is a need for different concepts. According to him, the term "protection" should be used instead of "lack of vulnerability" whenever the process involves a change of life trajectory from risk to adaptation (rather than the reverse) or when the mechanism of protection is clearly positive and the lack of mechanism leads to "normal" adaptation. Vulnerability factors are suggested to differ from risk factors in the sense that they are closer to the child than risk factors (Sternberg *et al.* 1997) and more long-standing (Cicchetti *et al.* 1997). In other words, risk factors are qualities of the environment, whereas vulnerability factors are more interpersonal attributes of the child.

The same factor may be protective, vulnerability or risk factors, depending on the situation. For example, divorce is a risk factor, but the absence of a spouse may be a vulnerability factor (Rutter 1985). An example from biology shows that the sickle cell syndrome causes anemia, but protects against malaria (Rutter 1987). Variables cannot be labelled as risk, protective or vulnerability factors because it is the process of which the factor is one part that determines the function (Rutter 1987).

### ***2.1.6. Key turning points and negative chain reactions***

It is often necessary to examine causal chains in which the end product is the result of many linkages over time rather than one event- or time-restricted causal mechanism, for example in Attention Deficit and Hyperactivity Disorder (Sroufe 1997). In addition to the immediate individual variation in stress and adverse life events, there is also variability in the subsequent life course, where adverse reactions might be intensified over time (Rutter 1988). These paths to pathology are called negative chain reactions or risk trajectories. The key turning points of life may be starting points of these chain reactions.

The key turning points of life are major changes during the course of life. They include such factors as the choice of schooling, marriage, pregnancy and migration to a different country. Rutter (1987) has argued that protective and vulnerability mechanisms are especially influential at these key turning points of life. At these points, the trajectory of life may change its course towards a more adaptive or more negative direction (Rutter 1993).

The term 'path' refers to a sequence of characteristics, events, experiences and behaviours that define successive steps or stages by which an outcome becomes prominent. An important determinant of this path is the interaction between the child and the environment, which creates a dynamic reciprocal and progressive system (Sroufe 1997). In a negative chain reaction, each stage of the path may promote further dysfunction and help to accumulate new risk factors.

## **2.2. Different migration types**

Migration is a diverse phenomenon, and there exist countless different migration contexts. In the literature, migration has been divided into involuntary and voluntary migration (Berry & Kim 1988, Berry *et al.* 1992, Guarnaccia & Lopez 1998). Voluntary migrants are immigrants and sojourners. They are distinguished by the fact that the stay of immigrants is longer and more permanent compared to that of sojourners (who include students, diplomatic personnel and international executives), whose stay in the country of destination is quite temporary and return is already planned ahead of the migration. Refugees are involuntary migrants, and their life has more often been stressful before the migration. Indigenous groups can also be categorized as experiencing involuntary acculturation, though they do not migrate (Berry & Kim 1988). In a way, children are rarely voluntary migrants in the sense that their parents usually make the decision to migrate (Guarnaccia & Lopez 1998).

In this study, the terms 'migrant' and 'remigrant' refer to people whose stay is more permanent and who move between countries mainly because of better job opportunities and a better standard of living. Refugees are not within the scope of this study, as they have a very different migration context. Although these different migrant groups exist, however, it is not easy in some cases to define which group a migrant belongs to.

### **2.3. Psychiatric symptoms among migrant children**

The previous studies on the psychiatric disorders of migrant children have used variable methods and study populations. Aronowitz (1984), Haour-Knipe (1989) and Beiser *et al.* (1995) have made literature reviews about migrant children's mental well-being. They found that the results are highly variable: some claim that migrant children's mental status is worse, while some others point out that there is no difference, and it has even been found that migrants' mental status is better than that of their native peers (Cochrane 1979, Steinhausen 1985). Below, I will review studies which present results of migrant children's mental well-being compared to their native peers. Refugees and sojourning students are considered to be out of the scope of this presentation. There are considerably fewer studies of migrant children and adolescents compared to adults (Guarnaccia & Lopez 1998).

#### ***2.3.1. Greek migrants in Europe***

There was a large migration wave from the Mediterranean countries to West Germany in the 1960's and 1970's (Fichter *et al.* 1988). The migrants were mainly unskilled workers in search of work. Study made by Siefen and others (1996) of Greek migrant adolescents (aged between 11 to 17 years) in Germany conducted with questionnaires showed migrants to be more impulsive and emotional with an inferior body image, higher achievement motivation and poorer emotional health compared to German sample. When they were compared to children who had lived all their lives in Greece, the difference in emotional health disappeared. Contrary to the other study, Steinhausen (1985) found that Greek migrants had even fewer psychiatric disorders than German control children. Fichter and others (1988) found that Greek migrant adolescents in Germany had less often symptoms of anorexia when screened by self-administered questionnaires, but a higher actual rate of anorexia when compared to the non-migrating peers in Greece.

When these children remigrated to Greece (Hatzichristou & Hopf 1995), they experienced problems mainly in school performance, but did not seem to experience any severe interpersonal or intrapersonal problems compared to their local peers, indicating rather smooth psychosocial adjustment. The authors found that a lower age at remigration led to better school achievement.

#### ***2.3.2. Turkish migrants in Europe***

Steinhausen (1985) studied 238 Greek and 70 Turkish 8- to 11-year-old immigrant children in Germany by structural interviews. Turkish children had more psychiatric disorders and Greek children fewer psychiatric disorders than German control children. Steinhausen assumed that there is a greater cultural difference and a greater amount of adaptational stress among Turkish immigrants. Another influencing factor could be that there is a strong

Greek community in Germany, which leads to a strong Greek identity among the children (Hatzichristou & Hopf 1995).

Turkish immigrants in The Netherlands have been found to have higher CBCL (Child Behavior Checklist, Achenbach) total scores compared to Dutch children (Bengi-Arslan *et al.* 1992). But when they were compared to Turkish children in Turkey, no such difference was observable. The researches assumed that cultural differences in the parents' perception and expectations of their children's behaviours as well as the threshold for reporting them could explain the difference between the Dutch and immigrant Turkish children.

### ***2.3.3. Migrants in England***

Rutter *et al.* (1974) studied West Indian children in London by presenting questionnaires to teachers and interviewing parents. They found that behavioural disturbances occurred at school, but not at home. They proposed that poor school achievement and racial discrimination lead to behavioural disturbances at school. A few years later, Cochrane (1979) studied immigrant children in Birmingham. In this study, teachers reported that West Indian children had no more behavioural deviance than their native peers, but higher rates of admission to mental hospitals.

Cochrane (1979) also included Asian immigrants in his study. These children had lower rates of behavioural deviance and mental hospital admissions. As an explanation of the difference between Indian and West Indian children, Cochrane proposed that immigrants from different countries had made their decision of migrate on different grounds and had therefore had different resources or mental health status before the migration.

### ***2.3.4. Migrants outside Europe***

In the United States, Touliatos and Lindholm (1980) studied 2991 children and adolescents with questionnaires addressed to teachers. They did not find any more personality problems or psychotic signs among the migrants (from Europe, South America and Asia) than in their non-migrant counterparts. Additionally, the migrants had fewer conduct disorders than the natives.

In Canada, Bradley and Sloman (1975) found that immigrant children had more elective mutism. Later, however, Munroe-Blum *et al.* (1989) studied with questionnaires a sample of migrant children in Canada aged 6-16 years. They found no statistically significant relationships between migrant child status and psychiatric disorders, such as conduct disorders, hyperactivity, neurosis and somatization, or school performance.

Davies and McKelvey (1998) studied 211 migrant and non-migrant adolescents in Australia. They found migrant adolescents to have significantly lower CBCL (Child Behaviour Checklist, Achenbach) and YSR (Youth Self Report Form, Achenbach) scores compared to their non-migrant counterparts. In earlier study (Klimidis *et al.* 1994) there were no observable differences of self-reported psychopathology between immigrants and native-born Australians.

### ***2.3.5. Children of professionals***

Tamura and Furnham (1993) studied 1941 Japanese remigrant children (mainly children of sojourning families of professionals) and controls with questionnaires. They found that older children had more difficulties than younger. An interesting finding was that the migrants had fewer anxiety and depressive symptoms at the age of 13-15, while the other age groups showed no significant differences in psychiatric symptoms. Children with multiple or longer overseas experiences had more problems, such as anxiety and depression, than those who only had a single relatively short experience.

Haour-Knipe (1989) reviewed the literature concerning children of professionals who had moved between cultures. Most studies were found to be conceptually and methodologically inadequate. Both positive and negative effects were found, and no conclusion either way could be presented. These children of professionals often live between cultures, neither in that of their parents nor in that of the host country, but rather in some kind of expatriate community, which is marked by temporality, small size and high visibility. The relationships tend to be superficial in this type of community. It is significantly different from, for instance, the community in which Greek migrants live in Germany (Steinhausen 1985). In a later study of higher social class sojourners (Öry *et al.* 1991), remigrant children showed more behavioural problems and their parents regarded their children as being less happy than the controls. However, no difference was seen in problem behaviour at school as assessed by the teacher. The study group consisted of 103 migrant children aged 6-17, while the control group consisted of 81 age- and sex-matched Dutch classmates.

### ***2.3.6. Studies based on hospital admissions***

Studies of migrant children's and adolescents' psychiatric hospital admissions are few. In England, Asian migrant children had lower and West Indian children higher rates of admission to mental hospitals compared to native English children (Cochrane 1979). Two studies from Canada (Munroe-Blum *et al.* 1989, Roberts & Crockford 1997) found that immigrant children in Canada were less likely to use psychiatric services than non-migrant children, though they had an equivalent level of need.

More recent studies of ethnic minority differences from the United States (Bui & Takeuchi 1992, Chabra *et al.* 1997) showed that Latino and Asian children were less often admitted to hospital due to mental problems. However, in the study by Bui and Takeuchi (1992), African American adolescents were more often admitted to psychiatric care than whites. The authors suspected several reasons for low rate of psychiatric hospital admissions: cultural factors, lack of adequate health insurance coverage, alternative methods of treatment, lack of culturally and linguistically appropriate services and a lower incidence of diseases. It is possible that the number of hospital admissions does not reflect the level of need for psychiatric care.

### **2.3.7. Conclusions**

The apparent inconsistencies in the literature on the relationship between migration and psychiatric disorders highlight the fact that the association between migration and mental health is more complex than a simple one-directional causal connection (Beiser *et al.* 1995, Davies & McKelvey 1998). Factors assumed to moderate the effect of migration include the type of acculturating group (sojourners, immigrants or refugees), the nature of the larger society, the mode of acculturation and individual resources (Berry *et al.* 1987). Because of the variability and apparent complexity of the results, the theoretical background of migrants' mental health has been hard to construct (Sam 1994, Klimidis *et al.* 1994). The explanations proposed for the implications of migration for the mental health of migrants can be divided into intrapsychic and psychosocial ones. One of the most widely discussed theory is acculturative stress (Berry *et al.* 1987). However, no universal theory about migration and mental health has been constructed.

## **2.4. Factors influencing mental health in migration**

### **2.4.1. Acculturation**

When a migrant faces a change in culture, a process of acculturation (i.e. behavioural and psychological changes that occur as a result of contact between people belonging to different culture groups) begins (Berry *et al.* 1992). Group-level acculturation may include a variety of changes, such as economic, technological, social, cultural and political changes. Individual-level acculturation may include changes in behaviour, values, attitudes and identity (Williams & Berry 1991). Individuals' processes of forming ethnic identity are closely tied to acculturation process.

During acculturation, or when successful adaptation to acculturation is not achieved, acculturative stress may arise (Sam & Berry 1995). Acculturative stress refers to a kind of stress in which the stressors are identified as having their source in the process of acculturation, sometimes resulting in a particular set of stress behaviours that include anxiety, depression, feelings of marginality, alienation, psychosomatic symptoms and identity confusion (Williams & Berry 1991). Guarnaccia and Lopez (1998) summarized some problems of acculturative stress among children: language problems, perceived discrimination from mainstream society, perceived cultural incompatibilities between the home culture and the host culture, and increasing gaps between the cultural affiliations of adults and children.

However, acculturation may also lead to more positive adaptations, such as taking advantage of the new opportunities provided by contact with society at large; thus, psychological or social pathology cannot be inevitably predicted on the basis of the presence of acculturation.

The ways in which individuals may react to acculturation are assimilation, integration, separation/segregation and marginalization (Berry & Kim 1988). The division is made

according to how an individual identifies himself in relation to his/her own culture and the majority culture. Assimilation means that the migrant rejects his/her original cultural identity and accepts the culture of the majority. Integration develops when both the original and host cultures are accepted and the migrant develops a bicultural identity. In separation, the migrant rejects the host culture and identifies himself strongly with the original culture. In marginalization, both cultures are rejected and the migrant has no culture to identify with.

Studies of adult acculturation have suggested that integration (i.e., bicultural identification) is the most adaptive form for immigrants, while separation and marginalization are least adaptive (Williams & Berry 1991, Pawliuk *et al.* 1996, Guarnaccia & Lopez 1998). Similarly, immigrants and ethnic minorities living in pluralistic societies that apply integrating policies are suggested to have good psychological adaptation. When studying Asian immigrants in Canada, Pawliuk *et al.* (1996) found that many of the children with extreme behavioural problems had rejected their own ethnic culture (i.e. tried to assimilate). Similar results have been reported by Kvernmo and Heyerdahl (1998) when studying indigenous Sami and majority children in Norway. They found that assimilated Sami children had more mental health problems than the others and that Sami children from multiethnic families (families where the parents have different cultural backgrounds) adapted better than those from monoethnic families. Rönholm obtained similar results (Rönholm 1999) when studying Finnish children in Sweden. Strong cultural ties (experience of national or cultural pride and commonality) to the home culture were found to be related to favourable self-esteem, and these two together strengthened pupils' orientation towards education.

In the case of children, a further important factor is the acculturation style of their parents. Pawliuk *et al.* (1996) found that the children of parents who accepted the majority culture adapted better. Another risk factor was the possible difference in the acculturation style between the parents and their children (asymmetric acculturation). Children usually acquire the host culture and language faster than their parents (Beiser *et al.* 1995). If this is the case, the parents may be forced to use their children as translators and cultural interpreters. These families are at risk for role reversal, which leads to destabilization of the normal lines of communication and authority (Beiser *et al.* 1995).

In their literature review, LaFromboise and others (1993) suggested that if a person wants a good bicultural identity he/she must acquire knowledge of cultural beliefs and values, positive attitudes towards both majority and minority groups, bicultural efficacy, communication ability, role repertoire and a sense of having roots.

### ***2.4.2. Bilingualism***

The change of language is one of the most important change in the migrant's environment when moving between Sweden and Finland. Apart from having a communicative function, language is also a sign of the cultural identity of the child or an indication of its absence. Therefore, the use of language reflects the mode of acculturation and is quite closely tied to it.

There are two languages in the environment of the migrant child: that of the majority and that of the home. Migrant children learn the majority language when in contact with the

majority children. They are also taught that language at school, and it may be the medium of all instruction. In most situations, migrant children develop successive bilingualism (Kuure *et al.* 1992): they preserve their mother tongue and begin to learn the second language before school age, mostly outside home. It has been suggested that the situation is most successful when the child speaks one language with one person (Grammont's principle, Ronjat 1913).

This kind of bilingualism, however, is a risk if the child's competence in the mother tongue does not develop properly and he/she prefers the second language. This may be the case if the majority language is used at home instead of the mother tongue or school does not support the development of the mother tongue. This may lead to a loss of the native language and a total adoption of the majority language. In this case, semilingualism may develop. Hansegård (1979) pointed out that semilingualism means an inability to use the affective function of any language. Semilingual people may achieve very good structural knowledge of the second language, but they cannot express any deeper feelings with it. The affective function of language is learned at a very early age when speaking to the mother and father. Thus, the affective function can be only achieved in one's mother tongue (Hansegård 1979). If this language is not used later in life, the child has lost something valuable. Sifneos (1973, 1996) proposed the concept of alexithymia, which means that the subject does not have an ability to express his/her feelings in language. Alexithymia is found especially often among psychosomatic patients. Supposedly, this inability may also be caused by a lack of competence in one's mother tongue.

So far, most research has focused on the consequences of bilingualism for school achievement and cognitive development (Kozulin 1988, Ricciardelli 1992), while little, if any, attention has been paid to the connection between bilingualism and mental well-being in a broad sense and in the long term (see DeBlassie 1983). Previously, bilingualism was generally portrayed as a handicap, but more recent studies have shown bilingual superiority in various cognitive areas (Ricciardelli 1992). However, these studies concern simultaneous bilinguals, who have learned both languages at the same time (mainly in bilingual families). The situation of minority children may be quite different. It has been repeatedly shown that bilingual minority children have poorer school achievement than their monolingual majority peers. Scandinavian studies by Skutnab-Kangas and Toukomaa (1976) and Toukomaa (1973, 1975) attribute this mainly to inadequate educational practices in which the mother tongue is not used enough.

