

**Self-Concept and School
Achievement of Pupils
with Cleft Lip, Cleft Palate
or Both**

A longitudinal study

Picture: Elina Tammiranta-Summa

Helsinki 2006

Research Report 271

Ismo-Olav Kjaldman

Self-Concept and School Achievement of Pupils with
Cleft Lip, Cleft Palate or Both

A longitudinal study

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*“Teach a child to choose the right path,
and when he is older he will remain upon it.”*

Proverbs 22: 6

*I dedicate this study to my grandparents, who taught me
the meaning of tradition and roots;*

*to my parents in Finland and in the United States, who
taught me the meaning of possibilities and dreams;*

*to my wife, who taught me the meaning of patience and
diligence;*

*to my daughter, who has taught me the meaning of con-
tinuity and diversity;*

*and to the children, impacted by facial clefts, whom I
promised to help at the age of ten.*

Kjældman, Ismo-Olav

Self-Concept and School Achievement of Pupils with Cleft Lip, Cleft Palate or Both
A longitudinal study

Abstract

The goal of this research was to survey the self-concept and school achievement of pupils with cleft lip, cleft palate or both from juvenile age to adolescence. Longitudinal researches of self-concept and school achievement among pupils with cleft lip, cleft palate or both are uncommon. This research was the first longitudinal research ever conducted in Finland among this population. This research can be considered to be a special educational study because of the target group involved.

Self-concept consists of the person's entire personality. Personality is biological and deterministic. Self-concept includes concepts, attitudes and feelings that the person has about him or her qualities, abilities and relations to the environment. The individual associates experiences to this personality with earlier observations through the social interaction. The individual will have the consciousness of the person's existence and action.

The target group in this study consisted of Finnish children with clefts, who were comprised of four different age groups. The questionnaire was sent to all subjects (N1=419) both times. A total of 74% of children returned the questionnaire in 1988 (N2=305). 48% of children returned the questionnaire in 1993 (N3=203). 42% of children returned the questionnaire both times (N4=175). These 175 children formed the research subjects. The survey was conducted in 1988, and again in 1993. In 1988, the pupils surveyed were 9 to 12 years of age, while in 1993 they were between 14 and 17 years old. The data was collected through the use of a questionnaire, which consisted of common questions and a personality inventory test that was developed for Finnish students by professor Maija-Liisa Rauste-von Wright.

Quantitative analysis methods were used to examine the structure of self-concept and school achievement. Structures found in this research were observed in relation to disorder, gender and maturation.

According to these results, structures of self-concepts and school achievement are in fact stable. Basic self-concept elements are seen to be formed at an early age. The developmental aspects of self-concept following puberty are observed as the stability of self-concept and as the forming of a general self. The level of school achievement is stable, but the structure of school achievement changes. From these results, it is possible to state that the gender of the child has a statistical significance regarding self-concept and school achievement. However, the experienced disorder does not have statistical significance as regards to self-concept and school achievement. Results of self-concept support the research of self-concept conducted earlier in Finland.

Keywords: *self-concept, school achievement, cleft lip, cleft palate, cleft lip and palate.*

Kjälldman, Ismo-Olav

Huuli-, suulaki- ja huulisuulakihalkiolasten minäkäsitys ja koulumenestys
Seurantatutkimus

Tiivistelmä

Tutkimuksen tarkoituksena oli kartoittaa halkio-oppilaiden minäkäsitystä ja koulumenestystä varhaisnuoruudesta nuoruuteen. Minäkäsityksen ja koulumenestyksen pitkäaikaiset tutkimukset halkiolapsilla eivät ole yleisiä maailmalla. Suomessa tämä tutkimus oli ensimmäinen laatuaan. Tästä syystä tutkimuksessa keskityttiin myös minäkäsityksen ja koulumenestyksen rakenteen analysointiin. Kohderyhmänsä vuoksi tutkimusta voidaan luonnehtia erityispedagogiseksi tutkimukseksi.

Minäkäsitys rakentuu yksilön koko persoonallisuudesta. Persoonallisuus on biologis-deterministinen. Minäkäsitys sisältää käsitteet, asenteet ja tunteet, joita yksilöllä on ominaisuuksistaan, kyvyistään ja suhteestaan ympäristöön. Yksilö liittyy kokemukset persoonallisuuteensa aikaisempien kokemusten kautta sosiaalisessa vuorovaikutuksessa. Yksilöllä on tietoisuus olemassaolosta ja toiminnasta.

Tutkimuksen kohderyhmänä olivat kaikki neljän ikäluokan suomalaiset halkiolapset. Kyselylomake lähetettiin kaikille em lapsille (N1 = 419). Ensimmäisellä kerralla vuonna 1988 kyselyyn vastasi 78 % lapsista (N2 = 305). Toisella kerralla vuonna 1993 vastanneita oli 48 % lapsista (N3 = 203). 42 % lapsista palautti kyselyn molemmilla kerroilla (N4 = 175). Näistä lapsista muodostettiin tutkimuksen kohderyhmä. Mittaukset suoritettiin vuosina 1988 ja 1993. Ensimmäisen mittauksen aikana oppilaat olivat 9–12 vuotiaita ja toisen mittauksen aikana 14–17 vuotiaita. Tiedot kerättiin kyselylomakkeella, joka sisälsi sekä yleisiä kysymyksiä että minäkäsitystestin, jonka on kehittänyt Maija-Liisa Rauste-von Wright.

Tutkimuksessa käytettiin kvantitatiivisia analyysimenetelmää minäkäsitys- ja koulumenestysrakenteiden analysointiin. Saatuja minuuden ja koulumenestyksen rakenteita tarkasteltiin suhteessa vaurioon, sukupuoleen ja aikaan.

Saatujen tulosten mukaan minäkäsityksen ja koulumenestyksen rakenteet ovat pysyviä ja niiden peruselementit muodostuvat varhain. Minuuden kehityksellisyttä murrosiässä ilmentää minäkäsityksen rakenteiden pysyvyys. Toisin sanoen muodostuu ns. yleinen minä. Koulumenestyksen tasossa ei tapahdu merkittävää muutosta, mutta sen sisällössä kylläkin. Saatujen tulosten perusteella on todettava myös, että lapsen sukupuolella on tilastollista merkitystä minäkäsitykseen ja koulumenestykseen, kun taas vauriolla (huuli-, suulaki- ja huulisuulakihalkio) ei tilastollista merkitystä ole. Minäkäsityksen osalta tulokset tukevat aikaisempia suomalaisia tutkimuksia.

Avainsanat: *minäkäsitys, koulumenestys, huulihalkio, suulakihalkio, huulisuulakihalkio*

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Since I started this study from scratch in 1986 with material consisting of my own experience of clefts and a thin knowledge in self-concept, statistical methods or the clinical aspects of clefts, many people have been needed to collaborate with me to complete this study.

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Ismo-Olav Kjaldman

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Abbreviations

CL = cleft lip

CPO = cleft palate only

CLP = cleft lip and palate

I Introduction

1.1 Background of the Research

Cleft lip and palate is one of the most typical malformations. In Finland there are about 120–130 new cases every year (Ranta 1982, 419.) Incidence of clefts has increased between 1954 and 1982. This may be the result of more effective diagnosis and record keeping, but there is also a real increase in incidence from 1.31 per thousand to 2.16 per thousand of all live births (Ranta 1982, 419). Danish researchers reported that the incidence in Denmark was 1.89 per thousand of all newborns between 1976 and 1981 (Jensen, Kreiborg, Dahl, Fogh-Andersen 1988, 258–269).

This increase has a social significance, as society must provide resources to repair malformations and to promote the development of the child. Part of this rehabilitation work takes place in the school, which is responsible for educational rehabilitation. It is accepted that pupils with cleft lip and palate should be educated in a comparatively equal way to non-clefted children. Occasionally, a long treatment period may be connected in permanent or short-term retardation of cognitive, affective and psycho-motoric development. Children with cleft lip and palate need special support from the teacher, who must be aware of the needs of his or her pupils. When the teacher is available for support at the classroom level, the pedagogic rehabilitation program of the child may be less socially isolating than that which entails specialist professional intervention.

It can be thought that a respectful attitude of a teacher towards children with cleft lip and palate will also lead to an overall respect toward other special groups.

Allardt (1976, 50) defines that welfare consists of human factors or needs: a sufficient standard of living, sufficient social relationships and sufficient self-realisation. The understanding and supportive attitude of the teacher will increase the self-realisation of the child with craniofacial clefts.

This study is longitudinal study. The purpose of longitudinal research is quite different from ordinary survey objectives. When the researcher uses a longitudinal framework in education, the goal is to be able to give an answer to the basic element: How does age influence the hypothesis? The researcher should be able to describe the situation, and to use the longitudinal research method as a prognostic instrument.

A five-year period is quite a long time for young people to be involved in research. Contact with many people during that time was lost. It is also a long time for a researcher to maintain focus on the study, especially then when the tasks are combined with an ordinary working life. There is a lot of material to analyse in longitudinal research. In my research there were 12 groups to

analyse for each hypothesis (two gender groups, three disabilities, and two age groups). The use of statistical methods entailed the comprehensive use of new statistical programs.

An interesting part of this longitudinal research was the background change of time. In Finland, there were considerable changes in society at large between the years of 1988 and 1993, with the transition from a welfare state in 1988 to an economically depressed era in the early 1990's. Families moved from one locality to another in order to maintain every day living, and many subjects were lost because their address was unknown. Furthermore, the mental effects of the economic depression on the population as a whole are not widely studied. It remains to be seen if this has had any impact on adolescents from the early 1990's.

At the end of 1993, Finland started a new policy of becoming a member of the European Union. Aspects of individual rights were included in the constitution of Finland, which was revised at the end of 1990's. Although equality has always been a very important part of independent Finnish society, this new constitution emphasizes equality even more than previous years. This aspect can possibly strengthen the idea not to answer the survey as a form of manifestation of a person's full independence and equality. This kind of behaviour can also be considered as normal for the adolescent right after puberty.

The third big change in our society was the rise of technology. It has to be emphasised that the data collection for the final phase of this study was conducted at a time before the global technological revolution, in a very different social climate.

1.2 Model and Division of the Research

The main purpose is to find out self-concept and the school achievement of the Finnish children with craniofacial clefts. This phenomenon of children with craniofacial clefts have been studied in many other countries (Lavigne & Faier-Routman 1992, 133–157; Broder & Strauss 1989, 114–118; Uhlemann, Zschiesche & Ziegeler 1986, 568–573; Jones 1984, 132–138; Richmann 1978, 360–364; Schneiderman & Auer 1984, 224–228; Kapp 1979, 171–176; Leonard, Dwyer Brust, Abrahams & Sielaff 1991, 347–353.) In order to study the self-concept and school achievement of Finnish children with craniofacial clefts, the model of real and ideal self-concepts was applied (Rauste 1973, 1974; Kääriäinen, Rikkinen 1988).

Chapter II contains clinical aspects about clefts. In this chapter there is also a short review of the aetiology and medical treatment of clefts. Chapter III presents the self-concept, self-esteem and school achievement of children with clefts. It also studies the forming of self-concept and self-esteem. Chap-

ter IV consists of three elements: the first includes the structure of the impairment and handicap; the second considers stages of development, and the third concerns the family and school. Chapter V contains hypotheses, which deal with two main areas: the self-concept of pupils, and their school achievement. Chapter VI presents the design, methods and data collection in two phases (1988 & 1993). Chapter VII presents the results of the survey research. The discussion is presented in chapter VIII.

II Cleft Lip, Cleft Palate or Both: Clinical Aspects

2.1 Aetiology, Epidemiology, Prevalence and Clinical Variations

Cleft lip with alveolar cleft originates between the 4th and 7th weeks of pregnancy. During that time the tissue of the oral area moves over the head and also from the sides of the head. The ecto-entodermic membrane will dissolve if tissue removal is prevented. This causes a cleft on the oral area. Cleft palate originates between the 7th and 12th weeks of pregnancy. When the child has cleft palate only, the origin differs from the cleft lip. In instances when a cleft palate occurs with a cleft lip, it is possible that the cleft palate originates after the cleft lip has developed, as the halves of the palate are unable to reach each other. Other facial clefts are known besides cleft lip and cleft palate; however, these are quite infrequent (Rintala, Ranta, Rantala, Harjula 1986, 7; Niemi & Väänänen 1993, 104–106; Kere 1998, 26–32.)

Animal experiments have been used to examine the aetiology of cleft conditions. Clefts in foetal mice have been attributed to many different agents, for example pharmaceuticals, radiation, oxygen deprivation and poor nourishment. Different strains of animal react differently to different agents. Pharmaceuticals alone are not the cause. Sometimes a deviant factor, or gene, is needed to make the tissue react during foetal development (Rintala, Ranta, Rantala, Harjula 1986, 7.) Knowledge of the aetiology of the cleft lip and cleft palate is still quite limited. However, it is known that following factors can cause the onset of the cleft condition:

- 1) gene mutation
- 2) chromosome mutation
- 3) environmental factors
- 4) multi factorial factors (the common effect of multiple poly genes and environmental factors), which probably cause most of the clefts (Stegars 1984, 278–279.)

In Finland, the incidence of clefts is 2,16 per thousand of all live births, which is approximately 120–130 new cases every year (Ranta 1982, 419). However, Ritvanen (1998, 45–50) proposes that the incidence of clefts is 2,26 per thousand of all live births between 1991–1995, or about 130–140 new cases every year. Differences in cleft lip and cleft palate have been found among different races.

Cleft palate cases exist in the following way:

- 1 case among 1500–3000 Caucasian people,
- 1 case among 2000–5000 African people,

1 case among 1600–4200 Asian people,
1 case among 1700 American Indian people.

Cleft lip or cleft lip and palate cases exist in the following way:

1 case among 775–1000 Caucasian people,
1 case among 1370–5000 African people,
1 case among 470–850 Asian people,
1 case among 230–1000 American Indian people (Aylsworth 1985, 533–542.)

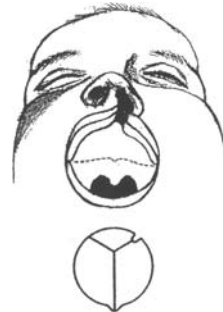
Cleft lip and cleft palate are head malformations. According to Kernah and Stark, cited by Ranta (1982, 419), they are usually graded with a three-dimensional classification system:

- ◆ cleft lip with or without alveolar cleft,
- ◆ cleft lip with or without cleft palate and alveolar cleft (e.g. complete cleft),
- ◆ cleft palate.

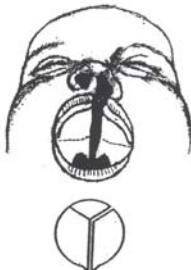
This schematic form of clefts mentioned above can also be presented in following way (Figure 1.):



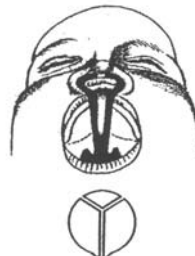
Unilateral cleft lip



Unilateral cleft lip with alveolar cleft



Unilateral cleft lip and palate



Bilateral cleft lip and palate

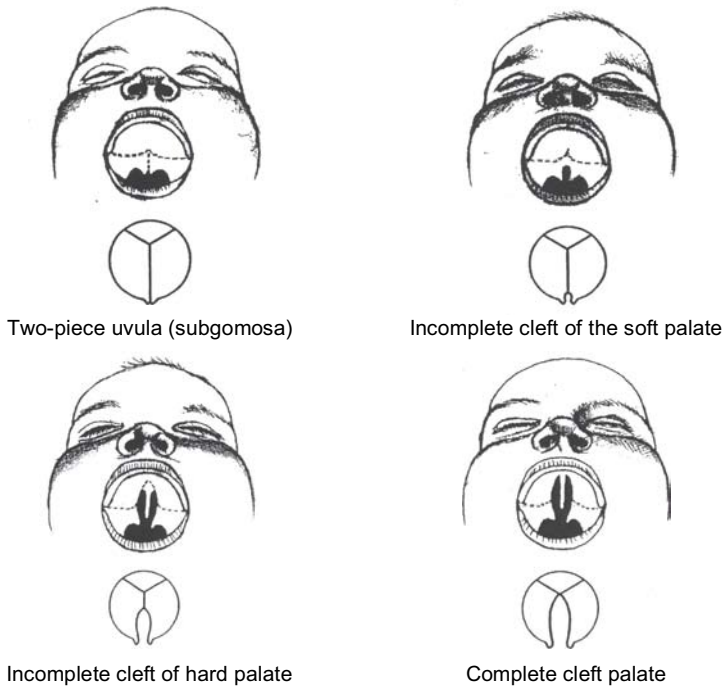


Figure 1. Clefts as schematic way (Rintala, Ranta, Rantala, Harjula 1986, 6; Hukki, Rautio 1998a, 39–44)

Many variations can be diagnosed among these forms as well as different kinds of transitions.