Language use may affect school achievement and mental well-being in various ways. Children must establish a balance between the two languages. Children's development (cognitive or mental) could be hampered if they are rejected by their friends because of language, if they do not understand the instruction, cannot accept the cultural identity of their family or are unable to communicate with their family members because of language problems (Lasonen 1978a, DeBlassie 1983).

### 2.4.3. Social support

#### 2.4.3.1. Concept of social support

According to Robinson and Garber (1995), there are three levels of analysis for studying social support: nature or dimension of support, source of support, and type or function of support. Three dimensions of support are proposed to exist: social embeddedness, perceived support and enacted support (Sandler *et al.* 1989, Robinson & Garber 1995). These dimensions are differently associated to each other and to psychopathology and stress. Social embeddedness means the actual size and shape of the social network of an individual. Perceived support consists of a subjective evaluation of support and satisfaction with the relationships. Enacted support refers to the frequency of contacts with individuals in the social network. Cohen and Wills (Cohen & Wills 1985) divided social support among adults into four types: esteem support, informational support, social companionship and instrumental support.

Children and adolescents show a shift from support from the parents towards support from peers (Aseltine *et al.* 1994) and towards perceiving greater intimacy from social ties with increasing age (Sandler *et al.* 1989, Robinson & Garber 1995). It is proposed that if the social networks are not satisfactory for some reason (such as peer rejection) in preadolescence, there is a risk that the child may not learn the necessary social skills to maintain a meaningful social network, which may lead to other interpersonal problems later in life (Robinson & Garber 1995). This suggests that it is important that each child gets accepted by his peers. It may, however, be difficult for a child with minority status to get accepted in the circle of children from the majority culture.

The size of the social networks and perceived support have been found to be directly related to a lack of depression and also to buffer against the effect of stressors (Robinson & Garber 1995, Hirschfield & Cross 1982), though the direction of the causal chain is not certain (Heller & Swindle 1983). Social support has also been found to be connected to the adaptation of immigrants (Williams & Berry 1991, Ward & Kennedy 1993).

#### 2.4.3.2. Relation between social support, stress and mental well-being

Many researchers have discussed the ways in which social support moderates the impact of stressful life events on mental well-being. A variety of models have been proposed to describe this association (Broadhead *et al.* 1983). Robinson and Garber (1995) summarised these models into three categories: social support deterioration models, direct effect models and stress-buffering models.

In the deterioration model, distress and social support have a common cause. For example, divorce is simultaneously a stressful life event and a factor that changes the structure of social relationships. In this model, both enacted support and social embeddedness are affected. According to the direct effect model, social support has a positive influence on mental well-being regardless of the amount of stress encountered. For example, social support influences

mental health by providing a secure and predictable social environment (Cohen & Wills 1985).

Stress-buffering models propose that social support has an effect on mental well-being only in the presence of stress. Many mechanisms have been proposed to buffer against stress. Social support could affect whether or not a particular event is considered to be stressful. Social support could also prevent the occurrence of stressful situations or buffer against stress by improving knowledge of coping strategies, sense of self-esteem and self-efficacy (Cohen & Wills 1985, Sandler *et al.* 1989). In stress-buffering models, perceived support could be most important dimension (Robinson & Garber 1995).

The buffering role of social support is not clear (Heller & Swindle 1983, Alloway & Bebbington 1987, Robinson & Garber 1995). Rowlison and Felner (1988), for example, found virtually no support for the hypothesis that social support buffers the impact of either major life events or daily hassles, whereas Sandler *et al.* (1989) reported that social support has a buffering role between stressful life events and children's mental health. In their review of adult literature, Cohen and Wills (1985) proposed that the buffering hypothesis is valid if perceived support or close relationships are measured and the direct effect hypothesis can be validated by measuring social embeddedness.

Migration is a stressful life event and has a negative impact on social networks. According to this assumption, the association between migration and social support is best explained by the deterioration model. However, this does not rule out the possibility that social support during remigration would not buffer against stress. For example, the remaining contacts with people in Sweden after remigration are negatively associated with depression (Moilanen & Myhrman 1989a) and may act as a buffering mechanism.

When studying the relations between social support, stress and mental well-being, we should note that these three factors are confounded under many circumstances and it is not possible to fully separate them from each other (Heller & Swindle 1983, Robinson & Garber 1995).

#### ***2.4.4. Other factors***

Many different factors may also be protective, depending on situation and time. For example, a strong ethnic community in the host country (group density effect) may be a protective factor in the short term (Halpern 1993), but in the long term it may be a risk factor because it may deter the acquisition of such tools as the majority culture and language, which are a prerequisite for full participation in the host culture (Beiser *et al.* 1995).

When studying Latino children in the United States, Hovey & King (1996) discovered that positive expectations concerning the future may act as a buffer against acculturative stress. It may be that these children perceive acculturative changes as opportunities.

## 2.5. Migration between Finland and Sweden

### *2.5.1. History and demographic factors*

There has been migration between Finland and Sweden for centuries. Finland was part of Sweden until the conquest by Russia in 1809 and ultimate independence in 1917. Swedish is still the second official language in Finland, and 5.7% of the Finnish population are Swedish-speaking (Statistical Yearbook of Finland 1998). In 1954, an agreement was made between the Scandinavian countries concerning the free movement of labour (Holappa & Meriläinen 1984). Finns took advantage of this agreement from its outset, but at that time migration did not reach very large proportions. The situation changed in the 1960s, when the unemployment of young people increased substantially in Finland. These people had been born after World War II, when the birth rate rapidly increased in Finland (Korkiasaari 1985). People also had much better wages in Sweden than in Finland in the 1960s. The reason for migration was usually economic (Korkiasaari 1985). The peak of migration took place in the year 1970, when 41.500 people (about 1% of the population of Finland) migrated to Sweden. There were approximately 200.000 – 300.000 Finnish migrants (including about 70.000 children) living in Sweden in the late 1970s (Lasonen & Toukoma 1978).

The migrants in the 1960s and 1970s were mainly young and unskilled workers. Some migrated directly after leaving comprehensive school. Others had worked in Finland and possibly had a family of small children. Finland began to urbanise in the 1960s, though it was not so urbanised as many other countries in Europe. Migration to Sweden was hence usually migration from rural to urban areas (Toukoma 1973, Korkiasaari 1985).

Moving from rural to urban areas poses many challenges to the migrant. Cities are much more diverse culturally than rural areas. There are usually also greater inequalities in cities, and life in an urban setting is also more materialistically oriented. Though this brings many opportunities, it may lead to social stress, alienation and marginalisation. Migrants have to choose their own social network (or be without any). This situation is very different compared to in rural localities, where social networks may be based on long traditions in the family and the geographical surroundings (The Urban Environment 1996). Urban networks are multiple, overlapping and dynamic, which is quite opposite to rural settings with their dense networks and strict boundaries (Heller & Swindle 1983).

Remigration to Finland has been constant since the 1960s, but there were two major waves of remigration: in 1970 to 1974 and 1980 to 1983. During these periods, at least 10,000 Finns remigrated each year (Holappa & Meriläinen 1984). In the 1980s, the direction of the total flow of migration turned back to Finland. At that time, the differences in the unemployment rate and the standard of living between Finland and Sweden were small (Korkiasaari 1985). In the years 1980-85, a total of 5,000 school-aged children remigrated from Sweden to Finland (Korkiasaari 1986).

Korkiasaari (1985) studied 1368 adult remigrants in the years 1980 and 1981. The most important factor for remigration was concern for the future of their children (17 % of all remigrants and over 50 % of the remigrants with families). The other important reasons included being homesick and not liking Sweden. 62 % of the study subjects returned to the municipality which they had left to migrate to Sweden. This study revealed six separate

“basic return types”: highly educated, older people with families, younger people with families, students, younger non-adapters and older non-adapters. Half of the subjects remigrated with their family. Every fourth remigrant child went to a school where the language of instruction was Swedish (Ihto 1981). There were assumably three reasons for this: the mother tongue of some children was Swedish, some could not speak Finnish very well, and some parents were afraid that their children would forget the Swedish language, which could be important for their future (Rosenlew-Cremieux 1982).

## *2.5.2. Finnish migrants in Sweden during the 1970s and 1980s*

### *2.5.2.1 General*

The most notable difference between native Swedes and Finnish migrants is language (Skutnabb-Kangas 1987). Finland and Sweden have fairly similar culture, religion and structure of society. In the 1960s and 1970s, however, the standard of living was much higher in Sweden than in Finland.

In his study, Toukoma (1973) found that 57% of all migrants were from Northern Finland. He interviewed 156 families in Olofström (a small industrial city in Southern Sweden). 72% of the families had migrated because of unemployment and low income in Finland. Most of the families said that unemployment they gave them no other choice than migration to Sweden. 25% of the migrant families planned to remigrate to Finland, and 72% of the families spent their summer holidays in Finland.

Finnish migrants in Sweden were more materialistic than Finns or Swedes in general (Jaakkola 1983). The real incomes increased by more than a fifth among those who migrated between 1961 and 1971. The migrants especially appreciated having a good car, which was used as a symbol of the better standard of living during the summer holidays spent in Finland. The good car also compensated for the low social status in Sweden (Jaakkola 1983).

The linguistic capabilities of the parents were usually poorer than those of their children. Many children therefore had to act as interpreters for their parents when the latter visited a doctor or dealt with the authorities (Toukoma 1973). This may lead to parentification, which impairs the boundary between the generations in the family.

According to Haavio-Mannila & Stenius (1977), Finnish migrants in Sweden had more symptoms of poor health (including mental health), used more health services and had poorer working capacity due to illness than their native counterparts or Finns in Finland. Finnish migrant children in Sweden had more often adjustment problems at school than the controls (Aurelius 1979).

Finnish migrants in Sweden were said to be heavy drinkers, and alcohol had a prominent role in Finnish migrants' identity, especially among men. This is one way for Finnish men to emphasize their Finnish identity. Marginalizing Finnish male youngsters are at risk to follow the example of Finnish men and begin to use too much alcohol (Rosenberg & Toukoma 1994). However, in the late 70's Finnish adult migrants in general did not have

more alcohol-related inpatient episodes in psychiatric clinics compared to the native Swedish population when occupation was controlled for (Haavio-Mannila & Stenius 1977).

### *2.5.2.2. Acculturation style*

Officially, Sweden promoted assimilation of its minorities during the 1970s and 1980s (Korkiasaari 1986). As late as 1987, 63% of Swedish people were of the opinion that Finnish migrants should become as much Swedish as possible, and 57% said that the migrants should regard Swedish as their mother tongue (Westin 1988). Pressure towards assimilation was still present in the late 1980's. But because the Finnish minority in Sweden was quite large and Finland is so close to Sweden and because of personal qualities (such as shyness), separation was easy among adults. Finnish migrants often spent their leisure time with other Finns and crossing the ethnic boundary was difficult (Toukoma 1973, Jaakkola 1983). In the study by Toukoma (1973), 11 % of the Finnish families in Sweden considered it important to assimilate to the Swedish native population. 81% of the families, however, considered it more important to preserve their Finnish identity and culture.

For the children, who had usually lived all their lives in Sweden, the situation was different. The assimilation policy had a stronger impact on them, being mediated by the school and by the negative stigma of the Finnish minority. Because of this, the competence of Swedish culture was much stronger among the second generation than their parents (Skutnabb-Kangas 1987), which occasionally led to different acculturation patterns between the children and their parents (separation among parents and assimilation or integration among children). Most of the Finnish migrants in Sweden integrated, assimilated or separated (Lasonen & Toukoma 1978). Ten years later, Skutnabb-Kangas (1987) found that 40% of the teenage children of Finnish origin who had lived all their lives in Sweden still identified more as Finnish than as Swedish, and none of them identified as fully Swedish, which indicates that the children did not accept assimilation.

Rönholm (1982) studied 135 migrants in the two small towns of Kalix and Botkyrkan located in Sweden. He found that a strong Finnish identity had a positive effect on the self-confidence and bilingualism of children. He concluded that the Finnish identity of migrant children should be promoted at school and at home to encourage their personal and social development.

### *2.5.2.3. Negative stigma*

Jaakkola (1983) interviewed 101 Finnish migrants in the industrial city of Västerås in central Sweden. Finnish migrants in Sweden were often from lower social classes and worked in low-status occupations in Swedish industry. Their work was shift work with more risks and a greater likelihood of unemployment than the work done by native Swedes. The majority of persons interviewed were of the opinion that they were given the dirtiest, heaviest and most unpleasant tasks.

Being Finnish was a negative stigma in Sweden, and many Finns did not want to reveal their ethnic identity and many of them spoke Finnish very quietly in public places or were silent (Jaakkola 1983, Toukomaa 1975). Migrants felt that there were negative attitudes or active discrimination by the Swedish in certain spheres in life. This caused status degradation upon migration and may have been reflected in the migrants' behaviour and self-image in many different ways (Jaakkola 1983).

The negative stigma especially affected to lives of children. They were teased by their Swedish peers and even by their fellow migrants with better capabilities in the Swedish language and a stronger Swedish identity. This made the children want to get rid of their Finnish identity and endeavour to be as Swedish as possible. Aggression towards the Finnish culture (and at the same time towards the parents with a Finnish identity) developed. Though rebellious behaviour is normal at puberty, it may lead to a severe identity crisis (Toukomaa 1973, Jalava 1981), being an example of the negative consequences of strong assimilation.

#### *2.5.2.4. Language of instruction at school*

In the year 1977, it became obligatory for Swedish municipalities to provide instruction for all children in their mother tongue for two hours a week. In the 1970s, some municipalities started classes where all teaching was in Finnish. At that time, it was discussed which language would be better for teaching: the mother tongue or Swedish (Liebkind 1989b, Lasonen 1978b).

Liebkind (1989a) compared migrant children who received all instruction in Finnish to children who received all instruction in Swedish. Her study population consisted of 33 children in Finnish classes and 38 in Swedish classes. The study was conducted in the municipality of Botkyrkan in 1984. She found that the children who received their instruction in Swedish identified themselves more to their Swedish peers than the Finnish ones. This was not the case among the children who received instruction in Finnish. According to her, the children in the Finnish classes had a more positive self-image. She concluded that the children who received instruction in Finnish may be better equipped to turn their developmental challenges into strengths (Liebkind 1989b).

Toukomaa (1975) studied the language abilities of school-aged migrant children in Olofström and Göteborg. These two municipalities had different strategies concerning the language instruction of migrants. In Olofström, children got effective teaching in Swedish from the pre-school age onwards and no teaching of Finnish at all. In Göteborg, children were taught in Finnish for two hours per week and in some cases all instruction was in Finnish (Toukomaa 1975). He found that the Finnish vocabulary was significantly poorer among the migrants compared to native Finnish children (but the children who were taught in Finnish had better vocabulary than the other migrants). During the first four years of school, migrant children's vocabulary was poorer than that of 90% of normal children in Finland. They had also correspondingly poor skills in the Swedish language compared to their Swedish counterparts. This deprivation means that migrants are 3-4 years behind in linguistic development (Toukomaa 1975). Another study (Lasonen and Toukomaa 1978) also showed the importance of using Finnish in instruction at the first three class levels.

Toukoma (1975) further found that, with their poor ability in Finnish, the migrants were unable to learn Swedish properly. They also had difficulties in learning mathematics and other languages. In this respect, it was much better if the children had spent their first two years of life in Finland or had received instruction in Finnish in Sweden. According to Toukoma, the most favourable age of migration is 10 years, and migration before this may lead to semilingualism. In his study, the children gave up Finnish in favour of Swedish 4-5 years after migration.

### ***2.5.3. Remigration to Finland***

Upon remigration, major transformations take place in language, social environment and the school system. Though the school systems in Finland and Sweden are generally quite similar, there are some differences in the subjects and teaching methods (Holappa & Meriläinen 1984, Vikman 1987). For example, there was no homework in Swedish comprehensive school in the 1970s and 1980s. In Finland, school children must do homework daily (Ihto 1981). At that time, the Finnish school system was more demanding than the Swedish system (Vikman 1989), which did not make remigration easier.

Lahti (1975) studied 150 remigrant children in their the third or fourth year of comprehensive school. According to the teachers, 63 % of the remigrants showed poorer than average school performance in the Finnish language (only 8 % had better results than the average children) and 37 % did less well than the average in mathematics (only 13 % had better than average results). About a third of the remigrants were at least two years behind the average in linguistic development. This finding was confirmed in the review by Korkiasaari (1986) about Finnish remigrant children. He pointed out that almost all studies showed poorer school achievement (especially in the mother tongue) among remigrants. In his own study, remigrants had a lower mark average than the control children. Similar results were obtained in another review (Vikman 1989). In his study of 96 remigrant children, Vikman found that, initially after remigration, children felt more negative towards school in Finland than in Sweden. The most important factors leading to this were the difficulties at school and the difficulties in establishing contacts with other children. Three out of four children received remedial teaching after remigration. During the two-year follow-up (Vikman 1990), however, the mark average rose and the children did not feel so negative about school any more.

These results only apply to families whose mother tongue is Finnish. Some of the migrants and remigrants were originally Swedish-speaking, and their school achievement was quite similar to that of children who had lived all their lives in Finland (Korkiasaari 1986).

Seppälä (1983) did not find any major problems in the identity or self-esteem of remigrants. She studied 49 children who had remigrated from Sweden in 1981-82 and went to comprehensive school after their remigration. Korkiasaari (1986) studied 467 return migrants who had remigrated to Finland during the years 1982-84 while at comprehensive school. He found that the identity of the remigrant children was not so strong as that of the control children. 10 % of the children felt themselves more Swedish, while 66 % felt themselves more Finnish. In this study, 16 % of the children were bilingual and 7 %

semilingual. According to Korkiasaari, remigrant children had generally adapted to Finland quite well.

Korkiasaari (1986) divided remigrant children into four groups. The first group consisted of children with a strong Finnish identity, who had spoken Finnish at home and Swedish outside their home in Sweden and whose families had higher socio-economic status. This group had adapted more successfully than the other groups. The second group consisted of children who had adapted to school poorly and whose identity was not so strong. However, they still enjoyed being in Finland and felt themselves more Finnish than Swedish. These children had spoken mostly Finnish both at home and outside home in Sweden. Their families also had lower socio-economic status. The third group consisted of children who adapted to school successfully, but still longed for Sweden and felt themselves more Swedish. They had spoken mainly Swedish in Sweden and were mostly in Swedish-speaking schools in Finland. They spoke fluently both Finnish and Swedish. The children in the fourth group adapted least well. Many of them felt more Swedish and would have liked to migrate back to Sweden. They had poor capabilities in both Finnish and Swedish. This group included more children who had received instruction in Swedish both in Sweden and Finland.

In his description of Finnish remigrant children from Sweden, Vikman (1987) found that remigration is more difficult at puberty than before puberty, and noted that older children in general, and older girls in particular, had difficulties in making friends after moving, which is why they all regarded remigration less favourably than did the younger children or the boys of their own age.

Räsänen (1988) studied Finnish children who had lived in Sweden during the Second World War. In spite of the fact that the “war children” had been separated from their mothers for many years in childhood and had been brought up in a different language environment during the refugee period, they had no more psychiatric symptoms in adulthood compared to those who had stayed in Finland.

According to the previous studies, remigrant children have no major problems. The main problems are a possible lack of an ability to speak fluent Finnish and poor school achievement. The major causes of poor school achievement have been assumed to be an inability to follow the instruction in Sweden (the children already lag behind in learning at the time of remigration) and the differences in school systems.

Research on psychiatric hospital admissions among Finnish remigrants returning from Sweden has been done by Moilanen (1986). In her study of 11 remigrants, the distress of the children was most often manifested as a somatic or behavioral disorder. The children also had identity problems. For most of the children, psychiatric care was started within two years after remigration.

The previous studies of the sample collected in 1984 and the 85 remigrant children (Moilanen & Myhrman 1989a, b, Kuure *et al.* 1992, Moilanen *et al.* 1994) had described the prevalence of psychiatric symptoms, school achievement, social environment, protective factors and use of language initially after remigration. Boys were more depressed and had more behavioural disturbances. Remigrants had poorer school achievement, but their performance in foreign languages was better (Moilanen & Myhrman 1989a). Good adaptation to remigration was enhanced by pen-friends in Sweden and good school achievement. The children whose father did not live at home adapted less well (Moilanen & Myhrman 1989b). Initially after remigration, mixed use of languages at home was found to be a risk factor for psychiatric symptoms and impaired school achievement (Kuure *et al.* 1992). Remigrant

families had more often changed jobs and profession, had moved more often and were less often members of various associations, which characteristics were connected to the high incidence of mental health problems (Moilanen *et al.* 1994).

### **3. Aims of the study**

The purpose of the present study was to investigate the long-term mental well-being of Finnish remigrant children and adolescents who had lived part of their lives in Sweden and to highlight the factors that influence their mental well-being. The numerals I-IV hereafter refer to the original publications. The specific aims of this study were:

1. to assess the prevalence of depression and behavioural disturbances among remigrant children and adolescents initially after remigration and six years later on the basis of questionnaires presented to the children and their parents and teachers (I),
2. to assess the prevalence of psychiatric symptoms during the ten-year period after remigration on the basis of information derived from the Finnish Hospital Discharge Register (III),
3. to explore how language use by these children in Sweden before remigration and in Finland shortly after remigration is associated with their mental well-being six years after remigration (II),
4. to examine how social support influences the mental well-being of remigrants in the short and long term (IV),
5. to identify the factors that protect against adverse effects of remigration (previously unpublished results).

## **4. Material and methods**

### **4.1. Subjects**

The original sample consisted of all the 320 Finnish 7- to 16-year-olds who had moved back from Sweden to Northern Finland with their families in 1984-1985. After permissions from the National Board of Education, the Finnish Teachers' Union and the local school authorities, the names and addresses of these children were obtained from the provincial school register. A control group was set up by assigning each remigrant child a non-migrant counterpart from the same class level and school in Finland matched for sex and age. Questionnaires were sent to all the remigrants and their controls in the first phase, and repeat questionnaires were sent six years later to the 623 who had consented to participate in the first phase. The study is a longitudinal prospective matched cohort study (Figure 1).

In some cases, it was not possible to choose a control child of the same sex ( $n=24$ , 7.5 %) or age ( $n=58$ , 18.1 %). Some of the remigrants were at a lower class level at school than the other children of the same age. In these cases, the same class level principle was preferred, in order to get the same teacher's evaluations of both children. In a few ( $n=8$ ) cases, moreover, the control child had also lived in Sweden at a very young age. In these cases, the teachers did not know that the child had lived in Sweden.

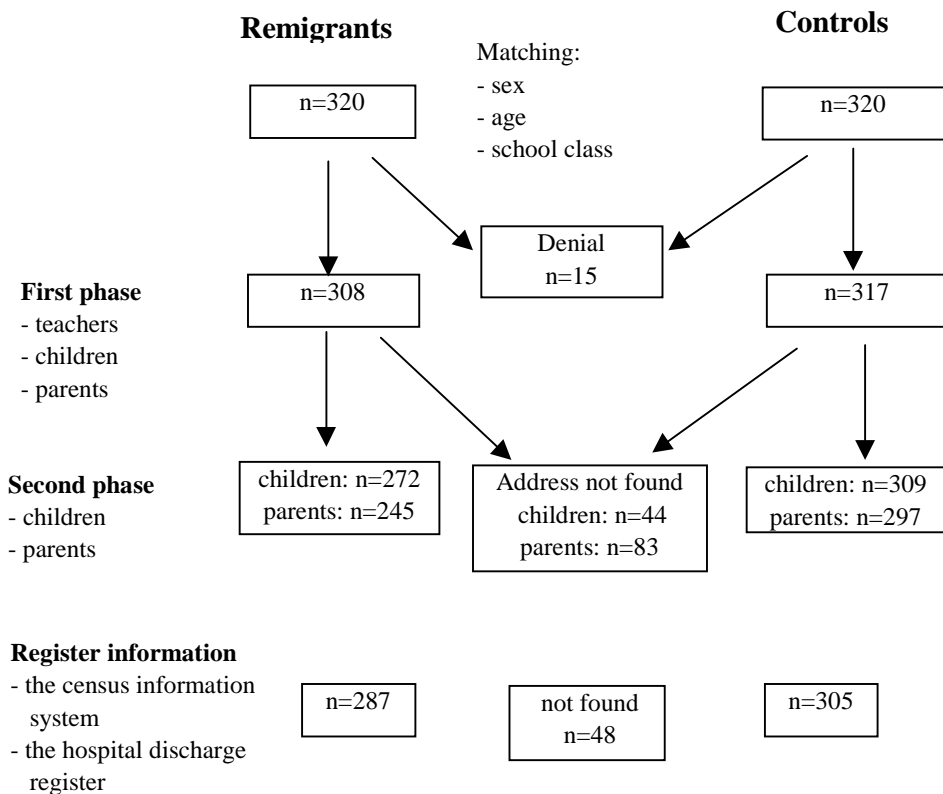
### **4.2. Procedure**

Three sets of questionnaires were used to gather the information in 1986. The children and adolescents filled in the Children's Depression Inventory (CDI, Kovacs 1980). They were also asked what language they had used when speaking to their mother, father, sisters and friends in Sweden before remigration and in Finland after remigration, and what language these persons used when speaking to him/her. About the situation before and after remigration, the children were asked how many friends they had, if they were afraid of the breaks in school, if it was easy to make friends, and what the school breaks were like. Additionally, they were asked what they had thought when they had first heard that they

were moving back to Finland, and if they had maintained their contacts with their old friends in Sweden after remigration.

The parents reported on their children's health and somatic symptoms (ten questions), their socio-economic status, family characteristics, employment situation and migration and the linguistic abilities of all members of the family. When interpreting the results concerning the linguistic ability of a child, we should bear in mind that the parents may have problems evaluating their child's ability in Swedish if they have poor ability in Swedish themselves. They were also asked how many years they had lived in Sweden and how many times they had moved in the past five years. The teachers reported on the children's school achievements and filled in the Children's Behavioural Questionnaire for Teachers, B2 (Rutter 1967).

In the second phase, in 1992, when the subjects were aged 13-22 years, questionnaires were sent to them and their parents, but not to the teachers, as many had already finished school. The subjects filled in the CDI modified to be suitable for their age group and reported their school achievement (latest marks in Finnish, Swedish, foreign languages and



**Figure 1: Study protocol**

mathematics), studies, language use and feeling of closeness. They were also asked if it was easy for them to make new friends, if they liked their current place of living, if they had very close friends and how many close friends they had.

The parents answered those items on the Rutter Parents' Scale, A2 (Rutter *et al.* 1970), which together make up the sum variables for neurotic and antisocial types of behaviour modified for the adolescent age category. The parents were also asked about the somatic symptoms of their children (six items), the language used in kindergarten and at school, family characteristics and the family's migration history.

Additionally to these questionnaires, two registers were used to gather information about the study subjects: the census information system maintained by the state and the hospital discharge register maintained by the National Research and Development Centre for Welfare and Health (STAKES). Marital status, number of children and occupation were derived from the census information system and the hospital admissions of the subjects from the hospital discharge register. This information was obtained in the year 1997.

The study was non-experimental and it was made by permission from the Ethical Board of the University of Oulu. The subjects were asked in the first questionnaire if they wanted to participate in the study. If they refused, no questionnaires were sent to the teachers in the first phase and the children and parents in the second phase. The results of the questionnaires were kept confidential. For the clinical survey (data from hospital discharge register), a permission was granted by the Finnish Ministry of Social and Health Affairs. When processing and analysing the data, names were replaced with identity codes.

### 4.3. Measures

#### 4.3.1. Questionnaires

##### 4.3.1.1. Children's self reports

The Children's Depression Inventory (CDI) constructed by Kovacs (1980) is a self-report form for children and contains 27 questions about the feelings of the child. We omitted the item concerning suicidality for ethical reasons. Questions about suicide could make underlying suicidal ideas conscious, which may involve a risk when the questions are mailed and answered without the presence of a supervisor. There were three levels of answer options for each question. The CDI score is obtained by summing up the 0 to 2 points from all questions. If there were more than 17 answers missing, the total score was not calculated. Otherwise, a missing answer was replaced with median value.

We divided the CDI into three components according to the factorisation of the Finnish school-aged population (Moilanen 1991): *low self-confidence*, *anhedony* and *sadness*. Low self-confidence consisted of six items: hating oneself, not being loved by anybody, looking ugly, being bad, doing everything wrong and doing very badly. Anhedony was made up of three items: having never fun, being bothered by many things and never having fun at

school. Sadness was also made up of three items: being sad all the time, feeling like crying and feeling lonely. There were to be answers to two or more questions for a sub-score to be calculated.

The division into depressive and non-depressive subgroups was made at a cut-off point of 10, which classified 11.3 % of the children as depressive. Kresanov and others (1998) suggested 12 or 13 as a cut-off point in CDI, but this was too high for our purposes (5.6% were considered depressive if the cut-off point was 12).

For an analysis of the mean scores for psychiatric symptoms, the remigrant children and their controls were divided by sex and by age at remigration (i.e. 1986): the boys into those under 13 years old and those aged 13 years or older, and the girls by using a corresponding cut-off point of 12 years. In other words, the groups were divided roughly into children who remigrated before puberty and those who remigrated during puberty

#### *4.3.1.2. Parents' reports*

Psychosomatic symptoms were assessed by asking the parents if the child had somatic symptoms which could have psychosomatic characteristic. In the first phase, there were six alternatives (headache, stomach ache, sleeping problems, daytime wetting, night-time wetting and encopresis) and in the second stage only three questions (headache, stomach ache and sleeping problems). There were three alternatives for each symptom: never, sometimes and weekly, and the two latter classes were combined for the analysis of each symptom.

The Children's Behavioural Questionnaire for Parents (Rutter A2, Rutter *et al.* 1970) was used in the second phase (in the year 1992). It has some minor differences compared to the B2 scale and includes three questions concerned with neurotic features (worrying about many things, being afraid of new things, being afraid of going to school or work) and four questions eliciting anti-social behaviour (destroying things, being disobedient, telling lies and bullying other children).

Socio-economic status (SES) was measured by inquiring the father's and mother's occupation. They were divided into six groups: professionals (I), minor professionals (II), skilled workers (III), semi-skilled workers (IV), farmers and others (students, housewives and retired). In some analyses, the groups I and II are referred to as having upper SES and the groups III and IV having lower SES.

#### *4.3.1.3. Teachers' reports*

The Children's Behavioural Questionnaire (for teachers B2) has been constructed by Rutter (Rutter 1967, Rutter *et al.* 1970), and it has been designed to measure the behavioural problems of the child. It consists of 26 questions about problem behaviour. The questions can be answered with three different options: disagree, agree to some extent and agree. The total score is obtained by summing up the 0 to 2 points from each question. If more than 17 answers were missing, the total score was not calculated. There were to be answers to two

or more questions for a sub-score to be calculated. Otherwise, when calculating the scores for the questions with missing answers, the answer that was missing was replaced with the median value.

Neurotic, anti-social and hyperactive sub-scores can be extracted from the Children's Behavioural Questionnaire scale (Rutter 1967). The neurotic sub-score is made up of the following items: worrying about many things, often appearing miserable, being afraid of new things and crying on arrival at school, the anti-social sub-score of destroying things, fighting with other children, being disobedient, telling lies, stealing things and bullying other children, and the hyperactive sub-score of being very restless, being fidgety and having difficulties to settle down.

As a cut-off point for behavioural disturbance (RB2), 9 was used, based on Rutter's suggestion regarding the division of children into clinical and non-clinical cases (Rutter 1967). This showed 10.8 % of the children to be disturbed.

The reliability and validity of the behavioural screening instruments among Finnish children have been assessed in a series of pilot studies by Almqvist *et al.* (1991a, 1991b). In a more recent study (Kresanov *et al.* 1998), it was found that RB2 and RA2 were valid, while CDI was not a valid instrument for screening psychiatric disturbance among Finnish children. This does not mean that CDI would not be valid to screen only depression. In this study, the goal was not to identify clinical depression, but measure the depressive tendency on a scale from milder to more severe symptoms.

### ***4.3.2. Register data***

Hospital admissions were obtained from the hospital discharge register maintained by the National Research and Development Centre for Welfare and Health (STAKES). The register includes information on hospital discharges from all hospitals and health care centres in Finland. Hospital discharges were gathered from the years 1986-96. Fortyeight subjects (33 remigrants and 15 controls) could not be identified and we did not obtain information on them. There are therefore slightly fewer remigrants (n=287) than controls (n=305). Within this time interval, three classification systems were used in Finland: ICD-8 in the year 1986, ICD-9 in the years 1987-95 and ICD-10 in the year 1996.

Hospital admissions were grouped by primary diagnosis according to the classes defined in ICD-9. The only exceptions were the categories III (Certain disorders involving the immune mechanism, Endocrine, nutritional and metabolic diseases) and IV (Diseases of blood and blood-forming organs), which were grouped as one.