2.2 The Rehabilitation of the Child with Cleft Lip, Cleft Palate or Both

During infancy, parents can use the child health centre instructions, although feeding may be difficult. Before surgical care is possible, iron supplements may be given to the child to improve the child's condition (Rintala, Ranta, Rantala, Harjula 1986, 10.)

Strauss (1989, 150–151) has noted that it is very important to have a multidisciplinary team to take care of children with clefts. The components of the cleft child's rehabilitation should be:

- ◇ surgical care
- ◇ dental care
- ◇ speech care
- ◇ psychological-pedagogic rehabilitation

2.2.1 Surgical Care

There are three stages in the surgical care of the child with a cleft condition:

1. the primary care of cleft lip
2. the primary care of cleft palate
3. the secondary repairs or subsequent operations

The surgical care of the cleft lip will start during the first months, with the exception of minor cases. In severe cases, the main goal is to arrange the deformed parts of the jaw into a better position during the first operation. This eases the closing operation of the lip and the front part of the palate during the second surgical phase a few months later (Rintala, Haataja, Rantala 1983, 47–55.)

In Finland, palatal operations are mainly made during the first year, during which the cleft palate is closed. The age of the child for this operation differs from country to country, with English speaking countries performing the operation during the first year and German speaking countries during the second year of the life of the child. When the palatal cleft is closed during the first year, the speech of the child will be better. On the other hand, when the palatal cleft is closed during the second year the child may have less growing disorders in his or her upper jaw. Both operation schedules need to be considered individually in each case (Hukki and Rautio 1998b, 89–106.)

The fistula in the front part of the palate can be closed, if there is a notable disadvantage for speech, and if food goes into the nose through the aperture. If the function of the palate remains so defective that the child's speech will not improve, regardless of the therapy, it will be necessary to perform a new operation. This should be done immediately, as soon as it becomes apparent that goals will not be reached through speech therapy. The lip is repaired before school age (Rautio, Hukki, Haapanen 1998, 123–131.)

Dental rectification care is given for most of the cleft lip and palate cases. Severe cleft lip and gingival cases require bone reconstruction to be performed on the upper jaw. Bone transfer is able to stiffen the dental curve and to create the normal bone base for the nostrils. In the same operation, the uncared fistulas in the hard palate are closed. The shape of the lip and nose is modified after bone transfer, when the retifical and dentural care of the teeth is complete (Rautio, Heliövaara 1998, 151–154.)

2.2.2 Dental Care

There are disorders in the development of the teeth and occlusion in almost all cases. The etiological factors of the dental disorders are the same as those of the clefts. Besides this, the cicatrices tissue, which forms after surgical

care, hampers the normal growth of the upper jaw. The goal of the dental care is to provide rectifical care, in an effort to prevent injurious occlusion errors and to correct disorders. The teeth, which may grow in the wrong position, are moved to the right occlusion location with the lower teeth. The care will last until the patient is 16–18 years old. Dental care needs are individualised for each child. It is also possible to combine surgical care and speech training as part of the dental care. Essential rectifical care is performed when permanent teeth are cut. Rectifical appliances will help to cut the teeth and to widen the upper jaw. At the end of the growth, a bone transfer operation may be needed. It is also possible to correct the occlusion among adult cleft lip and palate patients, when need of dental care is very noticeable. (Mäki, Rantala, Ranta, Stegars 1983, 47–55.) Dental care is one part of the multidisciplinary team work. Rectifical treatment is considered nowadays even more important than during previous years. Dental care is seen as a part of medical care but also as a part of psychosocial care (speech and appearance) (Heliövaara 1998, 138–150.)

2.2.3 Speech Care

Retarded development of the speech and language is more common to the child with a cleft than to healthy children. The reasons for this are: long treatment periods in hospital and the subsequent separation from parents; many aural inflammations; a potential disturbance in hearing; and rejective attitudes in the environment. The open palate causes many problems such as speech motor delays, difficulties with pronunciation, the defectiveness of auditive control and dyspractive difficulties. One also has to remember that the difference between the cleft child's active and passive vocabulary is large. Speech disorders caused by teeth are infrequent. A more noticeable significance occurs with the defectiveness of the palate and the compensatory mechanisms of speech motor skills, which are caused by the defect. The child is closely and widely tested before any speech training. The main idea is to chart the child's situation so that the child's problems can be prioritised. Speech training is given together with other treatments. In the course of the treatment, different strategies are planned to attend to the child in the most effective way. It is most important that the child has the possibility to learn correct colloquial language. The speech therapist can also advance the development of the child's total personality (Mäki, Rantala, Ranta, Stegars 1983, 47–55.) Normal speech is achieved more frequently if the isolated cleft palate is operated on primarily at the age of 12–18 months, as opposed to repairing the cleft later. The severity of the isolated cleft does not significantly affect the final speech result (Haapanen 1992, 53.)

2.2.4 Psychological-pedagogic Rehabilitation

Speech training is part of the pedagogic rehabilitation. The main goal is to improve the young person's preparedness and the ability to communicate. Pedagogic rehabilitation includes the evaluation of the young person's physical condition, educational condition and the interaction of physical and educational condition. After evaluation, it is possible to find the young person's need of special education and special learning (Salminen 1989, 29–30.)

The process is not simple. Ahlfors, Saarikoski and Sova (1987, 56) have stressed the asymmetry of the helping relationship, and the patient's essential position in the process. The most important properties of the supporter are:

- ❖ professional status: the helper has a good understanding of the pedagogic rehabilitation process.
- ❖ the helper's dissimilarity: this opens new perspectives to the helper due to his or her professional role, giving a distinct background to the rehabilitation situation (Ahlfors, Saarikoski, Sova 1987, 57).
- ❖ preparedness: traits of the personality which will operate in an interactive relationship. Kinanen (1976, 132–133) mentions five traits of the personality, which are important in helper preparedness: health, intelligence, empathy, autonomy, and creativity.
- ❖ psychological attitude: Cullberg (1975, 192) particularly stresses the psychological feelings of the helper; and he warns of the risks of symptom oriented rehabilitation from helpers who have been practising professions for lengthy periods.

Pedagogical rehabilitation requires many professional helpers, but the school can make a considerable contribution. The school is a natural environment of the child. School can have a more active role as a helper. People are starting to expect school services to provide activities for personality formation. Early intervention in school problems can prevent the repetition of some problems at a later date (Kivinen, Vadén 1976, 192, Salminen & Tammissalo 2001, 71; Timonen 1995, 37). The school and teacher develop strengths during their long relationship with the child. The idea of pedagogical rehabilitation is to develop goals according to the patient's needs. The processes will differ from patient to patient. Here, the qualified nurse is very important, because ultimately the nurse is the dispenser of the rehabilitation through which the goals are able to be reached (Eriksson 1985, 29–34.) It is also important to remember that there are some similarities with education and pedagogical rehabilitation. The ultimate aim of pedagogical rehabilitation is self-care, or the situation in which the patient can be responsible for his or her own health, and can search for the special services, whenever they are needed (Raatikainen 1986, 2–3; Salminen & Tammissalo 2001, 71).

Children with cleft lip and palate can be classified as having educational problems, in terms of the injury's visibility and problems in communication. Pedagogical rehabilitation is therefore an important part of their social accommodation (Salminen 1989, 29; Salminen 2001, 4; Timonen 1995, 37).

2.3 Functional (primary) and Visible (secondary) Disabilities of Clefts

Concerns are divided into functional or primary categories and visible or secondary categories. Functional or primary concerns include sucking, dental development and incorrect muscular action of the mouth. It is difficult for the child with cleft lip to suck correctly, because the lip is not tight. This problem differs for the child with a cleft palate. The nose-throat combination does not close while the child is sucking, swallowing or speaking. There is no variation of pressure in the mouth, which is necessary for these oral tasks. While the child is swallowing it is possible that food (especially liquid nourishment) can get in to the nose. Breast-feeding is usually successful only for the child with a very small-cleft lip. However, the biggest functional disadvantage is most typically the speech defect (e.g. nasal voice), which is caused by the defective action of the palate. The child has difficulty closing the palate during pronunciation. The tooth curve in the upper jaw is straightened, teeth are usually missing, or dental development is disturbed. This causes incorrect occlusion as well as speech defect. The deciduous teeth of the child with a cleft lip and palate usually push out at the same time as those of other children. However, the front tooth in the place of the cleft lip may be missing, may be underdeveloped, or there may be two teeth instead of one. The upper tooth curve may be smaller than the lower tooth curve. In this kind of situation it is possible that the occlusion of the front or side teeth can be across, or the front teeth can be oblique. The permanent teeth of the child with the cleft lip and palate may, however, push out a little bit later than they normally would. The front teeth can push up in the wrong place, and may be twisted. Tooth mica can be unequal and there can be brown flecks on the surface (Rintala, Ranta, Rantala, Harjula 1986, 9.)

Besides anatomical disorders there are also functional disorders. The cleft palate involves incorrect muscular action in the nose and in pharynx, and a disability in the pipe between the nasal pharynx and the middle ear. This defect and possibly the irritant caused by food in the nasal pharynx area effect the pressure regulation and the production of fluid in the middle ear. Because of the abnormal structural conditions, most cleft children will have otitis serosa during their first years. When the otitis serosa is chronic, it is possible that this may develop into an impairment of hearing. When the child has eating difficulties it is possible for nourishment to be imbalanced, as meals can be substituted with milk or porridge. This can result in anaemia

and repeated inflammations, which weaken the health of the child (Rintala, Ranta, Rantala, Harjula 1986, 9.)

All this may cause many problems, as Moll (1968, 110) has noted. Children with cleft lip and palate have linguistic defects, especially weakness of phonetic expression, hand motor skills and visual memory. He also notes that children with clefts use verbal expression less and have more simple structures in their speech than same age children without clefts. Children with cleft lip and palate usually perform lower than peer comparison groups, especially in linguistic tests. In spite of this, the intelligence level of the children with cleft lip and palate is variable (Cruickshank 1980, 210.) Estes and Morris (1970, 765) have noted that in the WISC-test, children with cleft lip and palate reached higher scores in the performed skills than in verbal skills.

Visible or secondary disadvantages involve the deviant appearance. It has also been found that facial appearance is an important characteristic of cleft impairment. This appearance causes a negative impact on social interaction. Surgical operations do not improve the situation (Tobiasen, Hiebert 1993, 82–86.) The disfigurement of the face is, of course, a disadvantage in itself, but is also the cause of many secondary disadvantages. The systematic prevention of disadvantages caused by facial disfiguration is as important as the care of different functional disorders. Even minor disfigurement of the features can seriously affect the identity of the individual, and environmental attitudes toward him or her. People may stare, mock or underrate the person with cleft lip. Parents and doctors can also take an adverse attitude to the person. The danger of psychic deprivation is high. It is necessary to make adequate preparations for this from an early age. It is also necessary to provide support to the patient and the family (Norio 1984, 284–285.) The child will experience ridicule from other children. Perkins (1977, 197) has noted that children with cleft lip and palate suffer socially and psychologically. These problems are usually observed at puberty, when the child is looking for or strengthening his or her individual identity.

However, adolescents who are knowledgeable about their clefts and the purpose of cleft palate teams may view treatment as a necessary and logical sequence of events designed ultimately to enhance appearance and function. For these adolescents, the goals of treatment are in keeping with existing well-differentiated self-concepts and body images (Clifford & Clifford 1986, 115–119.)

2.4 Pedagogic Research of the Clefts in Finland

There are only few Finnish studies that concentrate on the adaptation or educational matters of clefts. In this chapter those are gathered together and analysed.

- ◆ Lahti, Rintala and Soivio (1972) found that the adaptation process of cleft children is possibly disrupted by speech and to some extent physical appearance.
- ◆ Kjälldman (1990) noted that real and ideal selves of cleft children are relatively good. Research also found that children with oral clefts could reach average levels of school achievement.
- ◆ Kjälldman (1992) presented case studies on how the basic elements of self-concepts are stable and form at an early age.
- ◆ Kalland (1995) revealed that the bonding phenomena of mothers with clefted child was not disturbed by the appearance of the child. Furthermore, she noted that mothers were more concerned about the functional disadvantages of clefts (such as feeding) than visible disadvantages (such as appearance).
- ◆ Cheour, Haapanen, Hukki, Ceponiene, Kurjenluoma, Alho, Tervaniemi, Ranta and Näätänen (1997a, 1997b) found that children with CATCH syndrome and oral clefts may suffer from brain dysfunctions.
- ◆ Mäkinen and Niskanen (1998) also reported parents' positive adaptations for the child with oral clefts. Research also reported that children considered oral clefts to be an "ordinary thing".
- ◆ Kjälldman (1999) found that basic elements of self-concept are quite stable and some of those fragments correlate to school achievement before and after puberty.
- ◆ Ceponiene, Haapanen, Ranta, Näätänen and Hukki (2002) noted that children with oral clefts could have difficulties with the functioning of auditory sensory memory (ASM), which may cause language and learning disabilities.

These studies indicate the slender tradition of research on pedagogic research. Longitudinal investigations into the subject have yet to be conducted. In Finland there is a place for longitudinal pedagogic research of children with oral clefts. The results of longitudinal research can assist in the schooling and care of children with oral clefts.

The tradition of research has mainly consisted of surgical or speech investigations. This is very understandable, because both problems are the most obvious ones for the children with cleft lip, cleft palate or both. However, such studies do not consider the person as a psychologically undivided person. The process of healing and rehabilitation is much more than the procedures of frequent surgeries or speech training.

The process of healing is a process of socialisation. This process starts when the child with oral cleft is born. The process is happening continuously and it is linked to growth and everyday living as well as to medical care. These pieces should have an interaction together in order to give maximum support for the child. The chapter III discusses these questions in more detail.

III Cleft Lip, Cleft Palate or Both: Self-concept and Related Processes

In this dissertation I consider that the self-concept consists of the person's entire personality. I support Mead's (1962) definition that self-concept includes concepts, attitudes and feelings that the person has about him or her qualities, abilities and relations to the environment. I presume that the individual associates experiences to this personality with earlier observations through the social interaction. However, the multidimensionality of self in multiple social relations is an element that gives a form of actions and self in different situations (Gergen, 1991). Furthermore, I presume Lifton's (1993) theory about the multidimensional self, who is able to feel harmony and unified. I also accept Rogers (1965) theory that the individual will have the consciousness of a person's existence and action which, in turn, supports Merton's (1968) and Rosenthal's and Jacobson's (1968) theory of self-fulfilling prophecies. Finally, I accept Higgins' (1987) theory of potential discrepancy between the real and ideal self to provide an element for achievement.

3.1 Developing Self

The self is developing throughout the life. Through that process there can be seen two general characteristics of self-structure: the level of *differentiation* and *integration*. Through differentiation, the child is able to create and maintain different self-evaluations. For example, older children are able to separate forms of real self and ideal self. Interaction with ideal and real self creates *potential discrepancy* with further developmental aims. Through integration is possible for the growing child to construct the generalizations about the self in realization of abilities (Harter 1999, 8–9; Higgins 1987, 319–340)

Through the developmental process of self there are ***organizational, motivational and protective*** functions. Organizational functions form structures and guidelines. Motivational functions help the individual to achieve a goal. Protective functions protect the self from harm (Harter 1999, 10.)