#### 4.4. Analysis of dropouts

The response percentages were lower among the remigrants than among their controls and lower in the second phase than in the first (Table 1). The percentage was especially low among the parents of remigrants in the second phase (44%). Almost all the parents of non-answering children similarly failed to answer, too. In the second phase, address information could not be obtained from 11 % of the remigrant children and 20 % of their parents (the corresponding figures for the controls were 3 % and 6 %).

*Table 1. Numbers (percentages) of respondents*

	<u>Migrants</u>		<u>Controls</u>		<u>Matched<sup>1</sup></u>
	all (n=320)	reached <sup>2</sup>	all (n=320)	reached <sup>2</sup>	all (n=320)
	n (%)	%	n (%)	n (%)	n (%)
1. phase					
parents	228 (71)	74	272 (85)	86	196 (61)
teachers	294 (92)	95	291 (91)	92	281 (88)
children	227 (71)	74	270 (84)	85	194 (61)
2. phase					
parents	142 (44)	58	226 (71)	76	99 (31)
children	188 (59)	70	243 (76)	79	135 (42)

<sup>1</sup>Number of matched pairs in which both answered

<sup>2</sup>proportions calculated with subjects who did not refuse from study and whose address was found.

In the first phase, the dropouts were analysed by identifying the possible differences between the children who had answered and those who had not on the basis of the teachers' questionnaires and the register information (Table 2). The non-answering children had repeated school classes more often, they had lower mark averages at school and they had more behavioural disturbances.

*Table 2. Differences between the children who did and did not answer in the first phase.*

	answered	not answered	
	%/mean (n)	%/mean (n)	95 % CI / p-value <sup>1</sup>
Sex of child (boy)	58 (287)	63 (90)	1.2 (0.8 to 1.8)
Age of child in 1986 (mean)	11.7 (497)	11.8 (143)	0.1 (-0.4 to 0.6)
Teacher 1986			
Mark average at school (mean)	7.7 (321)	7.3 (81)	-0.4 (-0.6 to -0.2)
Repeating a school class	6 (25)	11 (14)	2.2 (1.1 to 4.3)
Behavioural disturbances (mean)	2.7 (456)	5.3 (126)	p<0.001
Registers 1997			
Hospital admissions (mean)	1.4 (464)	1.4 (128)	ns
Married	8 (35)	9 (11)	1.1 (0.5 to 2.2)

<sup>1</sup> Unadjusted odds ratio for dichotomised variables, p-values in non-normal interval variables and mean differences in normally distributed interval variables.

ns=Not statistically significant, p>0.05

Dropouts in the second phase were analysed in terms of the information gathered in the first phase from the children and their parents and from the registers in 1997 (Table 3 and Table 4). The children who did not answer were more often boys, had repeated a class, and had lower mark averages at school, and their father had not lived with the family at the time of the remigration. They were also more depressive and had more behavioural disturbances in the first phase.

The children whose parents did not answer had more often a lower socio-economic status (as measured by the father's rather than the mother's occupation), had more behavioural disturbances, had lower mark averages, and had repeated a school class more often.

*Table 3. Differences between the children who did and did not answer in the second phase.*

	answered	not answered	95 % CI / p-value <sup>1</sup>
	%/mean (n)	%/mean (n)	
<b>Parents in 1986</b>			
Mother absent	2 (7)	2 (3)	1.2 (0.3 to 4.8)
Father absent	10 (35)	17 (22)	2.0 (1.1 to 3.5)
Sex of child (boy)	54 (233)	69 (144)	1.8 (1.3 to 2.7)
<b>Mothers' social class</b>			
upper	25 (89)	23 (30)	0.9 (0.6 to 1.5)
lower	64 (229)	62 (79)	0.9 (0.6 to 1.4)
farmer	5 (18)	6 (7)	1.1 (0.4 to 2.7)
<b>Fathers' social class</b>			
upper	28 (99)	20 (23)	0.6 (0.4 to 1.0)
lower	64 (223)	71 (82)	1.4 (0.9 to 2.2)
farmer	7 (23)	5 (6)	0.8 (0.3 to 2.0)
Depressiveness, total score	4.4 (368)	5.5 (129)	0.031
Somatic symptoms	2.3 (358)	2.4 (120)	ns
<b>Teachers in 1986</b>			
Mark average at school	7.7 (274)	7.3 (128)	-0.4 (-0.6 to -0.2)
Repeating a school class	5 (21)	10 (18)	2.1 (1.1 to 4.0)
Behaviour (Rutter), total score	2.8 (404)	4.4 (178)	0.001
<b>Registers 1997</b>			
Age of child in 1992	17.6 (431)	18.1 (209)	0.5 (0.2 to 1.0)
Hospital admissions in 1997	1.4 (400)	1.3 (192)	ns
Married (1997)	9 (35)	6 (11)	0.6 (0.3 to 1.3)

<sup>1</sup>Unadjusted odds ratio for dichotomised variables, p-values in non-normal interval variables and mean differences in normally distributed interval variables.  
ns=Not statistically significant, p>0.05

*Table 4. Differences between the parents who did and did not answer in the second phase.*

	answered	not answered	95 % CI / p-value <sup>1</sup>
	%/mean (n)	%/mean (n)	
<b>Parents in 1986</b>			
Mother absent	3 (8)	1 (2)	0.5 (0.1 to 2.2)
Father absent	7 (21)	21 (36)	3.8 (2.2 to 6.8)
Sex of child (boy)	58 (215)	60 (162)	1.0 (0.8 to 1.4)
Mothers' social class			
upper	26 (83)	21 (36)	0.7 (0.5 to 1.1)
lower	62 (194)	66 (114)	1.2 (0.8 to 1.8)
farmer	5 (16)	5 (9)	1.0 (0.4 to 2.4)
Fathers' social class			
upper	30 (95)	18 (27)	0.5 (0.3 to 0.8)
lower	62 (194)	73 (111)	1.7 (1.1 to 2.6)
farmer	6 (19)	7 (10)	1.1 (0.5 to 2.4)
Depressiveness, total score	4.5 (324)	5.1 (173)	ns
Somatic symptoms	2.2 (313)	2.5 (165)	ns
<b>Teachers in 1986</b>			
Mark average at school	7.8 (234)	7.3 (168)	-0.4 (-0.6 to -0.3)
Repeating a school class	4 (14)	11 (25)	2.8 (1.4 to 5.5)
Behaviour (Rutter), total score	2.9 (343)	3.9 (239)	0.007
<b>Registers 1997</b>			
Age of child in 1992	17.6 (368)	18.0 (272)	0.4 (0.0 to 0.8)
Hospital admissions in 1997	1.3 (347)	1.4 (245)	ns
Married (1997)	9 (30)	7 (16)	0.7 (0.4 to 1.3)

<sup>1</sup> Unadjusted odds ratio for dichotomised variables, p-values in non-normal interval variables and mean differences in normally distributed interval variables.  
ns=Not statistically significant, p>0.1

## 4.5. Statistical analyses

Matching was not used in the statistical analyses, because of the high dropout rate (Table 1). In the second phase, less than half of the pairs of cases and controls answered. The statistical associations are presented as risk ratios, unadjusted odds ratios and differences between the means. When comparing two means of interval variables which were not normally distributed, we used the Mann-Whitney U-test. Risk ratios can be used when a dichotomised analysis is based on two cohorts, one of which has a risk factor, while the other does not (such as remigrants and controls) and there is theoretically a clear causal link between the cause and the consequence (Armitage & Berry 1987). Odds ratios are used in other cases of dichotomised analysis.

When the differences in social support were analysed, the results on the controls were presented in two forms: unadjusted and mathematically adjusted (Norusis 1988) for socio-economic status (SES) and family structure. Mathematical weighting (Norusis 1988) was performed in such a way that the weighted control group resembled the remigrant group with respect to SES and the family pattern. When weighting by family structure, the children were divided into those having both biological parents in the family and the others. This was done because SES and family structure differ between remigrants and controls, and SES could be associated with social networks and mental health.

P-values were only calculated for the interval variables which were not normally distributed (with the Mann-Whitney U-test). In the other situations, confidence intervals were used to estimate the statistical significance, because it has been suggested that confidence intervals should be used instead of p-values (Bullpit 1987, Gardner & Altman 1989). Hypothesis testing with p-values gives no information on the actual differences observed. The confidence interval (CI) for one comparison encompasses a range of values likely to cover the true population value, i.e. a range of outcomes with compatible results. However, confidence intervals are not to be calculated for variables that are not normally distributed (Evans 1986, Gardner & Altman 1989). In our sample, the CDI and Rutter scores, among others, were not normally distributed. All statistical analyses were made with SPSS for Windows, release 7.5.1.

## 5. Results

### 5.1. Demographic descriptives

The remigrants differed from the controls in view of some demographic descriptives. The families of the remigrant children had more often low SES and were less often farmers than the families of the controls when measured with the father's or mother's occupation (Table 5). The remigrants had less often large families (more than six siblings) than the controls (Table 6). Shortly after remigration, the father (but not the mother) was absent more often in the remigrants' families. The remigrants' mother and father continued to be married less often 13 years after remigration, and the young adults themselves were also married less often (6 % of remigrants and 10 % of controls). When returning from Sweden, 52 % of the families remigrated to the county where the mother or father had lived in their childhood. 16 % of the children moved to the city of Tornio, 6 % to city of Rovaniemi and 11 % to city of Oulu. 32 % of the remigrants moved close to the Swedish border (i.e. to the municipalities of Enontekiö, Muonio, Kolari, Pello, Ylitornio, Keminmaa and Simo and to the cities of Tornio and Kemi).

*Table 5. Socio-economic status of migrants and controls.*

SES	Mother			Father		
	migrants	controls	RR (95% CI)	migrants	controls	RR (95% CI)
	n (%)	n (%)		n (%)	n (%)	
Upper SES	31 (14)	88 (33)	0.4 (0.3 to 0.6)	29 (14)	94 (36)	0.4 (0.3 to 0.6)
Lower SES	168 (77)	140 (52)	1.5 (1.3 to 1.7)	166 (81)	139 (53)	1.5 (1.3 to 1.7)
Farmers	4 (2)	21 (8)	0.2 (0.1 to 0.7)	4 (2)	25 (10)	0.2 (0.1 to 0.6)
Others	16 (7)	19 (7)	1.0 (0.5 to 2.0)	5 (3)	5 (2)	1.3 (0.4 to 4.4)

*Table 6. Demographic descriptives.*

	Migrants	Controls	RR (95% CI)
	n (%)	n (%)	
Absent from family (1986)			
Mother	6 (3)	4 (2)	1.4 (0.6 to 2.9)
Father	39 (17)	18 (7)	1.8 (1.2 to 2.7)
Only child in family (1986)	29 (13)	22 (8)	1.3 (1.0 to 1.7)
More than 6 siblings (1986)	2 (1)	26 (10)	0.2 (0.1 to 0.6)
Not married (1997)			
Young adult	256 (94)	260 (90)	1.4 (1.0 to 2.1)
Mother	99 (37)	67 (23)	1.4 (1.2 to 1.7)
Father	86 (34)	51 (18)	1.5 (1.3 to 1.8)
Has children (1997)	37 (14)	38 (13)	1.0 (0.8 to 1.3)

The majority of children (85%) had migrated to Sweden before the age of three (Table 7), and half of the children had lived in Sweden for 7-10 years. Hence, the children had usually migrated to Sweden at early age and remigrated to Finland after having spent 3-4 years in a Swedish school. 43 % of the children remigrated during or after puberty and 58% were boys. 3.4 % of the children went to a Swedish-speaking school in Finland.

*Table 7. Age at migration and length of stay in Sweden.*

Age at migration	Length of stay in Sweden (years)				Total % (n)
	3-6 % (n)	7-10 % (n)	11-14 % (n)	15-19 % (n)	
0-2 years	7 (10)	46 (70)	22 (33)	10 (15)	85 (128)
3-6 years	4 (6)	5 (7)	2 (3)	0 (0)	11 (16)
7-19 years	3 (5)	1 (2)	0 (0)	0 (0)	4 (7)
Total	14 (21)	52 (79)	24 (36)	10 (15)	100 (151)

## 5.2. Prevalence of symptoms

The prevalence of symptoms was measured in two ways: (1) by questionnaires presented to the children, parents and teachers and (2) by register information from hospital discharges.

### 5.2.1. Questionnaire-based study (I)

The questionnaire-based prevalence of psychiatric symptoms is presented as a whole and separately for four groups of remigrants: boys and girls before puberty and during or after puberty. As a single group (Table 8), the remigrants had more depression and behavioural

Table 8. Psychiatric symptoms among migrants and controls.

Symptoms	Migrants	Controls	sign.
	mean (n)	mean (n)	
year 1986			
Depressiveness (Kovacs)	5.1 (227)	4.4 (270)	0.014
Low self-confidence	1.0 (226)	0.9 (270)	ns
Anhedony	0.8 (227)	0.7 (270)	ns
Sadness	0.2 (227)	0.1 (270)	0.054
Behavioural symptoms (RB2)	3.8 (293)	2.7 (289)	0.014
Antisocial behaviour	0.8 (293)	0.6 (289)	ns
Neurotic features	0.6 (292)	0.4 (289)	0.007
Hyperactivity	0.7 (293)	0.5 (289)	ns
Somatic symptoms	2.2 (221)	2.4 (257)	ns
year 1992			
Depressiveness (Kovacs)	6.5 (188)	4.7 (243)	0.001
Low self-confidence	1.4 (188)	1.0 (243)	ns
Anhedony	1.2 (188)	0.9 (243)	0.001
Sadness	0.4 (188)	0.2 (243)	<0.001
Behavioural symptoms (RA2)			
Antisocial behaviour	0.7 (139)	0.5 (223)	ns
Neurotic features	1.2 (139)	1.0 (223)	ns
Somatic symptoms	1.0 (139)	0.9 (221)	ns

ns=Not statistically significant,  $p>0.1$

disorders (especially neurotic features) shortly after remigration and more depression (anhedony and sadness) six years later.

The remigrant boys there had a strong tendency to have more psychiatric symptoms in the first phase only if they had remigrated before puberty (Table 9). The younger remigrant boys were more depressive than their controls in the first phase, had more behavioural symptoms, especially signs of neurotic and hyperactive behaviour. In the second phase, the older ones were more depressive and both the younger and older remigrant boys had significantly higher anhedony subscores than their native controls.

Table 9. Psychiatric symptoms among boys.

Symptoms	age<13 <sup>1</sup>			age ≥13 <sup>1</sup>		
	Migrants	Controls	sign.	Migrants	Controls	sign.
	mean (n)	mean (n)		mean (n)	mean (n)	
year 1986						
Depressiveness (Kovacs)	5.4 (78)	4.1 (105)	0,003	4.2 (53)	4.2 (50)	ns
Low self-confidence	0.9 (78)	0.8 (105)	ns	0.8 (53)	1.1 (50)	ns
Anhedony	0.8 (78)	0.6 (105)	0,085	0.7 (53)	0.8 (50)	ns
Sadness	0.2 (78)	0.1 (105)	0,056	0.2 (53)	0.1 (50)	ns
Behavioural symptoms (RB2)	5.3 (106)	3.1 (115)	0,013	4.4 (66)	3.3 (55)	ns
Antisocial behaviour	1.4 (106)	0.9 (115)	ns	1.2 (66)	0.7 (55)	ns
Neurotic features	0.7 (106)	0.4 (115)	0,044	0.6 (65)	0.5 (55)	ns
Hyperactivity	1.3 (106)	0.7 (116)	0,020	0.7 (66)	0.7 (55)	ns
Somatic symptoms	2.3 (79)	2.0 (102)	ns	1.8 (53)	2.4 (47)	0,016
year 1992						
Depressiveness (Kovacs)	5.4 (60)	4.3 (95)	ns	4.8 (38)	2.6 (39)	0,008
Low self-confidence	1.1 (60)	0.9 (95)	ns	1.0 (38)	0.7 (39)	ns
Anhedony	1.1 (60)	0.8 (95)	0,021	1.1 (38)	0.5 (39)	0,011
Sadness	0.1 (60)	0.1 (95)	ns	0.2 (38)	0.1 (39)	ns
Behavioural symptoms (RA2)						
Antisocial behaviour	0.7 (54)	0.6 (92)	ns	0.8 (27)	0.5 (39)	ns
Neurotic features	1.0 (54)	0.9 (92)	ns	1.0 (27)	0.6 (39)	ns
Somatic symptoms	0.8 (54)	0.8 (91)	ns	0.8 (28)	0.6 (3)	ns

<sup>1</sup> The children were divided into two age groups according to their age in 1986.

ns=Not statistically significant, p>0.1

The remigrant girls had significantly more symptoms only if they had remigrated during puberty and only in the second phase (Table 10). At that time, they had higher scores for depression (anhedony and sadness) than their controls.

Table 10. Psychiatric symptoms among girls.

Symptoms	age<12 <sup>1</sup>			age ≥12 <sup>1</sup>		
	Migrants	Controls	sign.	Migrants	Controls	sign.
	mean (n)	mean (n)		mean (n)	mean (n)	
year 1986						
Depressiveness (Kovacs)	4.4 (48)	4.2 (60)	ns	6.2 (48)	5.4 (54)	0,085
Low self-confidence	0.7 (48)	0.6 (60)	ns	1.5 (47)	1.4 (54)	ns
Anhedony	0.7 (48)	0.6 (60)	ns	0.9 (48)	0.7 (54)	ns
Sadness	0.3 (48)	0.2 (60)	ns	0.2 (48)	0.3 (54)	ns
Behavioural symptoms (RB2)	2.5 (64)	2.2 (64)	ns	1.9 (57)	2.0 (54)	ns
Antisocial behaviour	0.3 (64)	0.3 (64)	ns	0.1 (57)	0.2 (54)	0,091
Neurotic features	0.7 (64)	0.6 (64)	ns	0.4 (57)	0.4 (54)	ns
Hyperactivity	0.2 (64)	0.2 (64)	ns	0.3 (57)	0.2 (54)	ns
Somatic symptoms	2.3 (46)	2.9 (58)	0,072	2.4 (43)	2.6 (50)	ns
year 1992						
Depressiveness (Kovacs)	8.0 (47)	6.5 (61)	ns	7.8 (43)	4.8 (47)	0,006
Low self-confidence	1.7 (47)	1.5 (61)	ns	1.7 (43)	1.0 (47)	ns
Anhedony	1.3 (47)	1.2 (61)	ns	1.5 (43)	0.9 (47)	0,008
Sadness	0.6 (47)	0.3 (61)	0,074	0.6 (43)	0.2 (47)	0,004
Behavioural symptoms (RA2)						
Antisocial behaviour	0.7 (29)	0.5 (51)	ns	0.8 (29)	0.5 (41)	ns
Neurotic features	2.0 (29)	1.2 (51)	ns	1.2 (29)	1.4 (41)	ns
Somatic symptoms	1.4 (29)	1.0 (51)	ns	1.1 (28)	1.1 (40)	ns

<sup>1</sup>The children were divided into two age groups according to their age in 1986.

ns=Not statistically significant, p>0.1

A longitudinal comparison of the initially depressed and non-depressed groups (Table 11) revealed no significant differences between the remigrants in the second phase, but there was significantly more depression in the initially depressed controls.

Table 11. Continuity of initial depressiveness

Symptoms in 1992	Migrants			Controls		
	Dep <sup>1</sup>	Non-dep	sign.	Dep <sup>1</sup>	Non-dep	sign.
	mean (n)	mean (n)		mean (n)	mean (n)	
<b>BOYS</b>						
Depressiveness (Kovacs)	6.1 (8)	5.1 (72)	ns	7.0 (9)	3.5 (108)	0,020
Low self-confidence	1.5 (8)	1.0 (72)	ns	1.6 (9)	0.8 (108)	ns
Anhedony	1.2 (8)	1.2 (72)	ns	1.0 (9)	0.7 (108)	ns
Sadness	0.1 (8)	0.1 (72)	ns	0.2 (9)	0.1 (108)	0,058
Behavioural symptoms (RA2)						
Antisocial behaviour	1.3 (7)	0.7 (63)	0,099	0.6 (9)	0.5 (106)	ns
Neurotic features	1.7 (7)	1.0 (63)	0,090	1.6 (9)	0.8 (106)	0,059
Somatic symptoms	0.6 (8)	0.8 (63)	ns	1.0 (9)	0.8 (105)	ns
<b>GIRLS</b>						
Depressiveness (Kovacs)	7.4 (9)	7.3 (63)	ns	10.2 (10)	5.3 (88)	0,001
Low self-confidence	2.0 (9)	1.5 (63)	ns	2.1 (10)	1.2 (88)	0,024
Anhedony	1.4 (9)	1.2 (63)	ns	2.1 (10)	1.0 (88)	0,002
Sadness	0.3 (9)	0.5 (63)	ns	0.7 (10)	0.2 (88)	0,027
Behavioural symptoms (RA2)						
Antisocial behaviour	0.9 (7)	0.8 (42)	ns	0.6 (10)	0.5 (75)	ns
Neurotic features	2.4 (7)	1.4 (42)	ns	1.8 (10)	1.2 (75)	0,083
Somatic symptoms	1.3 (7)	1.1 (41)	ns	1.2 (10)	1.1 (74)	ns

<sup>1</sup> The children who had a CDI score of 10 or more in 1986 were classified as initially depressive.

ns=Not statistically significant,  $p>0.1$

In this sample, psychiatric symptoms did not significantly correlate with SES among either the controls (Table 12) or the remigrants.

*Table 12. Socio-economic status of father and mean psychiatric/psychosomatic symptoms among controls.*

symptoms	Upper	Lower	sign.	Farmer	Other
	mean (n)	mean (n)		mean (n)	mean (n)
year 1986					
Depression	3.7 (94)	4.8 (145)	0.077	4.0 (26)	7.3 (4)
Behavioural symptoms	2.3 (86)	2.8 (103)	ns	1.7 (24)	4.6 (5)
Somatic symptoms	2.2 (93)	2.6 (137)	0.063	2.2 (23)	1.5 (4)
year 1992					
Depression	4.5 (79)	4.9 (112)	ns	3.7 (21)	7.5 (4)
Somatic symptoms	0.8 (77)	0.9 (100)	ns	0.8 (17)	1.8 (4)

ns=Not statistically significant,  $p>0.1$

### ***5.2.2. Hospital admissions (III)***

The total number of hospital admissions was not higher among the remigrants than the controls. Among the remigrants, however, there were substantially more of those who had been in hospital more than four times and those who had received a primary or additional psychiatric diagnosis while in hospital. Moreover, the remigrants had statistically more hospital admissions because of infectious and parasitic diseases than the controls. There were no differences in hospital admissions between the girls and boys or between the children who had remigrated before puberty and the adolescents who had remigrated during puberty. There were no differences between the upper and lower social class.

The hospital admission rate was lower among the remigrants initially after remigration, but after a few years, the admission rate exceeded that of their native counterparts, which effect lasted for 5 years.

A closer examination of infectious and parasitic diseases failed to reveal any significant differences. Nor were there any differences in undefined abdominal pain (code 7890A in ICD-9), intoxications or suicidal attempts between the remigrants and controls.

### ***5.2.3. Psychiatric hospital admissions***

The migrants who had a psychiatric diagnosis were examined more carefully ( $n=13$ ). The response percentage of these children and their parents in the first phase was 62% (among others 73%). Six years later the corresponding figures were 23% of the parents and 39% of

the children (47% and 60% among the other remigrants). 62% had remigrated during puberty and 62% were boys. The father was absent from 38% of the families initially after remigration.

The hospital records of the remigrants with a psychiatric diagnosis during the inpatient period were obtained (Table 13). The records showed that, among the remigrants, there was no single disturbance which could be said to predominate. The patients had suffered from depression, anxiety, panic disorders, behavioural problems, adaptational problems and drinking problems. Two patients had migrated repeatedly between Finland and Sweden, and there is a possibility that they suffered from serious rootlessness.

*Table 13. Migrants with a psychiatric diagnosis.*

Diagnose	Days in hospital
3050A Alcohol abuse	3
3050A Alcohol abuse	1
3092E Adjustment reaction	32
3000A Anxiety NUD	2
3039X Alcohol dependence	9
3000B Panic disorder	1
3000A Anxiety NUD	1
3123D Disorder of impulse control	6
3094A Adjustment reaction	16
3075E Psychogenic vomiting	1
3077A Encopresis	11
2989X Psychosis NUD	33
3059X Drug abuse NUD	1

### 5.3. Language use

There were several measures of language use and the linguistic environment of the children. In both phases, language use and the linguistic capabilities of the family were inquired. In the second phase, moreover, the language of instruction in day care and comprehensive school were also inquired.

### 5.3.1. Bilingual groups (II)

When asked what language the child used when addressing his/her parents, siblings and peers, the respondents were allowed to choose between five alternatives: only Swedish, mostly Swedish, both Swedish and Finnish, mostly Finnish or only Finnish. Based on the literature and the clinical experience of remigrant patients, five groups were created in view of these answers: a successfully bilingual group, a conflict of loyalty group, a cultural shock group, a semilingual group, and a counteractive group. Note that the group labels are *ad hoc* terms and are not intended to be used as strictly defined concepts.

*The successfully bilingual group* (n=132), which consisted of subjects who had spoken mostly Finnish at home and both languages with their friends, had fewer behavioural disturbances and better school achievement in the first phase compared to the other remigrants, especially in the case of the boys. In the second phase, i.e. after six years, they still had better school achievement (Finnish, Swedish and foreign languages) and fewer somatic symptoms, but the scores for psychiatric symptoms reported by themselves were slightly higher than those of the other remigrants.

The adolescents in the alleged *conflict of loyalty group* (n=29) had spoken only Finnish at home and only Swedish with their friends. They had fewer somatic symptoms and less antisocial behaviour in the first phase of the study compared to other remigrants. The children spoke more often good Swedish (Table 14). Six years later, they still had fewer somatic symptoms and lower antisocial scores and their school marks were better, especially in the Swedish language, than those of the other remigrants.

*The cultural shock group* (n=17), which contained subjects who had spoken mostly Swedish in Sweden and only Finnish after their remigration to Finland, had had lower antisociality sub-scores in the first phase compared to the other remigrants and also had fewer problems in mathematics, but they had more often difficulties in writing and reading after the rapid shift in language use. The children and their fathers spoke less often good Finnish (Table 14). In the second phase, they had more depression, somatic symptoms and antisocial behaviour. They also tended to have poorer school achievement.

*The semilingual group* (n=19), which comprised subjects who had spoken both Swedish and Finnish to their mothers in Sweden, differed from the other remigrants in the first phase in that they scored higher on depression and had more often difficulties in writing, reading and mathematics. The mothers spoke more often fluent Swedish, while the children spoke less often good Finnish (Table 14). Six years later, their depression score was still slightly higher, and their marks for Finnish, Swedish and foreign languages were lower. They had also remigrated at a younger age.

*The counteractive group* (n=36) belonged to families where the children and parents had used different languages in Sweden (typically, the children had spoken Swedish to their parents and the parents Finnish to their children). They had slightly more depression, antisocial behaviour and somatic symptoms compared to the other remigrants in the first phase. They also had more often difficulties in writing and reading. The children and their fathers spoke less often good Finnish and the children and their mothers spoke more often good Swedish (Table 14). In the second phase, they had more somatic symptoms and antisocial behaviour.

Table 14. Good language capabilities of family members in the first phase.

	Mother		Father		Children	
	% (n)	Odds ratio (CI)	% (n)	Odds ratio (CI)	% (n)	Odds ratio (CI)
All						
Finnish	94 (204)		93 (179)		81 (108)	
Swedish	19 (41)		23 (43)		49 (108)	
Successfully bilingual group						
Finnish	95 (121)	1.5 (0.5 to 4.3)	93 (105)	1.1 (0.4 to 3.2)	86 (112)	2.0 (1.0 to 3.9)
Swedish	17 (22)	0.8 (0.4 to 1.5)	23 (25)	1.0 (0.5 to 2.0)	46 (60)	0.8 (0.4 to 1.3)
Conflict of loyalty group						
Finnish	89 (24)	0.5 (0.1 to 1.9)	92 (24)	0.9 (0.2 to 4.4)	74 (20)	0.6 (0.2 to 1.6)
Swedish	15 (4)	0.7 (0.2 to 2.2)	27 (7)	1.3 (0.5 to 3.4)	67 (18)	2.3 (1.0 to 5.3)
Cultural shock group						
Finnish	87 (13)	0.4 (0.1 to 2.0)	79 (11)	0.2 (0.1 to 1.0)	60 (9)	0.4 (0.1 to 0.9)
Swedish	33 (5)	2.3 (0.7 to 7.2)	21 (3)	0.9 (0.2 to 3.5)	73 (11)	3.1 (0.9 to 9.9)
Semilingual group						
Finnish	94 (15)	1.0 (0.1 to 8.4)	80 (8)	0.3 (0.1 to 1.5)	63 (10)	0.4 (0.1 to 1.0)
Swedish	38 (6)	2.7 (1.0 to 8.4)	10 (1)	0.4 (0.0 to 3.0)	63 (10)	1.8 (0.6 to 5.1)
Counteractive group						
Finnish	88 (30)	0.4 (0.1 to 1.5)	82 (23)	0.3 (0.1 to 0.9)	56 (19)	0.2 (0.1 to 0.5)
Swedish	35 (12)	2.9 (1.3 to 6.5)	25 (7)	1.2 (0.5 to 3.0)	79 (27)	5.0 (2.1 to 12.1)

### 5.3.2. Language of instruction in day care and school

The study revealed no distinct differences between the children who had had day care in Swedish or those who had had it in Finnish. Nor was there a clear pattern of association between the language used for instruction at school and the psychiatric symptoms. There were no significant differences between the children who got all their instruction in Finnish during their first three years at school compared to the migrants who had got all instruction in Swedish (Table 15), though the children who had been taught in Swedish were slightly more depressive in the first phase. Every child who had got all instruction in Swedish had Finnish as his/her mother tongue (based on the family name). In this sample, quite a few children been taught exclusively in Swedish (Table 16).

*Table 15. Children who received instruction in one language only during their first three years at school.*

symptoms	All Finnish (n=120)	All Swedish <sup>1</sup> (n=17)	sign.
	mean	mean	
in the year 1986			
Depressiveness (Kovacs)	5,1	6,8	ns
Behavioural symptoms (RA2)	2,4	1,9	ns
Somatic symptoms	1,8	1,8	ns
in the year 1992			
Depressiveness (Kovacs)	5,9	6,2	ns
Somatic symptoms	0,9	1,2	ns

<sup>1</sup> Except some had two hours home language teaching  
ns=Not statistically significant,  $p>0.05$

Table 16. Language of instruction among migrants.

	School year								
	1	2	3	4	5	6	7	8	9
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
All Finnish	87 (74)	70 (72)	53 (68)	35 (60)	23 (56)	14 (50)	4 (24)	3 (33)	1 (50)
Finnish and Swedish	5 (4)	7 (7)	6 (8)	8 (14)	5 (12)	3 (11)	2 (12)	0 (0)	0 (0)
Home language teaching <sup>1</sup>	15 (13)	12 (12)	11 (14)	11 (19)	7 (17)	6 (21)	6 (35)	4 (44)	0 (0)
All Swedish	11 (9)	8 (8)	8 (10)	4 (7)	6 (15)	5 (18)	5 (29)	2 (22)	1 (50)
Missing	159	144	117	93	70	48	34	17	7
Lived in Finland	43	79	125	169	209	244	269	294	311

<sup>1</sup> Two hours in Finnish per week

#### **5.4. Social support (IV)**

Immediately after remigration, the remigrants did not have fewer friends compared to the controls, and they did not feel that they had fewer friends in school breaks, but they did feel more lonely. According to the teachers, the remigrants had more social problems than the controls. Six years later, the situation was still the same, and the remigrants additionally reported having seldom close friends. The migration still contributed to a feeling of a lack of social support six years later. SES and family structure had only a minor confounding effect on these differences.

Six years later, a feeling of closeness to one's friends and one's place of living did not protect the remigrants from depression, but it did protect the controls.

#### **5.5. Factors leading to good adaptation**

To summarise the results on protective factors, two groups were created: those who adapted well in the first phase and those who adapted well in the second phase. The first group consisted of the children who had had CDI and Rutter scores under 3 in the first phase, no psychiatric diagnosis and no difficulties to make friends, had not been afraid to go to school breaks, and had had somatic symptom scores under 4. These criteria identified 33 remigrants. The second group consisted of the children who had CDI, neurotic and antisocial scores under 3 in the second phase, had no psychiatric diagnosis, had not dropped out of comprehensive school, had no difficulties at school, and had somatic symptom scores under 2. These criteria identified 26 remigrants.

The groups did not differ from the other remigrants in view of gender or SES. Several factors were found to characterise good adaptation in the first phase (Table 17). The children in the well adjusted group belonged more often to the successfully bilingual group, had spoken both Finnish and Swedish with their friends, had liked the idea of remigration when they first heard about it, had maintained contacts to Sweden by phone after remigration, had had a good time in the school breaks after remigration, and had higher mark averages than their classmates in general. Additionally, their mothers or fathers were less often unemployed and their fathers had moved more often. There were, however, no factors before or during remigration which would have been protective in the long run.