The developmental process of self forms the child's sense of ***self-efficacy***. The child understands that he or she can effectively take care of certain domains (Bandura 1990; also Flanagan 1996, 90). Also ***symbolic interaction, socialization*** and ***internalisation*** are part of the developmental process. Symbolic interaction means forming the self through the linguistic code. This code helps the child express the representations of self and its social construction. Socialization is also dependent on social constructions, and it usually can be observed through verbal interactions. In the internalization proc-

ess, the child will accept the evaluations of self as his or her self (Harter 1999, 10–13.)

The development of self requests several concepts. In this study is concentrated on the concepts of *self*, *self-concept*, *identity*, *ego*, *personality*, *self-esteem* and *self-worth*.

3.1.1 Self

Gergen (1991) defines the development of the research tradition of the **self** through the sociocultural model. He defines three major periods: *Romanticism*, *Modernism* and *Postmodernism*.

Romantic visions of self were widely approved in the late 18th century and in the 19th century. It used the expressions love, passion, loyalty, morality and will. Modernism in the tradition of self starts after the scientific and technological advances of 20th century. The central themes of modernism were rational utility, objective evidence and values of reason. The current post-modern tradition exists in the second half of 20th century to explain the multidimensional and multileveled self in the interaction of multiple social relations (Harter 1999.)

Romanticism

The classical philosophy embraces the wisdom from ancient Greece: “know thyself” (in Latin: nosce te ipsum)(Harter 1999). The seven wise men of Ancient Greece selected it as the most useful instruction of life, and it was proclaimed on the wall of Apollo’s temple in Delphi. Voltaire stated in the 18th century that the instruction was only suitable for God. According to Voltaire God was the only one truly able to know oneself (Kivimäki 2000, 192.)

Modernism

Historically the concept of self was formed by James in the 1890’s. James was interested in *symbolic interaction* in the development of self. He defined the theory of *multidimensional subjective and objective self*, including the material, social and spiritual selves. Material self related to the bodily self as well as possessions. Social self consisted of characteristics recognized by others. Spiritual self consisted of internal aspects like thoughts and moral judgements (James 1890, 1892, 1908.)

The structure of self was developed by Cooley (1902), Mead (1934, 1962) and Baldwin (1895). Their aspect in contrast to James was the social interaction of self. Self could be seen as a social construction, which was formed through the linguistic exchanges with others. They presumed that the self of the growing child formed through phases: imitating the behavior, approving

the permitted behaviour, and adopting the opinions of the others (Harter 1999.) Cooley (1902) defined the self as a mirror which showed the individual's appearance to others and others judgements of the individual's appearance as well as internal self-feelings or emotions which exist in the process. Mead (1934) was interested in the self in social interaction, and the attitudes others have toward the individual. Baldwin (1897) studied self through the accommodating and habitual self. The habitual self represents the child's natural behavior. The accommodating self represents the behavior modified by others.

In the early years the self was mainly considered to be a functional aspect of social and behavioral development. **Organizational significance** gave 20th century psychology a new aspect for studies of self. The attachment theories (Bretherton 1991; Cassidy 1990; Sroufe 1990) emphasized the meaning of mental processes in the development of self. In the second half of 20th century researchers (Brim 1976; Case 1985; Epstein 1973, 1981; Fischer 1980; Greenwald 1980; Kelly 1955; Markus 1977, 1980; Sarbin 1962) started to consider the self as a cognitive construction (Harter 1999.)

The historical tradition emphasizes the multiplicity of self. There is also another school that sees the self as an integrated, **unified self** (Allport 1961; Horney 1950; Jung 1928; Lecky 1945; Maslow 1954; Rogers 1951). Allport (1961) defines self as an inward unity; and according to Lecky (1945) behavior expresses this integrity and unity. Epstein (1973, 1981) uses concepts of internal consistency.

Postmodernism

Some modern approaches contend that **self varies across situations** (Ashmore & Ogilvie 1992; Gergen 1968; Kihlstrom 1993; Markus & Cross 1990; Rosenberg 1988; Stryker 1987). The construction multiplicity of self can be seen as a connection of different kind of selves that may allow the individual to adaptively respond to different relationships. Gergen (1991) defined a concept of **saturated self** to explain the demands of self in multiple social relations. It replaces the concept of **unified self**, which was the domain of modernism. Lifton (1993) and Giddens (1991) see the self can respond the challenges of postmodern time; it can be in harmony as well as shattered (also Hautamäki & Hautamäki 2005). Lifton has defied a postmodern **protean self** named after the Grecian sea god Proteus, who possessed many forms. Lifton emphasizes both the flexibility of self in different social interactions and the unity of identity (Harter 1999.)

3.1.2 Self-Concept

James (1908) noted that the self consists of the *subjective self and the objective self*. The objective self includes individual qualities, knowledge and skill. The subjective self is an individual as an agent. There is further evidence for James' discrepancy theory. The more negative ratings the person will have, the more lower is one's self-worth (Harter 1999, 165). This means that self-concept includes a *person's observations about self* (Shavelson & Bolus 1982). Byrne (1996, 5) postulates that self-concept includes cognitive, affective and behavioural aspects.

Self-concept has the characteristic of being able to process observation. Self-concept is:

◆ organized

Self-concept is a system. People are capable of organising information concerning themselves into categories and proportioning categories to others.

◆ multivariate

Self-concept consists of categories. It is a system in which one dimension is a phenomena of the category to which it belongs and categories are expressing the variety of self-concepts.

◆ hierarchical

General self can be divided in smaller or "lower" categories. These smaller parts or categories include the information about the person in this particular section ("Me in school", "Me in social relations" etc.). These categories have lower parts of their own. Finally, at the basic level there are personal observations of the self in terms of behaviour. For example Marsh and Shavelson (1985) see this hierarchical fragment as one of those elements of how the global self is forming through many minor observations.

◆ stable

The main factors of the general Self-Concept are stable and do not change very much over time. However, at the behavioural level, Self-Concept may be flexible to accommodate different situations.

◇ developmental

Although the Self-Concept is stable it is also developmental. This means the Self-Concept develops into a more complicated system through the years when the person is growing from a child into an adult.

◇ evaluative or independent

It is possible to separate the descriptive (“I am happy”) dimension and evaluative (“I work well in school”) dimension of Self-Concept.

◇ separate

Self-concept can be separate from other structures, like achievement in school (Byrne 1984, 427–456; Ouvinen-Birgerstam 1984, 189–191; Marsh & Shavelson 1985; Shavelson & Bolus 1982; Shavelson & Byrne 1996; Shavelson, Hubner, Stanton 1976, 411–415.)

Rogers (1965, 499–500) determined that the self-concept was *the person’s own conception of the self*, a conception which was organized, conforming and conscious. It includes the person’s observations about self in social interaction, personal targets, personal values and personal ideals. Essentially, self-concept has all the means necessary for a successful existence in the environment. This research is also based on Rogers’ (1965) theory of self as the consciousness of a person’s own existence and action (also Rauste 1973; Rauste-v. Wright 1979).

Lindeman (1985, 40–41) says that self-concept is a *conceptual scheme* wherein a person’s conception of the world has a specific position. The conceptual scheme is a model of mental strategies, which the person has. These strategies are based on experiences, with which the person interacts during development. The focal point of these strategies is the environment to which the person’s experiences and observations are fixed.

Furthermore, environment includes not only the external space of the individual, but also the social interaction-taking place within that space. Newcomb (1950) defines that the values and norms of social environment are reflecting in self-observations. Through that interaction with other human beings the person will observe oneself as an “actor” as well as an “expert”. Rauste-v. Wright (1979) has defined self-concept as an entity organized through social interaction as part of a person’s conception of the world.

Aho (1987, 3) defines that an individual observes external objects in relation to the self, and then ascribes content to the object. According to Korpinen (1983, 11), self-concept entails *phenomenal and structural image of the physical and psychical self*. Primarily self-concept consists of observa-

tions and phenomenal features which the individual experiences as personal (McDavid & Harari 1986; Sokal 1977, 188).

Coopersmith (1967, 20) describes self-concept as the personal *evaluation of dignity*. Self-concept exhibits the attitudes which the person has to himself or herself; it shows the levels of approval or disapproval. It also provides a measure of personal belief in one's own capabilities, success and dignity.

Kalliopuska (1984, 13–17) separates three components, which build self-concept. These are:

1. Cognitive component

The cognitive component develops connotations of self-concept, which are connected with qualities and functions of self-evaluation and social interaction. The following characterisations include these kinds of connotations: "I'm tall", "I'm intelligent".

2. Affective component

The affective component illustrates the person's feelings towards himself or herself. It is rather difficult to characterise this component because the individual does not often reveal his or her feelings towards himself or herself to other people. Comments like "I'm able to get my work done", is an affective characterisation.

3. Behavioural component

The behavioural component refers to those connotations with which the individual behaves in ways, which may either underestimate or appreciate himself or herself.

3.1.3 Identity, Ego and Personality

In psychology there are some other concepts, which are related to concept self-concept, like identity, ego and personality. According to Breger (1974, 329–331) identity is formed about themes, which are concerned with self. These themes are integrated and unified. Reber (1986, 341) emphasizes that identity illustrates a person's subjective opinion about him or herself. Erikson (1962, 249–250) rather used concept identity than concepts ego or self, because identity also includes the influence of social factors. Identity consists of four aspects: individuality, completeness, continuity and social identity. Erikson postulates that ego underlines the subject's inner personality or individual aspect of self. Identity is very often considered as the lasting self, or the inner subjective concepts of the individual as a person (Reber 1986, 341). Pervin (1970, 2–3) defines personality as a person's qualities, which are structured

or dynamic, and through which persons are reflecting themselves in different situations.

3.1.4 Self-Esteem and Self-Worth

Self-esteem is an *evaluative and affective component of self-concept* (Burns 1982; Wylie 1979). Self-esteem includes a person's understanding of him or herself as a performer (Harter 1985, 113). Through self-evaluation a person approves or abandons his or her self (Coopersmith 1967). Some researchers like Kernis, Grannemann and Barclay (1989) suggest that good self-esteem is related to success and poor self-esteem is related to failure. The other school of thought holds that the consequence is actually opposite, because they observe that good school performance can reduce good self-esteem (Baumeister, Campbell, Krueger, Vohs 2003.) Baumeister, Campbell, Krueger and Vohs made a literature search of self-esteem and analysed the findings. They read through 15,000 publications and 11,860 articles from which they generated their data in 2001. Several factors for self-esteem have been identified: early experiences (Coopersmith 1967); differences between the real self and ideal self (James 1908) and school achievements and social comparisons (Rogers 1965). James (1908, 187–189) noted that self-esteem developed from the relationship between the experienced reality and presumable possibilities. James used this observation to explain why self-esteem can stay at a high level as long as person is able to fulfil the expectations of ideal self. People may be intentionally ignorant of qualities which do not fit into or maintain self-esteem. Peuhunen (1981) suggested that self-esteem consists of two parts: a person's ideas of his or her action, and a comparison of those ideas to targets imposed earlier.

It is difficult to evaluate self-esteem because people have a tendency to report only socially accepted answers. Furthermore, most reported knowledge is cross-sectional for which there can be no separation of cause and effect. This means that the significance of the knowledge depends upon the person as well as the interpreter and the situation. However, once self-concept can become operational, the self-esteem of subjects can be studied by evaluating global self-concept. It is easier to test “what I feel about myself” than “what I really am”, because people usually define themselves through feelings (Coopersmith 1967; Elliot 1986; Fleming & Watts 1980; Marsh 1986; Rosenberg 1965; Shepard 1979; White 1986.)

Harter and Jackson (1993, 383–406) use concept self-worth rather than self-esteem. Harter (1999, 54–55) notes that a person should have a balanced view of positive and negative self-representations. These *self-representations are formed from self-conscious emotions* like pride, shame and guilt. These

emotions form constellations of perceptions that define behaviour (Harter 1999, 114).

Success in domains of importance is highly predictive of global self-worth. Support from approval of parents and peers is also highly related to self-worth. This means that competence of domains of importance and social support has an impact on the level of self-worth (Harter & Jackson 1993, 383–406)

3.1.5 Physical Development and Self-Concept

The forming of body image is a basis for self-concept development (Alahuhta 1978, 319–322). Physical characteristics and physical achievements are especially connected to self-concept among children at school age (Cratty 1967, 9). Sarbin (1962) defines that physical self-concept is part of general self-concept.

It is also documented that three domains (physical appearance, peer popularity and athletic competence) are linked to peer-approval; and two domains (scholastic competence and behavioural conduct) to parental-approval (Harter 1999, 227).

3.1.6 Changes in Self-Concept

As self-concept forms during the relationship with the environment, the direction of action and behaviour in learning and social relationships is affected. Children learn at an early age to compare themselves and their achievements with those of their peers. The children are aware of this comparison, especially at the beginning of primary school (Ruble, Feldman, Bogiano 1976, 192–197.) During the development of self-concept earlier experiences determine which experiences are significant for the individual (Beatty & Clark, 1968). Del Polito (1980) has noted that the development of self-concept coincides with the learning constructs of cognitive psychology: self-concept affects experiences, and experiences affect self-concept. Learning is a process, which forms active and holistic schemes. These schemes consist of perceptions of the outside world and the person's own action (Neisser, 1976; v. Wright, Vauras & Reijonen 1976.) Changes of self-concept will happen throughout life. Argyle (1978) has noted that the development of self-concept is dependent upon:

- ◆ the reactions of others
- ◆ comparison with others
- ◆ person's roles (mother, father, brother, sister, schoolmate, teachers etc.)
- ◆ identification to models.

This means that the person adopts characters in the observed world and self-concept is forming in social interaction.

Cooley (1902) referred to these reactions of others and the social aspect of the self as the “looking-glass self”. As well as Cooley, Mead (1962, 175–178) emphasizes the social aspect of self-concept. The self includes the “I” which is the nature of personal self, and the “me” which forms in social interaction through the attitudes of the other people. These two components can be separated but they belong together in the sense of being parts of a whole. Guthrie (1938) described the reactions of others as “self-fulfilling prophecy”. Kuhn (1960) held that people define themselves through roles when they answer the question “Who am I?”

In addition to the developmental theories it is worthwhile to consider the psychoanalytic theory of the industriousness of the child. The Inferiority Phase can be considered in terms of self-concept development. The child’s failure with goals, which are put too high, may easily turn the child towards an inferiority complex, resulting in a deflation of the self-concept. According to the psychoanalysts, early childhood experiences are highly influenced by the formation of the self-concept. It is held that the conflict with the real and the ideal self may cause feelings of guilt, which may induce forms of psychoneurosis. The flexibility of the self-concept exercises the individual process of adjustment. As the child grows, observations are absorbed into the self-concept of the child. These observations are differentiated; the value of each observation being positive, negative or neutral (Korpinen 1983, 12–13.)

According to Harter (1985, 76–80) self-concept develops in stages. Allport (1961) defined stages of the development of self-concept in the following way:

- ◆ from age 0 to 3; Physical Self: when the child has an understanding of permanent self-concept and self-esteem
- ◆ from 4 to 6; During these years the self and self-concept are extending
- ◆ from 6 to 12; When children become conscious of their ability profiles, and they are able to solve problems intellectually
- ◆ adolescence; During these years the young person can set goals and long-term targets.

The following empirical research provides evidence, which supports the existence of these structures throughout the development of self-concept. According to Lewis and Brooks-Gunn (1979), and Gallup (1977, 1979) the first stage is self-identification–knowledge of existence, which consists of two distinct phases. Firstly, at the age of ten weeks a baby will have basic knowledge of self; and secondly, at the age of twelve weeks a baby can separate him or herself from others. Stern (1985) has proved that early self-concept develops through interaction. The second stage is described as classification of self (Kuhn 1960). The child will classify social roles and gender,

as well as ethnic status. After this, the child will form the psychological self (Flavell 1977; Harter 1983) in which the child will be able to distinguish the physical self from the thinking self. The child will have the thought of self-esteem between the ages 7 and 10. Erikson (1962) mentioned that the period of adolescence would have an identity crisis through which the general self will form. During this developmental age, body image is a significant factor. The final stage of self-concept development is the awareness of the global self or general self (Rogers 1965; Mischel 1968).