Table 17. Successfully adapted migrants in 1986 and 1992.

Factor in the first phase	In the first phase			In the second phase		
	group (n=33)	others	OR (95% CI)	group (n=26)	others	OR (95% CI)
Boy	61 (20)	59 (138)	1.06 (0.50 to 2.23)	62 (16)	49 (77)	1.64 (0.70 to 3.84)
Migrated during or after puberty	55 (18)	40 (93)	1.81 (0.87 to 3.76)	39 (10)	44 (68)	0.81 (0.35 to 1.89)
Spoke only Finnish at home in Sweden	43 (13)	33 (56)	1.54 (0.70 to 3.40)	57 (10)	39 (44)	1.96 (0.72 to 5.35)
Both languages with friends in Sweden	42 (13)	18 (33)	3.31 (1.48 to 7.40) <sup>2</sup>	19 (4)	17 (20)	1.17 (0.35 to 3.83)
In the successfully bilingual group	73 (24)	45 (105)	3.25 (1.45 to 7.30) <sup>2</sup>	50 (13)	47 (74)	1.11 (0.48 to 2.54)
All instruction in Swedish	10 (3)	10 (17)	1.03 (0.28 to 3.77)	20 (5)	12 (15)	1.87 (0.61 to 5.71)
Day care in Finnish	79 (11)	80 (84)	0.92 (0.24 to 3.58)	79 (19)	82 (77)	0.84 (0.28 to 2.56)
Good ability to speak Swedish (child)	61 (20)	46 (84)	1.78 (0.83 to 3.79)	46 (10)	41 (50)	1.18 (0.47 to 2.95)
Good ability to speak Finnish (child)	85 (28)	80 (146)	1.42 (0.51 to 3.93)	96 (21)	84 (102)	4.12 (0.52 to 32.39)
Father had moved more than once in the past 5 years	39 (11)	21 (33)	2.39 (1.02 to 5.60) <sup>2</sup>	14 (3)	24 (25)	0.49 (0.13 to 1.81)
Mother or father unemployed	19 (5)	39 (65)	0.35 (0.13 to 0.98) <sup>2</sup>	20 (4)	39 (41)	0.40 (0.12 to 1.27)
Siblings	84 (27)	88 (164)	0.76 (0.27 to 2.16)	81 (17)	86 (106)	0.72 (0.22 to 2.39)
Lower social class	79 (26)	81 (151)	0.89 (0.36 to 2.20)	82 (18)	82 (102)	0.97 (0.30 to 3.15)
Remigrated to the parents' home county	45 (14)	52 (87)	0.76 (0.35 to 1.64)	71 (15)	53 (60)	2.25 (0.82 to 6.21)
Family moved to Tornionjokilaakso at remigration <sup>1</sup>	43 (15)	29 (53)	2.00 (0.94 to 4.26)	19 (4)	30 (36)	0.56 (0.18 to 1.79)
Liked the idea of remigration before actual remigration	66 (21)	32 (59)	4.08 (1.85 to 9.00) <sup>2</sup>	48 (10)	32 (39)	1.94 (0.76 to 4.94)
Remigration was not a surprise	78 (25)	63 (117)	2.08 (0.85 to 5.05)	76 (16)	63 (76)	1.90 (0.65 to 5.52)
Contacts to Sweden by phone	70 (21)	47 (78)	2.63 (1.14 to 6.09) <sup>2</sup>	59 (10)	47 (51)	1.63 (0.58 to 4.58)
Lots of friends and a good time in school breaks (Sweden)	80 (24)	62 (109)	2.50 (0.97 to 6.42)	57 (12)	62 (71)	0.83 (0.32 to 2.12)
Lots of friends and a good time in school breaks (Finland)	79 (26)	45 (85)	4.55 (1.88 to 10.98) <sup>2</sup>	52 (11)	48 (60)	1.21 (0.48 to 3.05)
Mark average better than the class average	68 (17)	36 (60)	3.86 (1.57 to 9.47) <sup>2</sup>	68 (13)	44 (52)	2.75 (0.98 to 7.73)

<sup>1</sup> Area located next to the Swedish-Finnish border

<sup>2</sup> Statistically significant difference

## **6. Discussion**

### **6.1. Methodological aspects**

The aim of this study was to investigate the mental well-being of Finnish remigrant children and adolescents. The subjects were children who had remigrated from Sweden to Northern Finland. In the 1970s, Northern Finland was the central source of emigration to Sweden, as approximately 40% of all migrants were from this region (Korkiasaari 1985). In the years 1980 – 1986, a total of 36% of the school-aged children remigrating from Sweden settled in Northern Finland (Korkiasaari 1986). The sample represents quite a large proportion of the Finnish remigrants from Sweden, but the families remigrating to the southern part of Finland may be different in some respects (for example by socio-economic status), and this partly restricts the possibility to generalize the results to apply to all the Finnish remigrant children and adolescents from Sweden. The migration and remigration situations in different countries differ from each other considerably, and these results should be generalized to other migration situations very carefully.

The response percentages were lower among the remigrants than among their controls and lower in the second phase than in the first. The percentage was especially low among the parents of the remigrants in the second phase. Partly this was explained by the fact that there were more problems in finding the correct addresses of the remigrants in the second phase. Some of them may have migrated back to Sweden. The teachers' response rates were equally high for both the controls and the remigrants (91%), and, along with the register data, they can be assumed to be the most reliable source of information in this study.

In the first phase, almost all the parents of the non-responding children also failed to respond. According to the teachers' evaluation, the non-responding children had more behavioural disturbances. In the second phase, the non-responding children appeared to have been more depressive and to have had more behavioural disturbances in the first phase. The children whose parents did not answer also had more behavioural disturbances. The children who did not answer had clearly more problems than the others. Firstly, this difference reflects poorer coping by the remigrant children and their families. Secondly, some of the children with problems probably did not participate in the study, which may have detracted

from the significance of the differences. These facts may have caused a bias, which should be borne in mind when analyzing the findings.

Data on the hospital admissions were obtained from 93% (n=592) of the subjects (287 remigrants and 305 controls). In this respect, the register data (together with the teachers' questionnaire) are more reliable than the data based on the questionnaires presented to the children and their parents.

Socio-economic status (SES) can be considered a potential confounding factor. Young unskilled adults moved to Sweden in the late 1960s and early 1970s mainly to search for work in factories or similar employment. This is why both the fathers and the mothers of the remigrant children had more often lower SES than their controls. The remigrant families were also less often farmers than the controls. Lower SES has been connected with psychiatric morbidity in normal samples of Finnish children (Puura *et al.* 1995). This connection has also been found among migrants (Mavreas & Bebbington 1987). In this study, psychiatric symptoms did not significantly correlate with SES among either the controls or the remigrants. Though the remigrant families had more often lower SES, this has only a minor confounding effect and it does not explain all the differences between the remigrants and controls. The results concerning social support did not change much when SES was weighted.

The strengths of this study are the multi-informant approach and the longitudinal follow-up design, which make it possible to view the phenomenon from different aspects. The longitudinal design makes it possible not merely to analyze the immediate effects of remigration, but also to assess its long-term consequences. An apparent weakness is the high dropout rate among the children and parents. However, the dropout rate was very low among the teachers and in the register data (under 10%). Another weakness is that the measurement of psychiatric symptoms was made only with screening instruments, while actual morbidity was not measured (diagnostic interviews). This problem was partly overcome by using the hospital discharge register, which included diagnoses. Personal interviews would give qualitative data and more detailed information about the perceived well-being and personal characteristics of remigrant children and adolescents.

## **6.2. Main findings**

### ***6.2.1. Prevalence of psychiatric symptoms***

Finnish children and adolescents who have lived in Sweden in their childhood have had a period of life which individuals of the normal population have not had. This period may have some long-term consequences for the later life of every remigrant. As a whole, the remigrants experienced more depression and behavioural disturbances than their native peers shortly after remigration, as measured by CDI and RB2. Six years later, they still had more depression. During the 10-year period after remigration, 13 remigrants had had a psychiatric diagnosis in inpatient care compared to only two such controls. The migrants also had more infectious diseases and more frequent hospital admissions. In Finland, the migrants did not have any language or economic barrier to obtain hospital care. This can

partly explain the difference compared to some other studies (Cochrane 1979, Munroe-Blum *et al.* 1989, Chabra *et al.* 1997), which failed to detect any differences between migrants and natives. The higher dropout rate among remigrants may also be a sign of their poorer mental health.

Especially the boys who remigrated before puberty had problems shortly after migration. One reason for this finding could be that the family was possibly more keen to remigrate to Finland if the child had serious problems in first years in school. Psychiatric problems are usually more visible among boys, whose problems manifest more as behavioural disturbances.

The children who remigrated before puberty had psychiatric symptoms mainly shortly after migration, but the remigrant children who had moved during puberty had more psychiatric symptoms than their controls only in the second phase. In the long run, remigration simultaneous with pubertal developmental tasks seems to involve more risks than remigration before puberty.

The depressive features and behavioural disturbances observed among the remigrants during the first phase did not lead to disturbances in the second phase, whereas the depressive symptoms of the controls continued until the second phase. The remigrants' problems were of more transient type than those of the controls.

These findings are different when compared to another widely studied European phenomenon of guest worker migration and remigration (Greek remigrants from Germany, Hatzichristou & Hopf 1995). Although migration between Greece and Germany involves more cultural changes (and, according to the acculturative stress hypothesis, more stress) compared to that between Finland and Sweden, the remigrants in that study did not have any more intrapersonal problems than their non-migrating peers. A possible reason for this difference could be the different study methods and the different context of migration and remigration. For example, there may be variable cultural differences or the migrant population may be selected from the source population by the criterion that only more/less healthy people migrate (Fichter *et al.* 1988).

### ***6.2.2. Factors influencing mental health of remigrants***

Remigration from Sweden may have a long-lasting effect on remigrant children's relationships with their peers. The remigrants did not have fewer friends, but they often felt more lonely shortly after remigration and also six years later. It seems that the remigrants had problems in establishing good peer relationships. They may feel that they have friends, but the friends are not close enough to protect them from loneliness. Six years later, identification to the circle of friends and to the place of origin was not associated to a lack of depression among the remigrants as much as among the native population. This finding probably reflects the fact that being rooted is less important for remigrants, who have lived the largest part of their lives far away from their roots. It may also be that the remigrants had more often acquired the individualistic and postmodern urban lifestyle, where social networks are multiple, overlapping and dynamic (Heller & Swindle 1983) and the circle of friends

and the place of living can be changed relatively easily. Ultimately, this may lead to marginalization.

The maintenance of both one's native language and the second language together with the two cultures experienced in childhood was found to be an important determinant of good adaptation after remigration. This kind of language use can even be recommended for migrant families: to maintain their cultural identity at the level of language use and at the same time to integrate into the surrounding society by achieving a good ability in its language. These children have succeeded in taking advantage of the diversity of their language environment and achieved a balanced bilingual and bicultural identity.

The children were placed at risk of poor adaptation if the mother spoke both Finnish and Swedish to the child. This incoherent language use can also indicate mother's unstable identity. Another risk situation was that the child and the mother spoke different languages to each other (typically, the children spoke Swedish to their parents and the parents spoke Finnish to their children). This may reflect the conflict of two cultures (majority and minority) colliding between family members with different acculturation styles. The principle of one person - one language, which postulates that the child should speak systematically one language with each person, was found to be of essential importance.

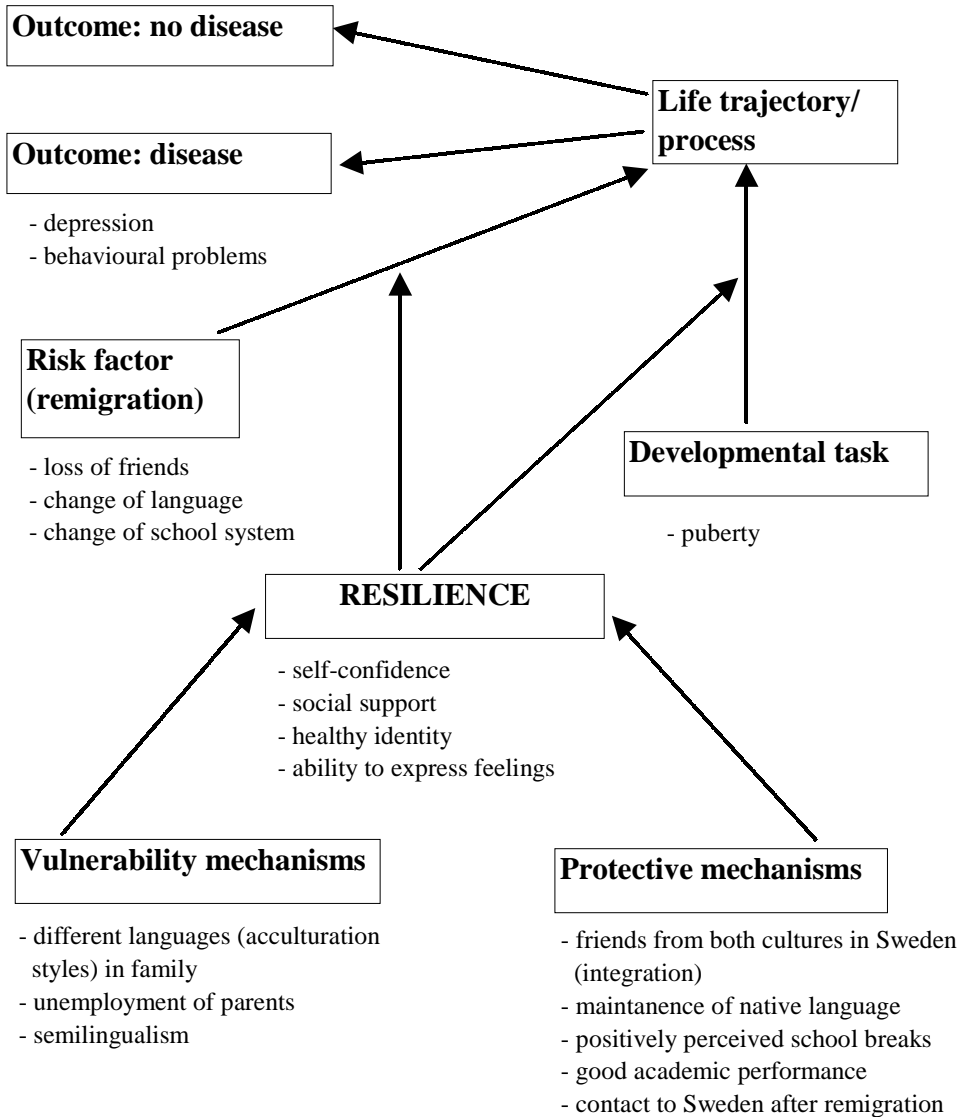
But despite these trends, not every individual had negative implications for their later life because of having lived their early years in Sweden. Some may even have derived some advantage from this situation by learning two languages and two cultures. The resilience of the remigrants was marked by good school achievement, having friends from both language groups in Sweden, being in the successfully bilingual group, contacts to friends in Sweden after remigration, parents' employment and father's history of moving.

### **6.3. Results in theoretical framework**

In this study, migration is considered a risk factor with different subclasses. These are the loss of friends and the change of the language, school system and environment. These risk factors are mainly in the exosystem, except the possible loss of close friends and other close persons outside the family, which is part of the microsystem.

The different factors and processes of remigrant child are presented schematically in figure 2. Remigration (or some of its components) is considered a risk factor. The individual variation of this risk is shaped by resilience, the quality of which is measured in terms of self-confidence, social support, healthy identity and the ability and possibility to express feelings to significant others. Resilience is constructed by different mechanisms, which are considered either vulnerable or protective. The figure 2 presents the vulnerability and protective mechanisms found in this study. Remigration is a key turning point in the life of a remigrant child and adolescent and has a significant impact on his/her life trajectory. The outcome depends on resilience, which modifies the effect of remigration.

How do children react to this risk factor? According to perspective of developmental psychopathology, there are marked individual variations, which depend on the adaptation by the child. This variation is obvious in the previous studies on the mental well-being of migrant children, where the results vary notably, depending on the situation. Resilience



**Figure 2: Systemic view of mechanisms of resilience upon remigration**

emerges through long processes during the development of the child. In this study, most of the children had lived almost all their lives in Sweden. The environment presented by Swedish society to the migrant child is therefore very important. Here, we concentrated mainly on the influence of the macrosystem, exosystem and microsystem (Figure 3). Though ontogenic development is a very important element in the development of the child, it was considered to be out of the scope of this study.

### 6.3.1. Macrosystem

When a family migrates to Sweden, they face a new culture and have to adapt to a new macrosystem. Among migrants, the conflicts between the macrosystem and the microsystem, and also between the exosystem and the microsystem are evident. This brings temporal instability to the structure at different levels. Subsequently, new stability is achieved after a certain length of time. However, this subsequent stability may lead to an abnormal organisation (of the microsystem). For example, the Swedish policy to assimilate migrants to society (factor of the macrosystem) occasionally led to a situation where the parents spoke Swedish to their children to promote their assimilation (state of the microsystem). However, without proper knowledge of his/her mother tongue, the child's development

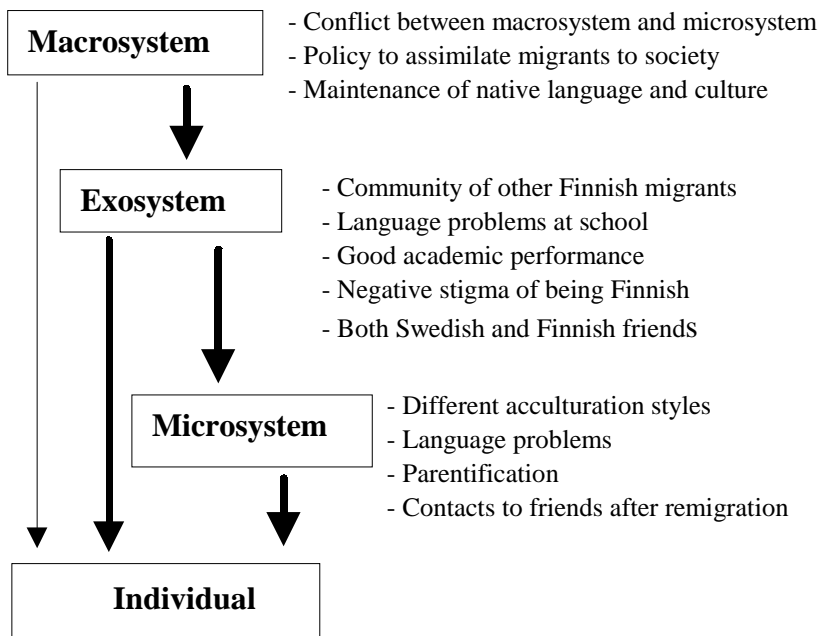


Figure 3: Ecological transactional view of migration

may be hampered (Hansegård 1979). Macrosystem factors (assimilation policy, negative status of Finnish minority) also influence the exosystem (for example, the language of instruction at school and peer relations). These are discussed further in the section concerning the exosystem.

Upon remigration to Finland, the macrosystem and exosystem of the child and adolescent change, which brings about short-term instability. For the children, who have lived almost all their lives in Sweden, this is the first change of the macrosystem, but for the parents, the situation is different and the change of the macrosystem is more like a returning to home. For children and adolescents, this is a key turning point in their lives, which may have unpredictable repercussions on their later life, and it is therefore of utmost importance to see how they adapt to it. One key criterion is to give each child a possibility to maintain their native language and cultural identity.

### ***6.3.2. Exosystem***

The exosystem includes the community where the child lives: the school, peer group and neighbourhood. Important protective factors reside in the exosystem: the community of other Finnish migrants. In industrial cities, where Finnish people usually migrated, Finnish migrants mostly lived in the same part of the city. This community may have protected from some adverse effects of migration, such as negative attitudes of the majority towards a minority (group density effect, Halpern 1993). This is an example of how a more proximal level (exosystem) protects against the effect of a more distal level (macrosystem). In a normal situation, this relation prevails between the microsystem and the exosystem, the microsystem being the more protective level (Cicchetti & Toth 1997).

There are also obvious risk factors at the exosystem level. The factor most important for the child is the school environment, which involves multiple elements that may promote the formation of pathogenic organisation in an individual. It has been found that low perceived academic competence and an inability of the school environment to facilitate development are related to depressive symptoms and low self-confidence (Cicchetti & Toth 1998). This effect is assumed to be mediated by the attitudes and behaviours of teachers and peers (Stipek 1997). In the 1970's, many migrant children had difficulties at school, partly because of their inadequate knowledge of the language of instruction (Toukoma 1975, Lasonen & Toukoma 1978). The situation changed in the late 1970's and 1980's, when teaching in the mother tongue was started in the largest cities. It has been found important that each child gets instruction in his/her mother tongue during the first two or three years at school (Toukoma 1975, Rönholm 1999). However, this study did not confirm this assumption, probably because of the low number of children who received their instruction in Swedish during first three years (n=17). Inadequate knowledge of one's mother tongue also impairs the learning of a second language (Hansegård 1979), which may lead to a situation where the child has no proper competence in any language. Dropping between two cultures has implications for self-image and disturbs the feeling of belonging, which may lead to serious mental health problems, as was seen in two remigrants who had been psychiatric inpatients.

The school environment may be stressful because of the negative stigma of being Finnish attributed by Swedish pupils (Toukoma 1973). Peer rejection and withdrawal are associated with depression among children (Boivin *et al.* 1994). It may place the children at risk for negative trajectories characterised by low motivation, alienation from prosocial activities and peers, which may lead to depression and behavioural disturbances (Stipek 1997).

Both Swedish and Finnish friends in Sweden seemed to promote resilience during remigration. These children had acquired a balanced bicultural Finnish-Swedish identity. They were possibly best adapted to their situation in Sweden and were connected to and got support from the majority culture, but they had also contacts to their Finnish peers and the Finnish culture, which is important upon remigration back to Finnish society. The importance of the original culture was also shown by the analysis of the different language patterns, where the children in both successful groups spoke mainly Finnish at home.

After remigration, school again played an important role among the protective factors present in the exosystem. There were markedly more children in the resilient group with mark averages above the class average. Positively perceived school breaks were also connected to resilience. As it was said earlier, low perceived academic competence and peer rejection are connected to psychiatric symptoms (Boivin *et al.* 1994, Stipek 1997, Cicchetti & Toth 1998). Six years after remigration, remigrants had less often close friends and still felt more lonely. Supposedly, they did not get enough support from the exosystem level after their remigration.

### **6.3.3. *Microsystem***

It could be assumed that the microsystem level was mainly equally protective among the migrants and the controls before and after remigration. However, there are some factors which could be vulnerability factors at this level, too.

The first factor to attract attention in our study was language use. The children who spoke a different language to their parents than their parents spoke to them were found to have a greater risk of exhibiting anti-social behaviour six years after remigration. Assumably, the parents and children did not have sufficiently good contact with each other. In some cases, the reason may have been that the children simply could not speak Finnish well enough. Some chronic conflict between the parent and the child could also have manifested as a use of different languages by them. It is further possible that these children had a different acculturation level than their parents. Usually, if the parents and children have different acculturation levels, the children are assimilated while the parents are separated (Skutnabb-Kangas 1987). In this situation, the boundary between the two cultures runs within the family. Assumably, if the family has a structure of this kind, it cannot give sufficient support for the child.

In the families where the children had achieved sufficient competence in Swedish, but the parents had not learned to speak Swedish, the children had to act as interpreters when their parents visited a doctor, a school or the local authorities (Toukoma 1973). This parentification is normal to some extent, and the child thereby learns to identify with the

responsible roles in his/her future life. But when it is not reciprocal or affects the child's freedom and growth it may have a detrimental effect (Boszormenyi-Nagy & Spark 1973).

After remigration, contacts to friends in Sweden by phone were important for resilience. Remigration threatens to break down all previous friendship contacts, and it takes some time to re-establish friendship ties in a new country. If the child succeeds to maintain his/her previous contacts to close friends, the initial period before acquiring new friends in Finland is easier and the child gets some support from his/her friends even during the period immediately following remigration.

Parental employment contributed to a prominent difference between the resilient group and the others. If the parents found employment soon after remigration, the stress level of the family was lower. We could assume that the parents who got jobs soon after remigration were overall better prepared for the remigration than the families where either parent was unemployed. At the time of remigration, the importance of the protective function of the family becomes even more prominent, because the other structures of the child/adolescent's environment of change.

#### **6.4. Implications for practice**

As migration between neighbouring countries is increasing along with the development of the European Union, research into children's adaptation in such situations is of current interest. Migration between Finland and Sweden continued to have an impact on the children and adolescents of this study for as long as six years after remigration. Remigrant children and adolescents are at risk of suffering from psychiatric symptoms more than their native peers, but in an optimal environment adaptation was good and the migration period in Sweden had no harmful effect on the migrant's mental well-being.

Because of this, it would be useful if there were more information for families who are planning to migrate to foreign country with small children. They should be notified that their native culture is important for their children. Though learning other languages is important nowadays, the learning should not take place at the expense of their native culture. The native language should be spoken in the family, but it would be good for the children to have friends from both their native culture and the host culture. The host society should also protect the identities of the minorities by integrating rather than assimilating newcomers.

The language of instruction at school has been discussed quite extensively in Sweden. It has been argued that children should receive instruction in their native language. In this sample, no conclusive results were obtained either way. This was partly explained by small number of children who received instruction exclusively in the Swedish language at the lowest class levels. However, contacts to the original culture were found to be important for remigrants, which suggests that instruction in the native language would be helpful in creating a balanced bicultural identity.

After remigration to Finland, the children and adolescents of the remigrant families would obviously benefit from special support. For example, their special needs and background should be acknowledged in remedial education. Useful might be family therapy

for discovering resources of the microsystem or supporting peer group therapy to share their problems with other remigrants.

Despite of the more prominent mental health problems among remigrants, majority of them still did not have any observable negative effect from the migration period and some may even had benefited from the migration by turning this experience more as an advantage. This can lead to increasing resilience which protects when encountering adversities in later life.

## 7. References

- Alloway R & Bebbington P (1987) The buffer theory of social support - A review of the literature. *Psychol Med* 17: 91-108.
- Almqvist F, Tuompo-Johansson E, Panelius E, Aronen E & Kairemo A-C (1991a) Screening for Psychiatric Symptoms on the Basis of the Rutter Parent's Questionnaire. *Rep Psych Fennica* 91:21-34.
- Almqvist F, Tuompo-Johansson E, Panelius E, Aronen E & Kairemo A-C (1991b) Screening for Psychiatric Symptoms on the Basis of the Rutter Teachers' Questionnaire. *Rep Psych Fennica* 91:35-46.
- Armitage P & Berry G (1987) *Statistical Methods in Medical Research*. 2nd edition. Blackwell Scientific Publications, Oxford.
- Aro H (1994) Risk and protective factors in depression: a developmental perspective. *Acta Psychiatr Scand* 377P (Suppl.): 59-64.
- Aronowitz M (1984) The Social and Emotional Adjustment of Immigrant Children: A Review of the Literature. *Int Migr Rev* 18: 237-257.
- Aseltine RH, Gore S & Colten ME (1994) Depression and the Social Developmental Context of Adolescence. *J Pers Soc Psychol* 67: 252-263.
- Aurelius G (1979) Adjustment and Behaviour of Finnish and Southern European Immigrant Children in Stockholm. *Scand J Soc Med* 7:105-113.
- Beiser M, Dion R, Gotowiec A, Hyman I & Vu N (1995) Immigrant and refugee children in Canada. *Can J Psychiatr* 40: 67-72.
- Bengi-Arslan L, Verhulst F, van der Ende J & Erol N (1992) Understanding childhood (problem) behaviors from a cultural perspective: comparison of problem behaviors and competencies in Turkish immigrant, Turkish and Dutch children. *Soc Psych Psych Epid* 32: 477-484.
- Berry JW & Kim U (1988) Acculturation and Mental Health. In: Dasen P, Berry JW, Sartorius N (Eds) *Health and Cross-Cultural Psychology: Toward Applications*. Sage, London, p 207-236.
- Berry JW, Kim U, Minde T & Mok D (1987) Comparative studies of acculturative stress. *Int Migr Rev* 21: 491-511.
- Berry JW, Poortinga YH, Segall MH & Dasen PR (1992) *Cross-cultural psychology. Research and applications*. Cambridge University Press, Cambridge.
- Boivin M, Poulin F & Vitaro F (1994) Depressed mood and peer rejection in childhood. *Dev Psychopathol* 6:483-498.
- Boszormenyi-Nagy I & Spark G (1973) *Invisible loyalties: Reciprocity In Intergenerational Family Therapy*. Harper & Row, New York.
- Bradley S & Sloman L (1975) Elective Mutism in Immigrant Families. *J Am Acad Child Psychiatry* 14:510-514.

- Broadhead WE, Kaplan BH, James SA, Wagner EH, Schoenbach VJ, Grimson R, Heyden S & Tibblin G (1983) The epidemiological evidence for a relationship between social support and health. *Am J Epidemiol* 117: 521-537.
- Bronfenbrenner U (1979) *The Ecology of Human Development: Experiment by Nature and Design*. Harvard University Press, Cambridge, MA.
- Bui KV & Takeuchi DT (1992) Ethnic minority adolescents and the use of community mental health care services. *Am J Comm Psychol* 20:403-17.
- Bulpitt CJ (1987) Confidence intervals. *Lancet* 1(8531): 494-497.
- Burack JA (1997) The study of atypical and typical populations in developmental psychopathology: The quest for a common science. In: Luthar S, Burack J, Cicchetti D & Weisz J. (eds) *Developmental psychopathology : perspectives on adjustment, risk, and disorder*. Cambridge University Press, Cambridge, p. 139-165.
- Chabra A, Chavez GF & Taylor D (1997) Hospital Use by Pediatric Patients: Implications for Change. *Am J Prev Med* 13 (Suppl 2): 30-37.
- Cicchetti D & Toth SL (1997) Transactional ecological systems in developmental psychopathology. In: Luthar S, Burack J, Cicchetti D & Weisz J. (eds) *Developmental psychopathology : perspectives on adjustment, risk, and disorder*. Cambridge University Press, Cambridge, p. 317-349.
- Cicchetti D & Toth SL (1998) The development of depression in children and adolescents. *Am Psychol* 53:221-41.
- Cicchetti D, Rogosch FA & Toth SL (1997) Ontogenesis, depressotypic organization, and the depressive spectrum. In: Luthar S, Burack J, Cicchetti D & Weisz J. (eds) *Developmental psychopathology : perspectives on adjustment, risk, and disorder*. Cambridge University Press, Cambridge, p. 273-313.
- Cochrane R (1979) Psychological and Behavioural Disturbance in West Indians, Indians and Pakistanis in Britain: A comparison of Rates Among Children and Adults. *Brit J Psychiat* 134: 201-210.
- Cohen S & Wills TA (1985) Stress, Social Support, and the Buffering Hypothesis. *Psychol Bull* 98: 310-357.
- Davies L & McKelvey R (1998) Emotional and behavioural problems and competencies among immigrant and non-immigrant adolescents. *Aust New Zeal J Psychiat* 32: 658-665.
- DeBlassie R (1983) Emotional and Behavioral Disorders in Bilingual Children. In Omark, D. R. & Erickson J. G. (Eds.) *The Bilingual Exceptional Child*. College-Hill Press, San Diego, p. 255-268.
- Evans C (1986) Confidence intervals, medical housing need, and inappropriate statistics. *Brit Med J* 293:756.
- Faust J, Baum CG & Forehand R (1985) An examination of the association between social relationship and depression in early adolescence. *J Appl Dev Psychol* 6: 291-297.
- Feiring C & Lewis M (1996) Finality in the eye of the beholder: Multiple sources, multiple time points, multiple paths. *Dev Psychopathol* 8: 721-733.
- Fichter M, Elton M, Sourdi L, Weyerer S & Koptagel-Hal G (1988) Anorexia nervosa in Greek and Turkish adolescents. *Eur Arch Psychiatr Neurol Sci* 237: 200-208.
- Gardner MJ & Altman DG (1989) *Statistics with confidence - Confidence intervals and statistical guidelines*. BMJ, London.
- Guarnaccia P & Lopez S (1998) The Mental Health and Adjustment of Immigrant and Refugee Children. *Child Adol Psychiatr Clin North Am* 7: 537-553.
- Haavio-Mannila E & Stenius K (1977) Mental health of immigrants in Sweden. Research reports 211, Department of Sociology, University of Helsinki.
- Halpern D (1993) Minorities and Mental Health. *Soc Sci Med* 36:597-607.
- Hansegård NE (1979) Kaksikielisiä vai puolikielisiä. [Bilingual or semilingual] Suomalaisen kirjallisuuden seura, Vaasa..
- Haour-Knipe M (1989) International employment and children: geographical mobility and mental health among children of professionals. *Soc Sci Med* 28: 197-205.
- Harrington R, Rutter M & Fombonne E (1996) Developmental pathways in depression: Multiple meanings, antecedents, and endpoints. *Dev Psychopathol* 8: 601-616.
- Harter S & Whitesell NR (1996) Multiple pathways to self-reported depression and psychological adjustment among adolescents. *Dev Psychopathol* 8: 761-777.