The theory of Bowlby's attachment models postulates that the child develops a series of attachment models for himself or herself and others. This theory underlines the developmental meaning of the child's environment. This theory explains why people intend to create strong, selective and long lasting interactions. The theory also explains how the breakdown of interaction causes oppression. (Bowlby 1971; Bretherton 1993; Cicchetti 1991; Hautamäki 2002; Pipp 1993; Sroufe 1990.) On the other hand, Fogel (1993) presents the concept of the dialogic self, a developing identity that has a rational relationship with culture and communication. According to anthropological and sociological theory, the self-concept or identity has two forms: sociological self or sociological identity, and personal self or personal identity (Goffman 1990). Speck (1987) holds that the real self can be found at the balance of these two identities. However, Purkey (1970, 12) maintains that self-concept will not change as long as the child's observations about self and the world are balanced. In this view, change of the self-concept requires favourable conditions and new conflicting observations.

Harter (1999, 347–348) has listed cognitive and social strategies, which may support the forming of self-concept.

Cognitive strategies

- ◆ Reduction of the discrepancy between the domain-specific perceived incompetence and the importance of success.
- ◆ Encouragement of relatively realistic self-perceptions.
- ◆ Assessment of the individual's belief system.
- ◆ Appreciation of the particular folk theory.
- ◆ Scaffolding an understanding of the origin of negative self-perceptions.

Social strategies

- ◆ Provide more support from parents, peer or compensatory sources.
- ◆ Encourage individuals to place more psychological emphasis on those interpersonal contexts.
- ◆ Use techniques that foster the internalisation of the positive opinions of others.

In this dissertation the self-concept is considered as a person's personality in cognitive and social division. The individual associates experiences to this personality with earlier observations through the social interaction (Mead 1962). This association is generated by the personal interpretation of the individual experience. The individual will have the consciousness of existence and action (Rogers 1965.) Self-concept includes concepts, attitudes and feelings that the person has about his or her qualities, abilities and relations to the environment (Mead 1962).

3.1.7 Gender Differences

A study by Korpinen (1979, 19) found that during early age development, girls consider themselves as mature, independent and capable to act the role of the adult. Their overall self-concept was more positive than that of boys, who mature at a later age. Differences among the girls were not generally so great. Korpinen (1990) found that among 3245 students

60% of the pupils were satisfied with themselves, boys more so than girls. The general self-esteem of girls was lower than that of boys at the end of the comprehensive school.

Hierarchical models for self-concept have been created, and models are also included in research on gender differences (males have more positive self-concept in athletic competence and physical appearance) and cross-cultural comparisons (western children and adolescents showed more positive self-concept than eastern children and adolescents (Harter 1999, 140–141).

3.2 The Adaptation of the Child with Cleft Lip or Cleft Palate or Both

Lahti, Rintala, Soivio (1972, 902) have found that the adaptation process of cleft children is possibly disrupted by speech and to some extent physical appearance. Richman (1983, 108–112) found that problems were more concerned with facial appearance than with speech. It has been found that children with clefts may have low expectations in their social environment. Their parents and peers may show avoidance behaviour toward them, which may affect school achievement and social relationships (Tobiasen 1984, 131–139.) On the other hand, Richman, Holmes and Eliason (1985, 93–96) found that if cleft lip and palate adolescents were well adjusted, they would have realistic perceptions of facial appearance, and their self-perceptions of behaviour would be similar to those of their parents.

Tobiasen (1989, 249–254) found that improvements in aesthetic acceptability from facial surgery were associated with psychosocial benefits. Adults with cleft lip and palate are just as entitled to the equal opportunities to live

and influence society as anyone else. The disfigurement can be almost totally removed by means of plastic surgery. However, children with cleft lip and palate may experience teasing and mockery during rehabilitation. Here, pedagogic rehabilitation is a very important part of the rehabilitation process. The pedagogic rehabilitation should be an effective support for integration. Bjornson and Agustsdottir (1987, 152–157) found that post-operative cleft patients had relatively good psychosocial adjustment. The subjects did not perceive that cleft lip or palate had influenced their lives to any great extent. Overall, the subjects were satisfied with the treatment and the service from members of the treatment team.

3.3 Developing Self with Impairments: Self-Concept and Cleft Lip, Cleft Palate or Both

Results about self-concept and the cleft lip and/or cleft palate condition are quite conflicting. Lavigne and Faier-Routman (1992, 133–157) found that physically handicapped children have lower self-concept values than those of a healthy control group. Leonard, Dwyer Brust, Abrahams, Sielaff (1991, 347–353) found that the self-concept values of popularity were quite poor among cleft children. They also found that CLP children had extra difficulties because of facial deformation, phonetic and linguistic deficiency and many operations. Children with cleft lip and palate (visible and non-visible defects) demonstrated the lowest self-concept scores. These test results suggest that early primary school age children experience significant stigma (Broder & Strauss 1989, 114–118.) Research by Jones (1984, 132–138) found a significant difference in self-concept between the study and control group. The study group (50 cleft lip and palate children between the ages of 8 and 18), regardless of gender, reported lower values in self-concept than the control group (50 non-cleft children matched by the age, gender and race). There were particular differences in behaviour, school status, popularity, happiness and satisfaction, and physical attributes and appearance. Kapp (1979, 171–176) suggested that female results indicated an effect of physical stigma due to the importance placed upon physical attractiveness in our society. She matched individually thirty-four cleft lip and/or palate children between the ages 11 and 13 with thirty-four non-cleft school children. Endriga and Kapp-Simon (1999, 3–11) reported in their article many studies concerned with the psychological problems among children with clefts.

On the other hand, there are also findings of relatively good self-concept. A study by Leonard, Dwyer Brust, Abrahams, Sielaff (1991, 347–353) found that cleft children's self-concept was no lower than self-concept of the non-clefted group. Self-concept was on average level or above it. Richman and Eliason (1982, 249–257) noted that the self-concept of the cleft children was

relatively good. Madison (1986, 337–341) found that the self-concept of the cleft children was no different from the self-concept of the non-cleft children. A study by Brantley and Clifford (1979, 177–182) confirmed that cleft palate adolescents had no difference in self-concept from their same-age, non-cleft peers. Clifford (1969, 221–227) found that although the cleft children received less parental acceptance at birth than children with asthma, there were no reported differences between self-concept. Kapp (1979, 171–176) found that there was no significant difference in self-concept between the study group (34 cleft lip and/or palate children between the ages 11 and 13) and the control group (34 non-cleft children who were individually matched). Kapp-Simon (1986, 24–27) also reported no significant difference with genders in self-concept (50 children with clefts between the ages 5 and 9 and a control group of 172 non-cleft children between the ages of 5 and 9).

As a summary: Endriga and Kapp-Simon (1999, 3–11) drew up a review of the psychological literature on cleft lip and palate and other craniofacial anomalies. They reported following negative effects:

- ◆ Parent-child relation: Parents of children with craniofacial anomalies reported psychological distress after the birth. Parents may isolate themselves. Parents reported feeding problems and difficulties of emotional adjustment. These factors may cause a negative impact on the parent-child relationship. It was found that the members of the dyad (mother and child) were less active than in the control group.
- ◆ Behavioural aspects: Children with craniofacial anomalies had behaviour problems. Girls showed more “acting-out” types of behaviour than boys with craniofacial anomalies or children without craniofacial anomalies. Parents and teachers also reported social and behavioural inhibition among children with craniofacial anomalies. Parents also considered their children depressed and withdrawn. Children had problems in their inner and external world at the same time.
- ◆ Educational and Social aspects: Self-concept scores were low, especially children with CLP. Girls were more likely to report the dissatisfaction with appearance and also later in life. There are also findings that children are more likely to have problems with verbal intelligence as well as language development. These may cause reading problems as well as poorer academic achievement later in life. Individuals with craniofacial anomalies were less likely to have children later in life and they may have some problems with their social interaction.

On the contrary Enriga and Kapp-Simon (1999, 3–11) reported findings that do not show any differences between children with craniofacial anomalies and the control group:

- ◇ Parent-child relation: Parents of children with craniofacial anomalies may have similar social networks than parents of a comparison group. Also, mother-infant interaction was found to be similar than that of other mothers. Late infancy seems to be similar than that of other children. Furthermore, there were no differences between the parenting style (nurturance and restrictiveness).
- ◇ Behavioural aspects: There are also findings that children with craniofacial anomalies have no more behaviour problems than a comparison group. On the other hand, social withdrawal is not a unitary factor.
- ◇ Educational aspects: In some researches, the self-concept scores were comparable to normative data. The educational level also seemed to be similar to that of the control group.

Finally, it can be said that these findings are ambiguous, and that more research is needed.

3.4 Self Image and Schooling: Relations

The integration of personality and mental health is one of the most important aims of school education. It is far more meaningful to consider the child's capacity to learn about himself or herself than the child's capacity to learn the curriculum (Kääriäinen 1988, 22.) The self-concept forms at a very early age through social interaction. Thus, the home has great significance to self-concept development. There is also evidence to suggest that children with higher social-economic status have a more positive self-concept (Aho 1987, 94–95; Korpinen 1979, 57–59.) The general self-concept of boys is usually better than that of girls. On the other hand, the educational self-concept of boys is weaker than that of girls. Thus, educational attitudes of boys are weaker than those of girls (Korpinen 1979, 57–59.) Korpinen (2000, 27–47) concludes that Finnish schools are more suitable to the needs of girls.

Realistic self-concept can be reached through educational attitudes, which emphasise the pupil and his or her own personality. Research has found correlations between community values and individual values, as well as how the individual feels. This means that the teacher in the classroom is the person who should be able to nullify social-economic differences by teaching acceptance of differences among the population. People around the child have great influence on student self-image: parents, teachers and friends will provide values for the child by providing examples of reinforcement for acceptable self-concept behaviours (Korpinen 1979, 19–21.)

Theories about self-fulfilling prophecies (Merton 1968; Rosenthal & Jacobson 1968) are partly related to the aspects of self image and schooling. Merton (1968) and Rosenthal & Jacobson (1968) found that other people's

expectations act as guides for learning interaction, and these supportive attitudes will promote achievement.

3.4.1 The Child with Cleft Lip, Cleft Palate or Both as a Pupil

Children with cleft lip and palate do not require any special intervention in classroom teaching because the condition itself is only a genetic malformation. This situation changes if the child has multiple disorders, which will require special arrangements. This research does not investigate children with multiple disorders or multi-handicapped children. The cleft child progresses through school with speech training, speech therapy or normal remedial teaching which may be needed after periods of hospital treatment. Studies have found that children with cleft lip and palate are more inhibited in the classroom than parents observe at home (Richman 1978, 360–364; Schneiderman & Auer 1984, 224–228.)

Madison (1986, 337–341) found that cleft lip and palate children score lower on intelligence tests than non-cleft children. This can be attributed to difficulties with the learning of speech, as well as hard of hearing conditions or a lack of motivation. As pupils, cleft children are shyer and more withdrawn than non-cleft children, but they do not exhibit more disturbed behaviour or psychological problems than non-cleft pupils. Also Uhlemann, Zschiesche and Ziegeler (1986, 568–573) found that children with clefts may prefer the social role of bystander, or they may passively accept the rules of the group.

Furthermore, Richman and Eliason (1982, 249–257) found that a high percentage of cleft children are underachievers, possibly due to behavioural inhibition and decreased expectations by teachers and parents. Fox, Lynch and Brookshire (1978, 239–245) suggested that cleft children need support in order to be in an equal position with their schoolmates. Research indicates that cleft palate children have poor values in tests concerning language, personal-social and motor skills. Also Broder, Smith and Strauss (1994, 429–436) have noted that children and adolescents with visible facial defects exhibited a lower problem solving ability than subjects with non-visible defects. They noted that children with clefts were socially less independent than other children.

There are findings that children with cleft palate only are significantly more likely to have severe reading disabilities (Richman and Eliason 1984, 1–6), and children with cleft lip and palate are significantly more likely to have verbal expressive deficits and milder reading problems. Brantley and Clifford (1979, 183–187) noticed that children with cleft palate had more negative academic ratings than their non-cleft peers. They investigated 44 children with cleft palate between 9 and 18. There are also findings that the

language development of children with clefts is delayed between the ages of 16 to 30 months (Scherer & D'Antonio 1995, 7–13). Also Broder, Richman and Matheson (1998, 127–131) reported learning difficulties, low school achievement and grade retention among children with clefts. Endriga and Kapp-Simon (1999, 3–11) outlined many studies on learning difficulties among children with clefts.

On the contrary, Pannbacker (1979, 124–125) believes that children with palatal clefts are not necessarily delayed in language development. She holds that the area to be investigated is wide, and that there are only a limited number of studies so far. Similarly, Richman and Eliason (1982, 249–257) noted that the general intelligence of cleft children is relatively normally distributed. There is no evidence that the educational status of the cleft child is any different to that of the age-sibling. Differences in the educational status of the child in comparison with that of the parents can be attributed to a general rise in the educational level over the last 30 years. However, occupational orientation of cleft children has been found to be very similar than that of the parents (McWilliams & Paradise 1973, 223–229).

However, Korpinen (1979, 20) believes that the teacher should have sufficient knowledge of clefts, in order to maximise the potential of all students: “The position of the teacher is very crucial. The skilful teacher can use his or her influence so that children learn to accept each other, to support one another and to take up one another positively.” Finnegan (1982, 222–229) found that special educators have more information and experience with clefts than general educators. However, the study revealed that both groups of teachers were deficient concerning the learning disabilities and classroom routines of cleft children. Furthermore Mitchell, Lott and Pannbacker (1984, 308–312) noticed that school personnel have inconsistent views about cleft children.

3.4.2 Child with Handicap as an Individual Actor

Kivinen and Vadén (1976, 126; see also Salminen & Tammissalo 2001, 71; Timonen 1995, 37) have noted that a variable but notable relation exists between the disability and the individual's psychic health. We have to remember that the handicapped child can have a perfectly similar psychic balance and mental health to the healthy age-mate. This postulates the approval of the child's own injury or the inner integration.

The realistic comprehension of oneself, self-concept, will mature for the child. The child knows who he or she is and what he or she is like. The child needs external integration or the need to join in with the culture and the world around the child as well as to act and live in it. This process is not continually advanced, and difficulties in the process can be the solitude of the handi-

capped individual, the absence of close persons or prejudiced attitudes. It is necessary to note that, in the interaction process, the attitude of the other members of society prescribes the advance of the adaptation process (Määttä 1981, 98–103.)

Urponen (1989) studied 488 chronically impaired and disabled children. In 1972 they were 12 to 15 years, and in 1982 they were 22 to 25 years old. She found that life spans of young people are modified and differentiated early. In this social follow-up study she found that a strictly medical approach is insufficient in revealing the handicaps and consequences of the impairment and disabilities in life.

3.5 Children with Clefts in Social Context

3.5.1 Family

During pregnancy the parents anticipate the birth of a healthy child. The birth of the handicapped child is always a disappointment for the parents, and the family is forced into a crisis reaction, which can be divided into different phases. The crisis reaction is an angle, which have traditionally used to describe the psychodynamic adaptation for the changes. The manifestation of the phases may vary between families, but the final phase lasts throughout life (Cullberg 1976.) According to Cullberg (1976, also Räsänen and Väättäinen 1986, 52–67) phases of the crisis reaction usually occur as follows:

1) The shock phase

The first phase is transitory. It will last from a few moments to a couple of days. The incident is not believed and everything seems to be very quiet. Inner agitation is well controlled; however, some people who go into shock have exhibited childish behaviour as a result.

2) The reaction phase

The incident is recognised and self-examination is performed. The phase will last from a couple of months to one year. The parents are more concentrated on themselves than the child. In the reaction phase, the psyche is protected by defence mechanisms (e. g. denying, warding, rationalisation, regression etc.).

3) The correcting phase

In this phase the parents orientate themselves to the child's disability, and to the many obligations, which they now have to consider. These obligations are rehabilitation, physical care, speech training, medical care, and ADL actions,

the focusing of the child's strengths and the internalisation of the absolute limitation caused by the injury.

4) The new orientation phase

The phase will last throughout life. The disability of the child is accepted. Matters, which are related to the disability, can be experienced and negotiated. In this phase the parents are also able to help other parents.

Each family is an entity of its own, and the phases of the crisis are overcome in many different ways, as families have different kinds of capacities for disability acceptance. Pentinmäki (1975, 324–335 and 1980, 7–11) has collected factors, which have an impact on the ability of the family to accept their disabled child:

- ◆ the family's way to act as a family,
- ◆ the parents' personalities,
- ◆ the previous losses,
- ◆ children's order of birth and their significance to parents,
- ◆ the seriousness of the disability or sickness and its significance to parents,
- ◆ the difficulty of the disability,
- ◆ the support of the environment,
- ◆ easily available knowledge about the disability,
- ◆ the child's own reaction.

It is important that the family has a strong capacity to accept the child's disability. Furthermore the family has to be able to organize the every day living (Virpiranta-Salo 1995; Määttä & Määttä 1999). The child has the best possibility of forming a realistic self-concept when the family has accepted the disability. According to Määttä (1981, 50; 1999, 40) the family, which has adapted itself to the child's condition, doesn't conceal the difference of the child, but will participate in society together with the child. The family is also able to support others who are in the same position. The child who has internalised the disability as an individual quality is open and sincere in social contact.

Psychodynamic theory presumes that the family will accept the child's disability step by step. Acceptance happens in stages, can take a lot of time and may be quite laborious for the family. Winnicott (1968), Gustavsson (1985) and Hautamäki (1996) have noted that mothers of disabled children may have stress about the dyadic relation: the role is unclear and priorities at home are difficult to assess. Thus, the family is continually handling the crisis. It is possible that the family will face a new crisis before they have resolved the previous one.

After the child is born the parents are given factual information concerning cleft lip and palate. Quite often, the parents are too upset to retain much of this good advice. Locally, medical care in Finland is mainly concentrated at the Universal Central Hospitals, and all patients are entitled to equal, professional treatment. This is an economic and reasonable provision, as the distance between Helsinki and the northern part of the Finland is over 1000 kilometres. The Cleft Lip and Palate Patient's Association was founded in 1990. Although there was a need for an association prior to 1990, the relatively recent formation of this group can be attributed to the small number of annual cases, the long distances involved in a country the size of Finland, and the centralised medical system, which is free of charge to all patients. The Association organises adaptation courses for families.

The problems experienced by families with a cleft child are well known. Richman and Harper (1978, 215–219) found that cleft boys (both cleft palate only and cleft lip and palate) perceived their mothers as an intrusive influence, resulting in less independent development. Also Brantley and Clifford (1979, 183–187) noticed that mothers of children with cleft palate indicated a significantly greater negative impact at the birth of the child, but did not exhibit greater detached attitude or action. However, parental reactions were perceived to be more negative by children with clefts. Long and Dalston (1982, 57–61) have found that there was no significant difference between the control and study group on gesture communication among one-year old children and their mothers. According to this research, the non-verbal communication, or the awareness of the need of communication, is well established among one-year old children with cleft conditions. Tobiasen and Hiebert (1984, 82–85) have found that children with clefts and children without clefts have behavioural problems at about the same frequency. However, parental reactions were different, with parents of children with clefts being significantly more tolerant of the conduct problems of their child.

There are findings that other members of the family will have problems after the child with cleft is born. Dytrych, Tyl, Schuller, Helclova & Berankova (1990, 678–682) found that mothers experienced neurotic symptoms after the birth of a disabled child. Three quarters of the mothers described the birth as a psychic shock. Some of the mothers suffered from reactive depression. The depression was not treated because it was not diagnosed. It was confirmed that the poor mental condition of the mother persists in the majority of the investigated group cases, up to the time of adolescence, and that this has a marked effect on the mental prosperity of the child. Children suffered from many mental handicapping phenomena like impaired self-esteem. These phenomena were caused by the parents' latent or manifest negative attitudes.

There are also findings that mothers of the study group showed greater stress and weaker self-confidence, as well as a greater amount of matrimonial

problems. The research has not revealed any differences in the maternal sense of the responsibility towards the child (Speltz, Armsden & Clarren 1990, 177–196.) Kalland (1995, 150) has noted that the functional dimension (feeding) disturbed the early mother-child interaction (bonding) more than physical appearance. Broder, Smith & Strauss (1992, 262–270) have found low, but statistically significant correlations between female subjects and their parents in satisfaction with appearance. Parents of females expressed more concern about the appearance of their daughter than parents of males. Parents of males were more concerned with speech development. Krueckeberg and Kapp-Simon (1993, 490–496) suggested that families including a child with cranio-facial anomalies should pay attention to interactions within the family.

3.5.2 Some Models for Supporting the Families

3.5.2.1 Early Information

One alternative is the Eco-Cultural model of adaptation (Gallimore, Weisner, Kaufman and Bernheimer 1989; Weisner & Gallimore 1994), which presumes that the problem of adaptation is not psychological, but underlines the organisation of everyday life. Daily routines should be organised in a meaningful way.

The Eco-Cultural model also determines that the family will recover if the services are dimensioned after needs which have been determined by the family itself (Määttä 1995, 7). This is important for the development of the child's personality, in that the child will accept oneself as the way one is (see self-concept, earlier in this chapter). In this phase, the role of the parents takes on a great significance: the child will be able to develop self-identify by having samples from the parents and embracing their attitudes (Korpinen 1983, 12–13).

Leskinen (1994) tested attribution theory for causal defining and explaining the welfare. In his study, Leskinen 1994 had 111 families with children ranging in ages from 2 to 8 years. He found that the higher mothers estimated the expectancy of their child's rehabilitation possibilities, the more hopeful they were and, the less frequently they expressed attitudes directing blame towards others. On the other hand the helpfulness of fathers about the rehabilitation possibilities predicted the higher involvement with the child. Leskinen suggests that families with a disabled child should be given early information about the disability and the family should be encouraged to keep an open mind towards professional information.

Kalland (1995, 174–175) also emphasised the importance of early information for the families. Her study suggests that parents need support to facilitate the bonding process as a part of the adaptation process. She studied 40 mothers with non-syndrome cleft lip and/or palate children. Kalland (1995,

177) notes that to understand the situation of the birth of the disabled child is more important and effective than interpreting the situation as a part of adaptation.

3.5.2.2 Activity Based Model

Taanila (1997, 57–62) found five different supportive factors concerning the adaptive process for families. In her research, she studied 127 families of children with mental or physical disability or juvenile diabetes, aged between 7 and 17 years. She found that families need cognitive activities like acceptance, information and an optimistic attitude, and that families need to take care of family relationship activities like cohesion and co-operation. Community activities like social support were also found to be very important for families with a disabled child, and the study suggested that families should have emotional activities like open expression of feelings and communication. The last supportive factor for adaptation found by Taanila was the need for individual development activities, suggesting that families need self-confidence and hobbies of their own. Taanila (1997, 83–84) concluded that families of handicapped children need immediate, effective support as well as adequate information. The families need help in order to organise the every day routines of their disabled child and personal interests, and they are encouraged to gather the support to create and maintain social relations.

3.5.2.3 Families Way to Act

Lillrank (1998) has studied the family system and the way parents act when they have a chronically ill child. She studied 32 families including children with childhood cancer. She figured four different approach variations used by parents under these circumstances. These approach variations have defined Ferguson and Ferguson (1987):

- (i) The Psycho-dynamic approach: uncertainty of prognosis causes the parent to use partial denial
- (ii) The Psycho-social approach: parents learn to shrink the perspective of time, and begin to live one day at a time
- (iii) The Functional approach: families learn the division of labour for work in the home
- (iv) The Interactional approach: the family adopts an open doctor-parent interaction.

On the other hand, Käyhty (1981, 15) recognises a problem of its own within the family system. Käyhty notes that if one member of the family has a serious problem, all the other members of the family will share the same kind of problem. He describes this as a result of the interaction relations, and provides the example of parents who are indifferent to their disabled child. The

child will be left to grow alone, which can be described as a frightening and heavy life burden. Parental presence, when they are listening and participating, is considered to be the best psychological care for child growth (Arajärvi 1984, 277).

3.5.3 School

Clefts may also cause social isolation and teasing, besides deviant speech and appearance. Tobiasen, Levy, Charpentier and Hiebert (1987, 209–215) found that congenital malformations associated with cleft lip and palate cause a risk of conduct problems at home, and behavioural and learning problems at school. However, children with clefts only and no associated congenital malformations have fewer problems at home and at school. Simonds and Heimburger (1978, 193–201) have found that many mothers were characterising children with clefts as excessively dependent. The researchers also noted that cleft children with articulation problems were more likely to have behavioural problems.

As educationally observed it was found that there was no significant correlation between the patient dropout rate from school and the type of cleft or severity of speech or hearing problems. There was a similarity between the educational achievement levels of the cleft palate patients and their siblings. It is suggested that family patterns form the primary basis for influencing whether or not a cleft palate child will ultimately complete high school rather than the fact that he has cleft palate (Demb & Ruess 1967, 327–333.) Richman (1976, 4–10) have found that cleft children have greater inhibition of impulses, and that they have lower educational achievement than non-cleft children. The researchers presume that cleft children have learned to avoid situations, which may give rise to negative responses by others.

From the point of social aspects only a minority of children with craniofacial anomalies have been found to exhibit behavioural problems. These problems can be predicted by observing the early mother-infant interaction during play and teaching situations (Speltz, Morton, Goodell & Clarren 1993, 482–489.) Uhlemann, Zschiesche and Ziegeler (1986, 568–573) noticed that children with clefts are less likely to have conduct problems by accepting the role of “good boy” or “good girl”.

In Finland the child will start the school approximately at the age of seven. Finland has a common compulsory education system, and classroom groups are heterogeneous, with special education mainly provided in the ordinary classroom situation. The idea of this kind of integration is to create a socially equal and fair school system (Ruoppila 1995, 159–161.) Wang, Haertel and Walberg (1994) have noted that the child creates a concept about him or herself as a pupil between the ages 5–8, which means that the start of

school can be of great importance to the whole school carer. The start includes the entire school institution, like the school's atmosphere, school building, teachers and classmates. It is noted that children and adolescents need positive feedback from their teachers and classmates. Positive feedback assists persons involved in the learning process (Harter 1999, 261.) The essential part of early school education in Finland is the creation of a cooperative and positive atmosphere as well as an institutional attitude, which takes notice of child's personality and supports him or her as a student (Opetushallitus 2004.)

There has been an ongoing debate on how prepared the children should be at the start of school in the disciplines of reading, writing and mathematical skills. There are, however, other skills, which the child should have, such as motor skills and attentiveness, which the child will need to begin practice in early academic skills (Ahonen, Lamminmäki, Närhi, Räsänen 1995, 168–173.)

Scheinin (1990, 43) also notes that the school requires skills for perseverance and target centred work. The school also includes the idea of progressive separation from home, which is supported by the targets of school education. The school education has two goals: firstly, it has to take care of civilisation's transformation to the next generation (Harva 1960, 62–64; Lahdes 1986, 30–31); and, secondly, school education has to select people for different jobs and duties for society (Uusitalo 1984, 156–157).

Thus, school education includes two stages: a micro stage, which concerns the level of the pupil, and the macro stage, which concerns the level of the society. Through evaluation, the school examines both stages at the same time. In Finland there is numerical measurement of school performance (from 4 to 10) among the school children that have reached the eighth grade, but numeric measurement can be used (with or without verbal feedback) even earlier if the school decides. The meaning of the measurement is quite different in terms of the self-concept development of the school pupil. The numerical measurement strengthens the self-concept of the pupil who is doing well and, on the contrary, may weaken the self-concept of the child who is not performing well in school (Korpinen 1979, 22.)

However, one of the main targets of the Finnish comprehensive school system is to create a means through which a student could have realistic and objective feedback about him or herself as a student. At the same time the student should be able to receive realistic opinion of his or her achievement level in different stages as well as having healthy self-confidence (POPS I, 1970.) This target includes the idea that children will be differentiated through the individual developmental processes whilst at the same time receiving feedback from the school. The target also binds together the micro and macro stage of school education, and later the child should be able to integrate into the society as a full standing member.

The educational trend about supporting the child has lately started to move towards inclusive education. According to Ainscow, Booth and Dyson (2003, 125–139) in inclusive education the practices are defining, evaluating and disseminating in a new way. Booth, Nes and Strømstad (2003) define that attitude towards inclusive education based on the values of environment. These values can be influenced.

The target group of this research is children with clefts. These boys and girls live across the whole of Finland, living together with non-clefted persons. As pupils they are taught in ordinary classrooms with non-clefted children. One of the goals of this study is to examine school achievement for this group of school students. Another intention is to describe the developmental processes of school achievement among this population.

3.5.4 Environment

There are findings that indicate male persons with mild or moderate facial disfigurements were socially judged, by the general public, to be more acceptable than females or males with severe disfigurements (Glass & Starr & Stewart & Hodge 1981, 147–151; Schneiderman & Harding 1984, 219–223; Tobiasen 1987, 323–327). Similar results have been found by Speltz, Morton, Goodell and Clarren (1993, 482–489), who noted that mothers of children with cleft lip and palate reported less favourable social support than mothers of children with cleft lip only. It was also found that children report a low preference for social interaction with children with visible defects (Harper 1995, 114–119).

Furthermore, the person with a cleft condition may also have problems of adjustment. There are findings that if cleft lip and palate adolescents were poorly adjusted, they reported unrealistic perceptions of their facial appearance, and perceived their behaviour as socially acceptable. Their parents reported more negative results (Richman, Holmes and Eliason 1985, 93–96.) Broder, Smith and Strauss (1994, 429–436) investigated cleft children's satisfaction of their appearance, and noted that subjects with non-visible defects expressed greater satisfaction for their appearance than subjects with visible defects. Padwa, Evans and Pillemer (1991, 354–359) found that children, with symmetric cranio-facial deformities (a more serious disability), did not score as high on psychosocial adjustment tests as children with asymmetric cranio-facial deformities. Andrä and Dieckman (1986, 487–495) found a correlation between the social behaviour of the cleft child and the educational level of the mother. Children with clefts, whose mothers had taken to the 10th class (in German school system), achieved significantly better in school than children with clefts, whose mothers did not take the 10th class. There are also findings that children with cleft lip and palate have higher scores in

maturity and inhibition than children with different observable physical impairment (Richman & Harper 1979, 257–261).

Kapp-Simon, Simon and Kristovich (1992, 352–356) found that social skills and athletic competence are the best predictors of social adjustment. They also found that adjustment of the adolescent is associated with the degree of inhibition, with more poorly adjusted adolescents displaying greater inhibition. Self-esteem did not predict adjustment. It was found that older cleft lip and/or palate patients reported increased satisfaction with speech, but no age differences in patients' satisfaction with appearance were observed in subjects with cleft lip and cleft lip and palate (Broder, Smith & Strauss 1992, 262–270.) The majority of adolescent patients with cleft lip and palate were very pleased or moderately pleased with their appearance and speech after surgical operations (Strauss, Broder & Helms 1988, 335–342). Research by Richman (1983, 108–112) indicated quite good social adjustment for adolescents with cleft lip and palate. Results indicated that adjustment processes and results of children with cleft lip and palate are individual. Simonds and Heimburger (1978, 193–201) and Watson (1964, 130–138) have found that there is no significant difference in having psychiatric diagnoses or conflicts between cleft patients and a control group. Krueckeberg, Kapp-Simon and Ribordy (1993, 475–481) have also found factors (facial encoding and friendliness), which can be used to predict social skills and which can be taught. However, a study by Krueckeberg and Kapp-Simon (1993, 490–496) did not reveal any statistical differences in social skills between the study and control families.