- Hatzichristou C & Hopf D (1995) School Adaptation of Greek Children after Remigration; Age Differences in Multiple Domains. *J Cross Cult Psychol* 26: 505-522.
- Heller K & Swindle RW (1983). Social networks, perceived social support, and coping with stress. In: Felner RD, Jason LA, Moritsugu J & Farber SS (eds) *Preventive psychology: Theory, research and practice*. Pergamon Press, pp. 87-103.
- Hirschfield RM & Cross CK (1982) Epidemiology of affective disorders. *Arch Gen Psychiat* 39: 35-46.
- Holappa A-S & Meriläinen A (1984) Paluoppilais Ranuan kunnassa. Kuvailua vanhempien ja opettajien käsitysten sekä sosiometrisen luokkakäytöksen perusteella. Pro gradu –tutkielma. University of Oulu, Faculty of Education.
- Hovey JD & King CA (1996) Acculturative stress, depression and suicidal ideation among immigrant and second generation Latino adolescents. *J Am Acad Child Psy* 35:1183-1192.
- Ihto M (1981) Ruotsinsuomalaisten lasten ja paluumuuttajien kouluongelmat. *Sosiaalinen Aikakauskirja* 4/81, 25-29.
- Jaakkola M (1983) Finnish immigrants in Sweden: Networks and lifestyles. Research report 30, Research group for Comparative sociology, University of Helsinki.
- Jalava A (1981) *Asfalttikukka*. WSOY, Juva.
- Kazdin AE (1997) Conduct disorders across the life-span. In: Luthar S, Burack J, Cicchetti D & Weisz J. (eds) *Developmental psychopathology : perspectives on adjustment, risk, and disorder*. Cambridge University Press, Cambridge, p. 248-272.
- Kazdin AE, Kraemer HC, Kessler RC, Kupfer DJ & Offord DR (1997) Contributions of risk-factor research to developmental psychopathology. *Clin Psychol Rev* 17:375-406.
- Klimidis S, Stuart G & Minas IH (1994) Immigrant status and gender effects on psychopathology and self concept in adolescents: A test of the Migration-Morbidity hypothesis. *Comp Psychiatry* 35: 393-404.
- Korkiasaari J (1985) Returnees from Sweden to Finland in 1980-81. Ministry of labour, Planning Department, Painatuskeskus, Helsinki.
- Korkiasaari J (1986) Paluoppilaiden sopeutuminen. *Siirtolaistutkimuksia A:13*, Siirtolaisinstituutti, Turku.
- Kovacs M (1980) Rating Scales to Assess Depression in Schoolaged Children. *Acta Paedopsychiatria* 46: 305-315.
- Kozulin A (1988) Reality monitoring, psychological tools, and cognitive flexibility in bilinguals: Theoretical synthesis and pilot experimental investigation. *Int J Psychol* 23: 79-92.
- Kraemer HC, Kazdin AE, Offord D, Kessler R, Jensen P & Kupfer DJ (1997) Coming to terms with the terms of risk. *Arch Gen Psychiat* 54: 337-343.
- Kresanov K, Tuominen J, Piha J & Almqvist F (1998) Validity of child psychiatric screening methods. *Eur Child Adol Psy* 7:85-95.
- Kuure O, Moilanen I & Myhrman A (1992) Limited language proficiency and types of bilingualism. *South Afr J Linguistics* 10: 240-247.
- Kvernmo S & Heyerdahl S (1998) Influence of Ethnic Factors on Behavior Problems in Indigenous Sami and Majority Norwegian Adolescents. *J Am Acad Child Adolesc Psychiatr* 37: 743-751.
- LaFromboise T, Coleman H & Gerton J (1993) Psychological Impact of Biculturalism: Evidence and Theory. *Psychol Bull* 114: 295-412.
- Lahti T (1975) Ruotsista Suomeen muuttaneiden kouluikäisten sopeutuminen, III. Sopeutuminen ja kielellinen kehitys [On the adjustment of Finnish school children returning from Sweden, III. Adjustment and linguistic development. *Kasvatustieteiden tutkimuslaitoksen julkaisuja* 259/1975, University of Jyväskylä, Jyväskylä.
- Lasonen K (1978a) Ruotsin suomalaiset siirtolaisoppilaat. Osa I Teoreettinen viitekehys. Research reports N:o 65, Department of education, University of Jyväskylä, Jyväskylä.
- Lasonen K (1978b) Ruotsin suomalaiset siirtolaisoppilaat. Osa II Empiirinen tutkimus. Research reports N:o 66, Department of education, University of Jyväskylä, Jyväskylä.
- Lasonen K & Toukoma P (1978) Linguistic development and school achievement among Finnish immigrant children in mother tongue medium classes in Sweden. Research reports 70, Department of Education, University of Jyväskylä, Jyväskylä.

- Liebkind K (1989a) Patterns of Ethnic identification Amongst Finns in Sweden. In: Liebkind K (Ed.) *New identities in Europe. Immigrant Ancestry and the Ethnic Identity of Youth*. Aldershot, Gower.
- Liebkind K (1989b) Siirtolaisoppilaan opetuskieli ja samastumiskuviot. *Psykologia* 24:272-8.
- Luthar SS (1997) Sociodemographic disadvantage and psychosocial adjustment: Perspectives from developmental psychopathology. In: Luthar S, Burack J, Cicchetti D & Weisz J. (eds) *Developmental psychopathology : perspectives on adjustment, risk, and disorder*. Cambridge University Press, Cambridge, p. 459-485.
- Masten AS, Best KM & Garmezy N (1990) Resilience and development: Contributions from the study of children who overcome adversity. *Dev Psychopathol* 2: 425-444.
- Mavreas V & Bebbington P (1987) Psychiatric morbidity in London's Greek-Cypriot immigrant community. *Soc Psychiatr* 22: 150-159.
- Moilanen I (1986) Psychiatric disorders in the children of emigrants returning from Sweden to Finland. In: Ekstrand LH (Ed.) *Ethnic minorities and immigrants in a cross-cultural perspective*. Swets North America Incorporation, Berwyn, p. 185-193.
- Moilanen I (1991) Components of Childhood Depression. *Rep Psych Fennica* 91: 85-91.
- Moilanen I & Myhrman A (1989a). Akklimatisering von Rückiedlerkindern und -adoleszenten. [Adaptation of remigrant children and adolescents who return to their country of origin]. *Z Kinder Jug-Psych* 17: 10-16.
- Moilanen I & Myhrman A (1989b). What Protects a Child During Migration. *Scand J Soc Med* 17: 21-24.
- Moilanen I, Myhrman A & Kuure O (1994). Social environment and mental health in returning migrant children. *Arctic Med Res* 53 (Suppl. 1): 32-39.
- Munroe-Blum H, Boyle M, Offord D & Kates N (1989) Immigrant children: psychiatric disorder, school performance and service utilization. *Am J Orthopsychiat* 59:510-19.
- Norusis M (1988). *SPSS/PC+ V2.0 Base Manual for the IBM/XT/AT and PS/2*. SPSS Inc, Chicago.
- Pawliuk N, Grizenko N, Chan-Yip A, Gantous P, Mathew J & Nguyen D (1996) Acculturation style and psychological functioning in children of immigrants. *Am J Orthopsychiat* 66: 111-121.
- Pombeni ML, Kirchler E & Palmonari A (1990) Identification with peers as a strategy to muddle through the troubles of the adolescent years. *J Adol* 13: 351-69.
- Puura K, Tamminen T, Bredenberg P, Escartin T, Kaukonen P, Leijala H, Rutanen M, Suominen I & Salmelin R (1995) Psychiatric disturbances in children in the catchment area of Tampere University Hospital. *Psychiat Fennica* 26:173-185.
- Rantakallio P (1988) A longitudinal study of the Northern Finland birth cohort for 1966. *Paed Perinat Epidemiol* 2:59-88.
- Ricciardelli LA (1992) Bilingualism and cognitive development in relation to threshold theory. *J Psycholinguist Res* 21: 301-16.
- Richters JE (1997) The Hubble hypothesis and the developmentalist's dilemma. *Dev Psychopathol* 9:193-229.
- Roberts N & Crockford D (1997) Psychiatric admissions of Asian Canadians to an adolescent inpatient unit. *Can J Psychiatr* 42: 947-851.
- Robinson NS & Garber J (1995) Social Support and Psychopathology across the Life Span. In: Cohen S & Cohen DJ (eds) *Developmental Psychopathology, Volume 2: Risk, Disorders, and adaptation*. John Wiley & Sons, New York, p 162-209.
- Ronjat J (1913) *Le Développement du langage observé chez un enfant bilingue*. Champion, Paris.
- Rosenlew-Cremieux A (1982) "Våra Svenska invandrare" – En studie av återflyttarbarn i den svenska skolan i Björneborg. Svenska Litteratursällskapet i Finland, nämnd för samhällsforskning, forskningsrapporter N:o 41, Åbo.
- Rosenberg T & Toukomaa P (1994) Om kvinnors kraft, mäns marginalisering och pojkers kosmiska ensamhet. In: Peura M & Skutnabb-Kangas T (eds) *Man kan vara tvåländare också... Sverigefinländernas arkiv*.
- Rowlison RT & Felner RD (1988) Major life events, hassles, and adaptation in adolescence: confounding in the conceptualization and measurement of life stress and adjustment revisited. *J Pers Soc Psychol* 55: 432-444.

- Rutter M (1967) A Childrens Behaviour Questionnaire for Completion by Teachers: Preliminary findings. *J Child Psychol Psyc* 8: 1-11.
- Rutter M (1985) Resilience in the face of adversity. Protective factors and resistance to psychiatric disorder. *Brit J Psychiat* 147: 598-611.
- Rutter M (1987) Psychological resilience and protective mechanisms. *Am J Orthopsychiat* 57: 316-31.
- Rutter M (1988) Epidemiological approaches to developmental psychopathology. *Arch Gen Psychiat* 45: 486-95.
- Rutter M (1993) Resilience: some conceptual considerations. *J Adol Health* 14: 626-31.
- Rutter M (1999) Resilience concepts and findings: implications for family therapy. *J Fam Ther* 21:119-144.
- Rutter M, Tizard J & Whitmore K (1970) *Education, Health and Behaviour*. Longman, London.
- Rutter M, Yule W, Berger M, Yule B, Morton J & Bagley C (1974) Children of West Indian immigrants: 1. Rates of behavioural deviance and of psychiatric disorders. *J Child Psychol Psyc* 15: 241-262.
- Räsänen E (1988) Lapsuusajan separaatiokokemusten vaikutus aikuisiän psyykkiseen ja fyysiseen terveyteen sekä sosiaaliseen hyvinvointiin [The Effect of the Separation Experiences during Childhood on the Mental and Physical Health and Social Well-being in Adulthood]. Publications of the University of Kuopio, Original reports 2/1988.
- Rönholm R (1982) Suomalainen siirtolaisoppilas oman ja ruotsalaisen kulttuurin vuorovaikutuksessa. Kasvatustieteiden lisensiaattityö, Turun yliopisto, Turku.
- Rönholm R (1999) Identiteetin lähteillä. Kulttuurijuuret minuuden ja opiskelun osana. *Annales Universitatis Turkuensis C* 152.
- Sandler I, Miller P, Short J & Wolchik S (1989) Social support as protective factor for children in stress. In: Belle D (ed) *Children's social networks and social supports*. Wiley, New York, p 277-307.
- Sam D (1994) Acculturation of Young Immigrants in Norway. A psychological and socio-cultural adaptation. Faculty of Psychology, University of Bergen, Bergen.
- Sam D & Berry JW (1995) Acculturative stress among young immigrants in Norway. *Scand J Psychol* 36:10-24.
- Seppälä H (1983) Ruotsista Suomeen palanneiden oppilaiden (ns. paluuopilaiden) minäkäsityksestä ja siihen vaikuttavista tekijöistä. Pro gradu -tutkielma, University of Oulu, Faculty of Education.
- Siefen G, Kirkealdy BD, Athanasou JA & Peponis M (1996) The self-image of Greek, Greek-migrant and German adolescents. *Soc Psych Psych Epid* 31: 241-247.
- Sifneos PE (1973) The prevalence of alexithymic characteristics in psychosomatic patients. *Psychother Psychosom* 22: 225-262.
- Sifneos PE (1996) Alexithymia: Past and Present. *Am J Psychiat* 153 (Suppl. 7): 137-142.
- Skutnabb-Kangas, T (1987) Are the Finns in Sweden an ethnic minority – Finnish parents talk about Finland and Sweden. Research project on the education of the Finnish minority in Sweden. Working Paper nr 1, Roskilde University, Roskilde.
- Skutnabb-Kangas T & Toukomaa P (1976) Teaching Migrant Children's Mother Tongue and Learning the Language of the Host Country in the Context of the Socio-Cultural Situation of the Migrant Family. Research Reports 15, Dept. of Sociology and Social Psychology, Univeristy of Tampere, Finland.
- Sroufe LA (1997) Psychopathology as an outcome of development. *Dev Psychopathol* 9: 251-268.
- Statistical Yearbook of Finland (1998) Statistics Finland, Hämeenlinna.
- Steinhausen H-C (1985) Psychiatric disorders in children and family dysfunction. *Soc Psychiat* 20: 11-16.
- Sternberg KJ, Lamb ME & Dawud-Noursi S (1997) Using multiple informants and cross-cultural research to study the effects of domestic violence on developmental psychopathology: Illustrations from research in Isreali. In: Luthar S, Burack J, Cicchetti D & Weisz J. (eds) *Developmental psychopathology : perspectives on adjustment, risk, and disorder*. Cambridge University Press, Cambridge, p. 417-436.
- Stipek D (1997) Success in school – for a head start in life. In: Luthar S, Burack J, Cicchetti D & Weisz J. (eds) *Developmental psychopathology : perspectives on adjustment, risk, and disorder*. Cambridge University Press, Cambridge, p. 75-92.

- Tamura T & Furnham A (1993) Comparison of adaptation to the home culture of Japanese children and adolescents returned from overseas sojourn. *Int J Psychiat* 39: 10-21.
- The Urban Environment. A special reprint from *World Resources 1996-97* (1996) An Official publication of HABITAT II. Oxford University Press, New York.
- Toukoma P (1973) Korutonta kertomaa : suomalaisperheet ruotsalaisessa teollisuusyhdykskunnassa [Sad stories: Finnish families in Swedish industrial society]. Research reports 1/1973, Institutes of Sociology and Social Psychology, University of Tampere, Tampere.
- Toukoma P (1975) Siirtolaisoppilaan kielitaito ja koulumenestys : tutkimus suomalaisten siirtolaisoppilaiden kielellisestä kehityksestä ja koulumenestyksestä ruotsalaisessa peruskoulussa [Language acquisition and school achievements in migrant pupils: a study of Finnish migrant school children's linguistic development and school achievements in the Swedish elementary school]. Työvoimaministeriö, Helsinki.
- Touliatos J & Lindholm B (1980) Behavior Disturbance of Children of Native-Born and Immigrant Parents. *J Comm Psychol* 8: 28-33.
- Ward C & Kennedy A (1993) Where's the "culture" in cross-cultural transition? Comparative studies of sojourner adjustment. *J Cross Cult Psychol* 24:221-249.
- Werner EE (1992) The children of Kauai: resiliency and recovery in adolescence and adulthood. *Journal of Adolescent Health* 13:262-8.
- Werner EE (1997) Vulnerable but invincible: high-risk children from birth to adulthood. *Acta Paediatr* 422 (Suppl.): 103-105.
- Westin C (1988) Den toleranta opinionen. Inställningen till invandrare 1987. DEIFO-rapport 8, Stockholm.
- Vikman J-P (1987) Vanhempien paluumuutto kouluikäisten lasten elämänmuutoksena. Reports from the Department of Psychology 144. University of Tampere, Finland.
- Vikman J-P (1989) Paluuoppilas koulunvaihtajana. Reports from the Department of Psychology 146. University of Tampere, Finland.
- Vikman J-P (1990) Paluuoppilas pari vuotta Suomeen muuton jälkeen. Koulunvaihdosta selviytymisen seuruututkimus. Reports from the Department of Psychology 148. University of Tampere, Finland.
- Williams CL & Berry JW (1991) Primary prevention of acculturative stress among refugees: Application of Psychological theory and practice. *Am Psychol* 46: 632-641.
- Öry FG, Simons M, Verhurst FC, Leenders FR & Wolters WH (1991) Children who cross cultures. *Soc Sci Med* 32: 29-34.