A study by Sale and Carey (1995, 6–19) noted that full-inclusion strategies did not eliminate the negative social perception of students with disabilities. The risk group for social and psychological stress and for having their quality of life negatively impacted consists of the individuals with the most severe forms of cranio-facial deformities. However, only a few patients will develop psychopathology (Pruzinsky 1992, 578–584.) Richman (1995, 99–103) has noted that adolescents with clefts may be at risk for adjustment problems. There is evidence that some adaptation problems with cleft children exist, as they are more likely to drop out of the school more often than their relatives and they are not entering into matrimony as often as their relatives (McWilliams & Paradise 1973, 223–229). Peter and Chinsky (1974, 443–449) have found that college attendance, but not graduation, was associated with higher marriage rates within the cleft female group. The cleft male students who had completed college were associated with higher marriage rates. The lowest rates of marriage belonged to the cleft male group who had attended the college, but had not graduated. There were no significant differences between the groups (clefts, siblings and the control group) in the choice of marriage partners: subjects with higher educational attainment more frequently married spouses with higher educational attainment. However, the

educational aspirations were lower than those of the two other groups in the study. The researchers presume that this is due to low educational aspirations of cleft families.

A European study by Bjornsson and Agustsdottir (1987, 152–157) found that fewer individuals were married or living together in the cleft group than in the comparison group. Females were more self-conscious than males in respect to how others viewed their appearance, and their expectations exceeded the actual outcome of surgery.

In addition to physical appearance, the child's voice also has an impact on social interaction. Ramig (1982, 270–274) found that when listeners were given extra information about cleft speakers with the "hyper nasality" description, the information did not affect listener ratings. Despite the deviant appearance or hyper nasal voice, clefts are not regarded as very severe disabilities. Cleft palate was rated slightly more positively than cleft lip, and both of these concepts, in turn, were rated more positively than the concepts of asthma, amputation and physical disability. Body part concepts (for example mouth, nose, face) were less positively valued, rated less potent and less active than the more distal body part concepts. Conceptually, cleft palate and cleft lip were seen in the range of mild illness, and considered close to the concept of migraine. Other symptoms such as asthma, amputation and physical disability were rated as conceptually more severe (Clifford 1967, 165–173.)

3.6 Summary

During the child's first years the most important environment consists of the family and the surrounding social relations. The family moves through the crisis reaction after the birth of the disabled child and adapts to the new circumstances. The adaptation of children with clefts includes problems with social skills, communication and linguistic skills but not necessarily behavioural difficulties. Conflicting results indicate a need for further study. However, results mainly reveal a negative effect, demonstrating some problems caused by a small malformation.

The self-concept forms through interaction, the individual develops attitudes, which the person will use to perceive himself. There are conflicting results from studies with the self-concept development of cleft children, possibly due to the fact that this is a relatively new field for psychosocial investigation. The article of Endriga and Kapp-Simon (1999, 3–11) reveals the contradiction of the results among studies. One very probable reason for that is that the studied groups may not necessarily be clear cleft groups. Subjects may have other syndromes with cranio-facial clefts like Pierre-Robin, Catch

or FAS. However, it is apparent the clefts condition causes difficulties, for children in the areas of linguistic development and social skills.

IV Some Aspects About Adaptation and Integration in Special Education

4.1 Coping with the Given

After the child is born, he or she starts to grow and develop. The environment affects this developmental process because the child will have interactive relations to the outer world (Hautamäki & Kontiainen 1993.) Through this process, the individual will identify one self as a person. The child will have social competence to the existing circumstances and conditions with higher constants and he or she will adapt (Poikkeus 1995.)

Masten and Coatsworth (1995, 722–723) have noted that personal qualities like skills, processes and outcomes are related to the effectiveness of adaptation. It is also possible to evaluate individual differences in the quality of adaptation. The person who is adapting will have multidimensional competence behaviour. This behaviour will transform over time as behavioural manifestations are organized, integrated and co-ordinated with environment. Many underlying processes are connected to cognitive, affective and motivational mental functions and their integration in adaptive behaviour.

The modern theory has found a couple of aspects, which should be of concern in the development and adaptation of the child. A family system influences the child both directly and indirectly. The child is a part of a family system as well as a part of the world, which permeates through the family. Modern theory is also interested in individual differences between children, as individual variations influence development and adaptation. Furthermore, development is affected by the interplay between biological and environmental factors, which influences the variation of IQ (Hodapp, Burack, Ziegler 1990, 4–13.)

The development process of children with impairments is even more complicated. Berkson (1993, 33–40) mentions some aspects of individual differences among children with disabilities. Through these differences it is possible to identify features of adaptation. Firstly, behaviour is described quantitatively in order to compare the delay of the child with same-age peers, taking the unique developmental nature of each child into consideration. This careful measurement of individual differences has created new categories and syndromes, and, although it is possible to find causes for different syndromes by using contemporary methods, the causes of many syndromes still remain a mystery.

Categories and causes are needed to define and specify treatments for the child. Treatments can be divided to drug therapies, psychotherapy and behaviour modification. Severity of handicap has significance for the life and adaptation of the individual: the greater the severity of handicap, the more diffi-

cult it is for the individual to lead a normal life. It is also possible that one severe handicap may directly cause another handicap, generating a multiple handicapping condition. On the other hand, multiple handicaps may be related to severity indirectly, in which case the primary handicap may be the cause of one or several secondary handicaps or disorders, such as emotional or behavioural problems. The developmental level and chronological age of the child may also affect the life of the child, as the level of development may be related to the nature of the handicap. Each handicap describes its own special characteristics. Adaptation is also dependent on the environment, and it is the school environment, which defines the level of handicap and the role of the individual as part of a society (Berkson 1993, 33–40.) The pedagogic discussion has recently argued that there is no need for categories (Ainscow, Booth and Dyson 2003, 125–139). Education taxes the human intellect, and is responsible for changing the behaviour of the child in a way, which is consistent with the aims of society. Among modern research there can be found studies, which are handling this phenomena (Lyon, Fletcher, Torgesen, Shaywitz, Chhabra 2004.)

The adaptation of a person with a handicap is a complicated and difficult process, in which the effectiveness of the modern world and the limitations of the handicapped person are seen to work against each other. Määttä (1981, 32) suggests that the adaptation of the handicapped person to society requires both internal and external integration.

The attitudes of society towards handicapped persons have changed considerably throughout history. Today it is presumed that handicapped persons should be integrated into society. After the Declaration on the Rights of Disabled Person (UN 1975), the handicapped person was given the right for the respect of human dignity, as well as the right to a full and satisfactory, normalised life.

Structural guidelines exist on how to evaluate the satisfaction of the life of the handicapped child. Thomas and Chess (1980, 251–254) have defined adaptive and maladaptive behaviour through the concepts of goodness of fit and poorness of fit. A goodness of fit means that the optimal development and adaptation can take place when the expectations and demands of the society are in balance with the child's own capacity, motivation and behaviour. On the other hand, a poorness of fit occurs when there is an imbalance between the environment and the child, resulting in distorted development and maladaptive behaviour. Thus, goodness of fit and poorness of fit depends upon the interactional relation between the child and the environment.

4.2 Impairment, Disability, Handicap

The World Health Organisation (WHO) defines the concept of handicap through the model of functioning and disability. It provides a multiperspective approach to the classification of functioning and disability as an interactive and evolutionary process. Impairment itself may cause the abnormality, or the deviation of, the psychological or physiological operations, or those of the body functions and structures, but it may exist without capacity limitations. Disability means the restriction or limitation of functional capacity, so that one may have capacity limitations without assistance, and no performance problems in the current environment. Handicap means the lack of capacity caused by the injury or disability. The lack of capacity restricts or prevents participation and achievements, which would be normal according to one's age, sex, status or cultural background (WHO 2001.)

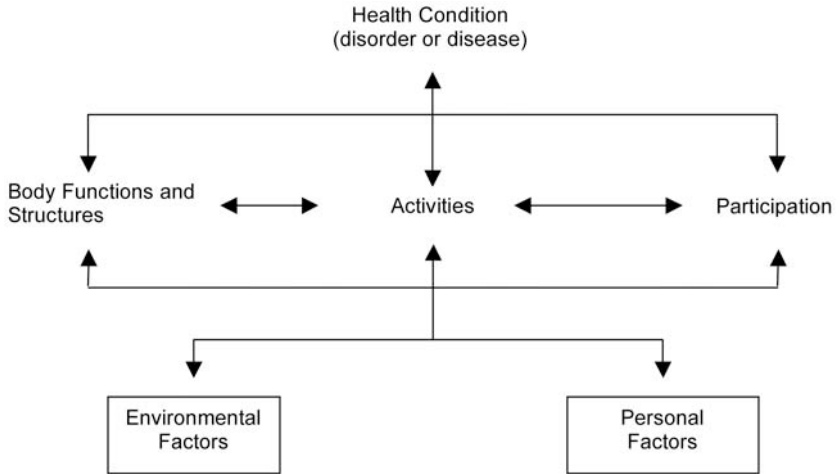


Figure 2. The ICF according to The World Health Organisation (WHO 2001)

Varmola specifies that the injury is not considered the fault of the individual according the WHO classification, but it is in fact a phenomenon between the individual and the environment (Varmola 1985, 5–6).

Badley (1987, 124) ascertains that the handicap can be determined through the interaction between the impairment or disability and the environment, resources, social and cultural circumstances.



Figure 3. Handicap according to Badley (1987, 124)

Korhonen (1993, 16–20) has studied the relationship between the disabled person and the environment, and he has developed rehabilitation or evaluation model through which is possible to handle disorder disadvantages. In this model, a person’s whole life is described through different kinds of systems. The model makes it possible to find out sectors that need to be supported.

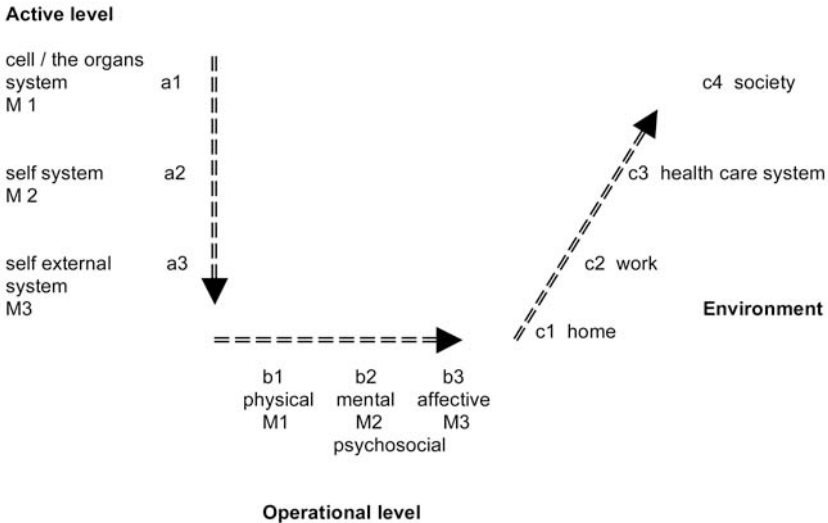


Figure 4. Korhonen’s PY-model

These classifications can serve to describe the development of children with cleft lip and palate. The models may be used as a control through which is possible to verify that all the details which are affecting in child’s life are included in the observation at the same time. The stages of the cleft lip and palate, one’s personality and environment, all have an effect on the consequences of the disorder.

4.3 Development of the Child with Handicap

When the child is handicapped, it may hamper the young person's development process and may be the cause of many problems, which Määttä (1981, 52–57) divides into four groups:

1. Parent binding and guardianship

Parents of handicapped children may live in exaggerated solitude, caused by the feelings of guilt and agony. The inability of the handicapped person to accommodate may be connected as much to parent attitudes as to the handicapping condition itself. Kalliopuska (1984, 15) notes this by saying that parent attachment and attitudes toward the child exercise an effect on the child's self-esteem.

2. Disorder in the development of the self-concept

The self-concept is the individual's view of self, which the person forms through observations and experiences (Aho 1987, 3 and Korpinen 1983, 11).

Määttä (1981, 52–57) notes that handicapped young people have a limited trust in their abilities, that they have clearly more inferiority feelings and they are disconcerted. Their self-esteem is weaker and their experience of themselves can be more desultory than that of the young people of the same age. Handicapped young persons regard themselves physically as “confused and tangled”, and they deny the statement “I am attractive”. Parents' behaviour or comments may support the child's own experiences of his or her deviant appearance. In this kind of situation, other people's negative attitudes also have an effect on the developing self-concept of the handicapped child.

3. Rejection and denial of sexuality

The handicapped person transfers parental and surrounding attitudes into the self, and may reject the necessity of nearness and later sexuality. The feeling of nearness consists of the idea “to be similar to others and to be with others”. This also includes physical appearance and its valuation. A handicapped person may misevaluate his or her appearance and refuse to treat himself or herself as a person to be admired. In order to prevent rejection from the opposite sex, a handicapped person may deny sexual needs and avoid any kind of contact with other people.

4. Isolation

The reaction of a handicapped young person to psychic crisis can be physical, psychic and social isolation. The person is unable to become involved in

contacts, which are loaded with positive and mutual emotions. One type of isolation is the total denial of the malformation, meaning that the person cannot place him or herself as an individual into an interaction system. This may mean that the model of social life will be quite extraordinary and uncommon for a human being. This kind of model of living includes loneliness and consists of coldness of feelings.

V Research Tasks

This research is a longitudinal study of children with cleft lip (CL), cleft palate (CPO) or cleft lip and palate (CLP). The purpose of the research is to collect information of the school achievement and self-concept of the children with CL, CPO and CLP. The survey examines children with craniofacial anomalies in Finland in two different areas:

1. What is the self-concept of the children?
2. What is the school achievement of the children?
3. What happens to self-concept and school achievement after five years period?

These problems may be formulated as the following hypotheses:

1. The self-concept of the children with cleft lip and palate (CLP) is less positive than that of children with the other clefts (CL or CPO).

Children with CLP are more inhibited and more withdrawn than children with CL and CPO.

Children with cleft lip and cleft lip and palate (CL and CLP) have lower self-concept scores in self-attractiveness ratings than children with cleft palate (CPO)(Lavigne & Faier-Routman 1992, 133–157; Broder & Strauss 1989, 114–118; Uhlemann, Zschiesche & Ziegeler 1986, 568–573; Jones 1984, 132–138; Richmann 1978, 360–364; Schneiderman & Auer 1984, 224–228; Kapp 1979, 171–176; Leonard, Dwyer Brust, Abrahams & Sielaff 1991, 347–353.)

2. Children with cleft lip and palate (CLP) have lower levels of school achievement than children with other clefts (CL or CPO).

Children with CLP have more linguistic problems than children with CL and CPO. (Leonard, Dwyer Brust, Abrahams & Sielaff 1991, 347–353; Madison 1986, 337–341; Richman & Eliason 1984, 1–6.)

3. School achievement and positive self-concept are not significantly related (Korpinen, E. 1990, 75).

These hypotheses were formulated in accordance with international studies presuming that low levels of school achievement and self-concept would be

strongly perceivable with the most serious disorders of craniofacial clefts. Similar results can be anticipated from the Finnish study.

VI Subjects and Methods

6.1 Subjects

The subjects were collected from the patient archives of the Cleft Lip and Palate Centre of Helsinki University Hospital in 1988. In the late 1980's the medical care of cleft lip and palate children was centralized in Finland, and all the diagnosed cases were treated and attended to the Helsinki University Hospital. This means that it was possible to gather the information of the whole population in one place. The information of each subject was gathered from the original case records.

Access to the original source material (the medical papers of each individual) made it possible to check the diagnoses of each subject thoroughly. The original records made it possible to keep the subjects as a clear population. This means that each subject has got only one diagnose (CL, CPO or CLP). Subjects that were having other anomalies besides cleft lip, cleft palate or cleft lip and palate were dropped from the study. Furthermore, it needs to be noted that cleft lip, cleft palate and cleft lip and palate are established medical terms and diagnoses, easing the process of finding subjects for the research. The medical records included information on all diagnosed and treated cases in Finland, initiated by regional maternity hospitals or child welfare clinics.

The subject group consisted of the entire population of children in Finland with Cleft Lip (CL), Cleft Palate (CPO) and Cleft Lip and Palate (CLP), who were between the ages 9–12 years in 1988 (N=419), born between 1975 and 1978. The same subject group (N=419) was used 5 years later in 1993 when the students were between the ages of 14–17 years.

The longitudinal studies using the whole, unallocated national population are very rare. It seems that there are none similar reported in the major studies.

Birth year	Cleft lip		Cleft palate only		Cleft lip & palate		Total	
	N	Male	Female	N	Male	Female	N	Male
1975	17	11	6	66	28	38	127	65
							30,3%	
1976	10	6	4	44	17	27	79	39
							18,9%	
1977	20	11	9	55	17	38	106	50
							25,3%	
1978	18	13	5	66	29	37	107	55
							25,5%	
Total	65	41	24	231	91	140	419	209
	15,5%			55,1%			100%	49,9%
								210
								50,1%

Table 1. Number of subjects and disabilities among children born between 1975 and 1978

6.2 Data Collection

The questionnaire was mailed to the 419 persons in the 1988. 70% returned the questionnaire (N=305).

The 1993 questionnaire was mailed to the same 419 persons. 48% returned the questionnaire (N=203). In 1993 only 66% of the students who responded to the 1988 study could be reached, a decrease of 33%. There were 175 children who answered in 1988 and also in 1993. Those children formed the study group of this research. The final response rate was 42% of entire population. In addition to the child's questionnaire, the envelope included a questionnaire for the parents and the teacher. Subjects (175 children) represent the whole population of children with craniofacial clefts. This can be seen in the tables 1 (p. 52) and 2 (p. 54). The subjects who answered in 1988 and in 1993 represent gender, age and disability groups equally. Among subjects there are more children in the group with cleft palate only (CPO) than children in the other groups (CL, CLP), as children with cleft palate only (CPO) were originally the biggest group. In Finland there exist more children with cleft palate only than other clefts. The ratio between different cleft groups is the same among those who answered the questionnaires both in 1988 and in 1993. Thus, the subject groups (CL, CPO, CLP) are represented equally over both periods of this longitudinal study.

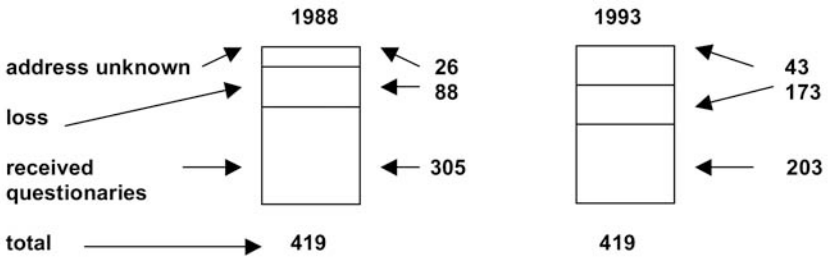


Figure 5. The response rates of the study

Birth year	Cleft lip		Cleft palate only		Cleft lip & palate		Total	
	N	Male	Female	N	Male	Female	N	Male
1975	6	5	1	20	5	15	36	18
							20,6 %	
1976	8	4	4	22	9	13	41	22
							23,4 %	
1977	7	4	3	19	7	12	35	16
							20 %	
1978	9	4	5	33	9	24	63	24
							36 %	
Total	30	17	13	94	30	64	175	80
	17,1 %			53,7 %			100 %	46 %
								95
								54 %

Table 2. The number of subjects within each group

6.3 Missing Data and Compensation

The questionnaires were sent to all subjects (419) in both research years. As is common in longitudinal research, not all subjects responded to both questionnaires. Some questionnaires were returned only partially completed, and there were individuals who answered only once (in 1988 or in 1993).

There are no firm guidelines for how much missing data can be tolerated for a sample of a given size (Tabachnick & Fidell 1989, 61). As this research was the first study to examine four age groups of the whole population of clefts in Finland, the constructive idea of the research was to have as much information from the total population as possible. However all the cases were not included as subjects. Only those subjects who had answered in 1988 and in 1993 were included, as mentioned earlier.

The answers of some single items were, however, missing among a couple of subjects. Those items needed to be compensated. The compensation procedures for missing data depend on the main target of the research. The most conservative compensation method was chosen, with all the missing values compensated with the means calculated from the available data. This method reduces the variance of the data (Tabachnick & Fidell 1989, 64.)

As a pioneering study of this special group in Finland, it was not possible to compare the results with analogous research. The questionnaire gathered general information on the phenomena of self-concept and school achievement of the clefts. Further research will specify the general information gathered in this research.

Technically, the compensation was performed with the SPSS-programme by using the option to replace the mean. After the compensation procedure it was possible to use information from 175 cases (response rate 42%).

Tabachnick and Fidell (1989, 66) also propose that analyses can be performed with and without missing data. This research includes data after compensation. Analyses without missing data have been presented in previous research (Kjälldman 1999). The trend of the analyses in this study is very much alike between sub-groups. Accurately, it can be said that differences are mainly between genders not between the disabilities. The means of boy's self-concept tend to be higher than the means of girls. To some extent the facial and functional disability (CLP) together seems to turn the person's opinion of his or her physical appearance into a more negative opinion.

6.4 Instruments

A survey research method was selected in order to reveal the present status of attitudes and beliefs of the population, previously noted by Travers (1978). The survey instrument consisted of three parts:

1. General Questions: General information was gathered on all subjects in the age groups. General questions included questions about present status: school, friends, idols etc.
2. CSEI personality instrument: Test was designed to measure the respondent's attitude toward self in personal (26 items), social (8 items), family (8 items) and academic areas (8 items) of experience. The test also included some items (8 items) which did not measure anything of any value to the research. The test consisted of 58 items. Finally, the CSEI generated a total self-esteem score (Bolton 2003.) This personality inventory test had been used earlier in Finland (Korpinen 1990). The idea was to use two personality test together.
3. A Personality Inventory Test to examine real and ideal self.

Results in this study were based on information gathered by questionnaires. The main structure of the questionnaire consisted of the personality inventory that was developed for Finnish students by professor Maija-Liisa Rauste-von Wright and had been used in her own research. The personality inventory tested the opinions of the persons' real abilities and talents as well as their wishes. This personality inventory test is based on the Mead's (1962) definition that self-concept includes concepts, attitudes and feelings that the person has about him or her qualities, abilities and relations to the environment. As well it's based on the Rogers (1965) theory that the individual will have the consciousness of a person's existence and action. The personality inventory questionnaire (Appendix 1) was used by Kääriäinen and Rikkinen (1988.)

6.5 Items

This research was also a survey for children with clefts. One aspect was to study the differences between the real and ideal self. The research studied 16 variables for testing the real self and 16 variables for testing the ideal self in 1988 and in 1993. In addition to those variables school achievement was studied as one variable in 1988 and 1993, making a total of 66 variables to be tested during analysis procedures. These variables tested the concept of self. Students rated each item from 1 to 5 with number 1 as the minimum value and number 5 as the maximum value. The value number 5 also characterised the highest level of skill or quality of the subject.

The self-concept test used in this study, and developed by professor Rauste-von Wright was a combination of the Personality Inventory test and Osgood's Semantic Differential test (Rauste 1973, 15; Osgood 1960, 712–714.) This test was selected for two reasons:

- a) it was a suitable research instrument to survey the population
- b) it had already been used in Finland, Rauste in 1973 and in 1974 and Kääriäinen & Rikkinen in 1988. Rauste (1973, 1974) conducted research on self-concept among adolescents in Finland. Her study groups were adolescents in Helsinki. The study concluded that the overall self-concept of Finnish adolescents is relatively positive. Kääriäinen and Rikkinen (1988) studied the discrepancy of real and ideal self after the sixth and seventh grade among the adolescents in Helsinki. They also had a longitudinal structure in their research. Results were similar to those of Rauste. Their research results can be used as a control group for this study of cleft conditions, as identical research instruments are used in all studies. The results of Rauste (1974, 18–28, 145) need to be more carefully observed. The results of factor Self-Confidence differs remarkably from the results of Kääriäinen & Rikkinen (1988) and Kjäldman (this study). In the study of Rauste the ideal self-concept was weaker than real self-concept.

A sample population was identified, and a series of changes in the tests were done to gather information on self-concept of cleft lip, cleft palate and cleft lip and palate school students in Finland, over a five-year period of development. The chapter seven presents the results of this survey.

6.6 Reliability and Validity

6.6.1 Reliability

Reliability was tested through the Cronbach alpha. Scores are presented in tables 4 (p. 62), 5 (p. 64), 12 (p. 70) and 13 (p. 70). The scores (.8143–.5796) indicate a rather high reliability.

The reliability of the test can also be influenced by factors like test length, test-retest interval, constriction or extension of range, guessing and variation within the testing situation (Salvia & Ysseldyke 2001, 130). In this study the test included major scales to ensure the reliability. In 1988 and in 1993 exactly the same items and forms were used. The test-retest interval was quite long (5 years period), but adequate for an investigation into the developmental phase of puberty. The same questionnaire and same instructions were used; also, the subjects were the same for the most part. Furthermore, the same scorer coded all the questionnaires on both data collection occasions. The coding was based on objective criteria and there was no need to calculate inter-score reliability.

Additionally, the measurements performed earlier in Finland were considered to be parallel researches (Rauste, 1973, 1974; Kääriäinen & Rikkinen,

1988). The questionnaire was also tested through the case study (Kjaldman, 1992).

The results of data generated three forms of generalisations: the dimensionality of scale (internal consistency), re-measurement after some time (stability or test-retest reliability) and measurement of different testers (inter-rater or interscore reliability) (Salvia & Ysseldyke 2001, 120–121.)

6.6.1.1 The constriction or extension of range

One point which Salvia and Ysseldyke (2001, 131) mention concerns the constriction or extension of range of ability of the people whose performance is used to estimate reliability. In this research, the test concerned all the cases of the entire age group in Finland. There was no need to speculate about constriction or extension effects for reliability for this study. Accidental marking errors may occur, but this form of research did not measure any kind of knowledge held by the individual. The test sought to gather information from the subjects on their opinions of themselves.

6.6.1.2 Variation

Variation within the testing situation is a more complicated question, but this may be counteracted by the fact that the formula of the test and the scorer were the same in both situations. The test-retest method of the research is the most secure precaution taken to protect the reliability of the research. A 5-year period did bring many changes in a young persons' life. It is also possible that the whole context of living will change (school, friends, hobbies, living place, form of the family etc.) These kinds of changes may have an effect on results.

6.6.2 Validity

The validity of a longitudinal research measures the accuracy of the research procedure to identify the target information.

6.6.2.1 Content validity

Content validity assesses how the test actually represents the phenomena to be measured (Salvia & Ysseldyke 2001, 145–146.) In this research the instrument was used twice before in Finland. The results found among these subjects, compared to the theory of self and factorial structures used in earlier studies in Finland, indicate that the test instrument has content validity (Rauste 1974; Kääriäinen & Rikkinen 1988.) In this research there was no control group. Previous researches done in Finland among Finnish adolescents (Rauste 1974; Kääriäinen & Rikkinen 1988) were regarded as control groups

(see Alkula, Pöntinen, Ylöstalo 1995, 54). Rauste (1974) had found seven factors which she used. In 1988 Kääriäinen and Rikkinen did not use any factory analysis, choosing to use the very same factorial structure as found Rauste in 1974. Similarly, this research employed the identical factorial structure used by Rauste (1974) and Kääriäinen and Rikkinen (1988). In Appendix 4 the summary of the factory analysis of this study is shown. It can be seen that there are different amounts of principal components in real and in ideal self in 1988 and in 1993 (5,6,4,6). The 7 principal components in the factory analysis were not available as in Rauste's study (1974). Furthermore, the loadings worked with the 1st principal component only (21%, 25%, 27%, 21%).

The information among the population of the research (children with craniofacial clefts) can be considered to be very precise, as it includes all cases in four different age groups. The medical concepts used (cleft lip, cleft palate, cleft lip and palate) can be concretely defined according to medical fact.

However, self-concept is more abstract. In this study, all the essential elements on self-concept and self-esteem are gathered. Here, however, the focus is truly on the concept of self, not the esteem of it; the essential point of study being the self-concept processes instead of self-feelings, as emphasised by Kuikka (1991, 54). Furthermore, the research tested the multidimensional self / characteristics of self (Gergen 1991) as well as the unified, harmonized self / real self-ideal self (Lifton 1993).

A careful examination of the test content is necessary. Content validity can be divided in three factors: the appropriateness of the types of items included in a test; the completeness of the item sample in relation to the item universe; and the way in which the items assess the content. The criterion-related validity reveals how precisely performance on a test can predict performance on a criterion measure (concurrent validity). Alternatively, it can also predict anticipated performance (predictive validity). The construct validity reveals how the test describes the entire phenomena (Salvia & Ysseldyke 2001, 145–157.) Pietilä (1976, 233–248) suggests that data collection should be in response to the phenomena to be studied. In this research the operational procedure of the study was carefully considered. The instrument was exactly the same as the one used earlier in Finland. Similarly, in this study the instrument and process of gathering the information were repeated in an identical manner at the beginning and end of the five-year period. Additionally, the pre testing of the research instrument was conducted in 1987 and in 1992 (Kjälldman 1992).

6.6.2.2 Unsystematic error

Several factors that may weaken validity are unsystematic error (unreliability) and systematic errors, such as bias, enabling behaviours, item selection, administration error and test norms (Salvia & Ysseldyke 2001, 156–157). As

the test had been used successfully twice before in Finland, bias was eliminated. The test did not demand any kind of skill or enabling behaviour for which a child at the age of 9 would be unable to perform. The test items were selected to be at a level that all Finnish children could understand them. Furthermore, all the subjects were considered in the same equal way. Questionnaires were received through the postal system, and were returned upon completion. As is the case with postal research, it is always possible that the questionnaire does not reach all the subjects (see the figure 5, p. 53 in the Chapter Six).

6.6.2.3 Weakening factors

A high level of quality was maintained by having the whole age group as a test sample. Norms of the test can be considered as reliable due to the previous use of the procedure among Finnish adolescents. It is possible that the research included some errors. Postal surveys may not evaluate all the feelings of the respondents. Some of the subjects were entering into puberty during the first phase of the research (9–12 years old) whilst had passed through puberty during the second phase of the research (14–17 years old). At puberty, feelings and attitudes become strong, and the research accounts for this by using a cross-lagged model of data analysis. Decreased numbers of the sample was not systematic. Equal numbers of subjects dropped out from the all age groups, both genders and all disability groups. Through tables 1 (p. 52) and 2 (p. 54) we can see how the decrease was divided over the whole sample.

The structure of the study is based on logical structures of deductive and explorative thinking. Results found in this study can probably be generalized to the whole population studied here. I presume that in some extent it is also possible to generalize the structures between the self and achievement over the entire population. The limitation of the generalization is related to the medical speciality of the studied population.

VII Results

The data of this research includes a wide selection of information collected during a five year period. The data was used to generate characteristics of personality, rather than using factor analysis. The structure is identical to the earlier Finnish studies of Kääriäinen & Rikkinen (1988) and earlier research (Rauste 1973, 32–33.)

	Rauste (1973, 1974)		Kääriäinen & Rikkinen (1988)		Kjälldman		
Girls: Age	11	13	11-12	13-14	9-12	14-17	
Intelligence & Performance	Real: 3.03	Real: 2.77	Real: 2.94-3.01	Real: 3.20-3.32	Real: 3.20-3.32	Real: 3.32	Real: 3.42
	Ideal: 4.85	Ideal: 4.08	Ideal: 4.47-4.54	Ideal: 4.41-4.48	Ideal: 4.41-4.48	Ideal: 4.66	Ideal: 4.53
Leadership	Real: 3.23	Real: 3.19	Real: 3.23-3.26	Real: 3.42-3.46	Real: 3.42-3.46	Real: 3.34	Real: 3.63
	Ideal: 2.88	Ideal: 3.21	Ideal: 3.74-3.78	Ideal: 3.78	Ideal: 3.78	Ideal: 3.95	Ideal: 4.11
Emotional Balance	Real: 3.73	Real: 3.83	Real: 2.43-2.52	Real: 2.04-2.44	Real: 2.04-2.44	Real: 2.79	Real: 2.31
	Ideal: 3.95	Ideal: 3.86	Ideal: 2.33-2.82	Ideal: 2.44-2.81	Ideal: 2.44-2.81	Ideal: 2.80	Ideal: 2.52
Determination	Real: 3.66	Real: 3.40	Real: 3.64-3.71	Real: 3.46-3.52	Real: 3.46-3.52	Real: 3.50	Real: 3.73
	Ideal: 4.37	Ideal: 4.50	Ideal: 4.72-4.82	Ideal: 4.56-4.85	Ideal: 4.56-4.85	Ideal: 4.73	Ideal: 4.67
Self-Confidence	Real: 2.78	Real: 2.91	Real: 3.19-3.20	Real: 3.20-3.25	Real: 3.20-3.25	Real: 3.27	Real: 3.26
	Ideal: 1.45	Ideal: 1.45	Ideal: 4.34-4.58	Ideal: 4.28-4.34	Ideal: 4.28-4.34	Ideal: 4.29	Ideal: 4.22
Spontaneity	Real: 3.30	Real: 3.22	Real: 3.46-3.54	Real: 3.52-3.72	Real: 3.52-3.72	Real: 3.68	Real: 3.58
	Ideal: 3.82	Ideal: 1.97	Ideal: 3.44-3.77	Ideal: 3.66-3.69	Ideal: 3.66-3.69	Ideal: 3.68	Ideal: 3.88
Attractiveness	Real: 3.11	Real: 3.15	Real: 3.03-3.22	Real: 3.12-3.27	Real: 3.12-3.27	Real: 3.35	Real: 3.13
	Ideal: 4.82	Ideal: 4.48	Ideal: 4.06-4.30	Ideal: 4.03-4.18	Ideal: 4.03-4.18	Ideal: 4.29	Ideal: 4.11
Boys: Age	11	13	11-12	13-14	9-12	14-17	
Intelligence & Performance	Real: 3.56	Real: 3.10	Real: 3.06-3.48	Real: 3.40	Real: 3.42	Real: 3.52	
	Ideal: 4.75	Ideal: 4.33	Ideal: 4.71-4.75	Ideal: 4.66-4.67	Ideal: 4.64	Ideal: 4.65	
Leadership	Real: 3.21	Real: 3.28	Real: 3.28-3.49	Real: 3.43-3.60	Real: 3.44	Real: 3.47	
	Ideal: 3.44	Ideal: 3.40	Ideal: 3.76-3.99	Ideal: 4.08-4.18	Ideal: 3.91	Ideal: 4.12	
Emotional Balance	Real: 2.76	Real: 3.27	Real: 3.03-3.13	Real: 2.59-2.65	Real: 2.84	Real: 3.01	
	Ideal: 2.76	Ideal: 2.78	Ideal: 2.44-2.81	Ideal: 2.73-2.96	Ideal: 2.95	Ideal: 2.92	
Determination	Real: 3.69	Real: 3.59	Real: 3.47-3.59	Real: 3.65-3.79	Real: 3.90	Real: 3.91	
	Ideal: 4.42	Ideal: 4.64	Ideal: 4.50-4.91	Ideal: 4.81-4.79	Ideal: 4.76	Ideal: 4.75	
Self-Confidence	Real: 2.70	Real: 2.65	Real: 3.20-3.30	Real: 3.20-3.39	Real: 3.43	Real: 3.35	
	Ideal: 1.46	Ideal: 1.52	Ideal: 4.22-4.50	Ideal: 4.20-4.56	Ideal: 4.32	Ideal: 4.18	
Spontaneity	Real: 3.25	Real: 2.68	Real: 3.38-3.42	Real: 3.30-3.35	Real: 3.68	Real: 3.39	
	Ideal: 2.06	Ideal: 1.61	Ideal: 3.49-3.53	Ideal: 3.35-3.43	Ideal: 3.59	Ideal: 3.71	
Attractiveness	Real: 3.29	Real: 3.11	Real: 3.00-3.17	Real: 3.15-3.27	Real: 3.43	Real: 3.37	
	Ideal: 4.62	Ideal: 4.27	Ideal: 3.88-4.23	Ideal: 4.14-4.16	Ideal: 4.28	Ideal: 4.14	

Table 3. Means in previous studies and in this study

Means and standard deviations for variables, profiles of different injury and gender can be seen in profile figures hereafter.

Table 4. Means and Standard Deviations of Self-Concept variables

Self Concept Variables				
Real Self	1988		1993	
	Mean	Std. Dev.	Mean	Std. Dev.
Industriousness	3.5	1.0	3.4	1.1
Intelligence	3.5	1.0	3.6	0.9
Talents	3.1	1.2	3.4	1.0
Leadership	2.8	1.1	3.3	1.0
Liveliness	3.2	1.4	3.0	1.2
Inhibition	3.5	1.2	3.6	1.0
Attractiveness	3.0	1.0	3.0	1.0
Factual Orientation	2.8	1.0	2.6	1.1
Sociability	3.9	1.1	3.8	1.1
Satisfaction with Appearance	3.8	1.3	3.4	1.1
Talkativeness	3.8	1.1	3.6	1.1
Actively engaged in Lessons	4.1	1.1	3.9	1.1
Popularity	3.2	1.0	3.4	0.9
Stability	3.7	1.2	3.8	0.9
Carelessness	3.1	1.02	3.0	1.1
Similarity	3.5	1.3	3.1	1.1
School Achievement	3.5	0.7	3.5	0.8
Ideal Self	1988		1993	
	Mean	Std. Dev.	Mean	Std. Dev.
Industriousness	4.7	0.7	4.6	0.7
Intelligence	4.7	0.6	4.6	0.6
Talents	4.5	0.9	4.6	0.7
Leadership	3.2	1.3	3.5	0.9
Liveliness	2.7	1.5	3.1	1.2
Inhibition	4.6	0.8	4.7	0.6
Attractiveness	4.3	0.9	4.5	0.7
Factual Orientation	2.9	1.3	2.7	1.1
Sociability	4.6	0.7	4.7	0.5
Satisfaction with Appearance	4.6	0.8	4.7	0.6
Talkativeness	3.6	1.3	3.9	0.9
Actively engaged in Lessons	4.7	0.9	4.4	0.8
Popularity	4.3	0.9	4.3	0.7
Stability	4.7	0.7	4.7	0.6
Carelessness	4.0	1.2	3.7	1.1
Similarity	3.9	1.4	3.0	1.3
Alpha	.8143			

The development of self-concept can be observed through the discrepancy between the real and ideal self from 1988 to 1993. Each self-concept variable had two discrepancies, one in 1988 and one in 1993 (discrepancy figures are part of the chapter appendix). All characteristics of personality were tested against the conditions of (i) disability and (ii) gender by using the MANOVA-test for repeated measurements. Finally, partial correlation values show the connections between school achievement variables and the variables of characteristics of personality. Connections of the general self are illustrated by the generation of the net of self-concept and school achievement. Partial correlation values are presented in the correlation matrix. During the partial correlation analyses were all the factors standardized in turn.

The development of school achievement was tested through the standardised school report numerical average grade in 1988 and in 1993. The study revealed how the structures of school achievement change through the juvenile stage of development.

A third condition, the significance of age, can be seen in the final results in longitudinal research. As self-concept is constantly forming through social interaction, longitudinal research was seen as a method of observing this developmental process (Korpinen 1990, 87–89; Berger & Luckman 1994.)

The results of the study are presented in this chapter in following order:

- 7.1 General Self-Concept
- 7.2 Discrepancy Profiles,
- 7.3 Characteristics of Self
- 7.4 MANOVA-test of Characteristics of Self
- 7.5 School Achievement
- 7.6 Cross-Lagged Model between Characteristics of Self and School Achievement
- 7.7 General Self
- 7.8 Model between the General Self-Concept and School Achievement

7.1 General Self-Concept

The personal inventory test consisted of items concerned with subject self-opinions. Each item was rated from 1 to 5, establishing a maximum score of 80 points from the entire test (5 points X 16 items). If the subject scored more than half of the maximum score, it can be said that his or her self-concept is positive (Kääriäinen & Rikkinen 1988). A low discrepancy between the real and ideal self indicates a high self-assessment and a balance of self-concept (Eskelinen 1981, 15). On the other hand, the developmental point of self-concept demands that there is a contemporaneously positive discrepancy between the real and ideal self. If the discrepancy scores between the real and

ideal selves are very trifling it indicates the subjects' habit to see themselves as being too good (narcissism). Furthermore, the wide difference between the scores indicates low self-esteem (under achievement).

The general self of cleft children is mainly positive, and the observed discrepancy is rather low. Results indicate that the general self-concept of cleft children is at the same level as earlier findings in Finland among healthy children (Rauste 1973; Kääriäinen & Rikkinen 1988.)

In addition to equal levels of general self-concept between cleft and healthy children, the correlation value of the real self of cleft children from one testing time to another is statistically very significant ($r=.4025$, $p=.0001$) which indicates a very strong homo type stability (Pulkkinen 1982,5 and 14).

Table 5. Means and Standard Deviations of General Self

General self	1988		1993	
	Mean	Std. Dev.	Mean	Std. Dev.
Real self	54.63	7.50	54.00	7.99
Ideal self	66.10	6.73	65.68	5.24
Alpha	.5796			

Table 6. Means and Standard Deviations of Male Clefts

General self – male	1988		1993	
	Mean	Std. Dev.	Mean	Std. Dev.
Real self				
Cleft Lip	55.76	7.13	55.06	9.09
Cleft Palate	54.36	7.73	55.39	7.98
Cleft Lip and Palate	56.42	6.41	54.05	7.72
Ideal self				
Cleft Lip	66.12	5.97	66.18	5.25
Cleft Palate	65.15	7.58	65.08	5.86
Cleft Lip and Palate	66.70	6.34	66.44	5.86

Table 7. Means and Standard Deviations of Female Clefts

General self – female	1988		1993	
	Mean	Std. Dev.	Mean	Std. Dev.
Real self				
Cleft Lip	54.00	8.59	52.92	8.79
Cleft Palate	54.37	7.44	52.85	7.54
Cleft Lip and Palate	52.11	8.72	55.47	8.75
	1988		1993	
Ideal self	Mean	Std. Dev.	Mean	Std. Dev.
Cleft Lip	65.85	8.05	65.15	5.26
Cleft Palate	65.70	6.86	65.63	4.69
Cleft Lip and Palate	68.17	4.87	65.39	5.35

The significance of the results can be seen in chapter 7.7. As the level and stability of general self-concept is very similar to earlier studies in Finland, it can be said that the other results of cleft children analysed hereafter are comparable to self-concept studies done earlier in Finland by Rauste (1974) and Kääriäinen & Rikkinen (1988).

7.2 Discrepancy Profiles

In this study the observation of self-concept structure starts from the discrepancy values of variable profiles between the real and ideal self. The bases of the discrepancy values are the original variable values presented here as divided for each disability and gender. Values were presented in one group as reported earlier in chapter six.

Table 8. Means of Male Clefts

Variables	1988						1993					
	CL		CP		CLP		CL		CP		CLP	
	real	ideal	real	ideal	real	ideal	real	ideal	real	ideal	real	ideal
Industriousness	3.4	4.5	3.5	4.6	3.8	4.7	3.1	4.5	3.5	4.5	3.5	4.7
Intelligence	3.4	4.9	3.6	4.6	3.6	4.8	3.6	4.8	3.8	4.5	3.6	4.7
Talents	3.0	4.6	3.2	4.6	3.2	4.5	3.6	4.9	3.6	4.7	3.3	4.7
Leadership	2.6	3.4	2.9	3.2	3.0	3.2	3.1	3.7	3.1	3.5	3.2	3.5
Liveliness	3.6	2.9	3.7	2.7	3.2	2.6	3.6	3.3	3.1	2.8	2.5	2.7
Inhibition	3.9	4.4	3.4	4.5	3.8	4.7	3.6	4.7	3.7	4.5	3.6	4.8
Attractiveness	3.1	4.2	2.8	4.2	3.0	4.3	3.2	4.4	3.2	4.5	3.0	4.5
Factual Orientation	2.6	3.2	2.4	2.8	3.3	3.0	2.9	2.9	3.1	2.7	3.0	3.2
Sociability	4.0	4.4	3.8	4.6	4.2	4.7	4.1	4.7	3.9	4.7	3.6	4.7
Satisfaction with Appearance	4.4	4.2	3.9	4.7	3.7	4.8	3.8	4.6	3.7	4.5	3.5	4.5
Talkativeness	3.7	3.4	3.7	3.5	3.9	3.7	3.6	4.1	3.6	3.9	3.2	3.7
Actively engaged in Lessons	3.5	4.2	3.7	4.5	4.0	4.7	3.5	4.1	3.6	4.3	3.9	4.7
Popularity	3.5	4.6	3.3	4.1	3.3	4.3	3.5	4.2	3.5	4.5	3.4	4.3
Stability	4.2	4.7	3.8	4.8	3.8	4.8	3.7	4.7	3.9	4.7	4.0	4.8
Carelessness	3.4	4.5	3.0	3.8	3.2	4.0	2.9	3.8	3.1	3.6	3.1	3.8
Similarity	3.6	4.0	3.7	3.9	3.3	3.9	3.4	2.8	3.2	3.4	3.5	3.2
School Achievement	3.4		3.3		3.4		3.5		3.2		3.3	

Table 9. Means of Female Clefts

	1988						1993					
	CL		CP		CLP		CL		CP		CLP	
	real	ideal	real	ideal	real	ideal	real	ideal	real	ideal	real	ideal
GIRLS												
Variables												
Industriousness	3.5	4.8	3.4	4.8	3.5	4.8	3.4	4.6	3.3	4.5	3.6	4.7
Intelligence	3.5	4.5	3.5	4.7	3.2	4.8	3.5	4.3	3.6	4.6	3.5	4.6
Talents	3.2	4.2	3.1	4.6	2.9	4.4	3.2	4.4	3.3	4.6	3.5	4.2
Leadership	3.2	3.8	2.8	3.2	2.7	2.8	3.5	3.6	3.5	3.5	3.8	3.3
Liveliness	2.7	1.9	3.0	2.6	3.0	3.3	3.0	3.2	3.0	3.3	3.3	3.6
Inhibition	3.5	4.7	3.5	4.5	3.1	4.7	3.5	4.5	3.5	4.8	3.9	4.6
Attractiveness	3.5	4.8	3.1	4.3	3.0	4.4	2.8	4.5	2.9	4.7	3.1	4.3
Factual Orientation	3.0	2.3	2.7	2.8	2.9	3.3	2.3	2.3	2.3	2.5	2.2	2.7
Sociability	3.7	4.5	4.0	4.7	3.7	4.8	3.5	4.8	3.7	4.7	4.1	4.7
Satisfaction with Appearance	4.2	4.8	3.7	4.6	2.9	4.7	3.3	4.8	3.3	4.8	3.3	4.8
Talkativeness	3.5	3.5	3.8	3.6	3.7	3.7	3.4	3.9	3.7	3.9	4.0	3.9
Actively engaged in Lessons	4.2	5.0	4.3	4.8	4.5	4.7	4.2	4.5	4.0	4.5	3.6	4.3
Popularity	3.2	4.4	3.2	4.2	2.7	4.4	3.2	4.5	3.3	4.3	3.5	4.2
Stability	3.4	4.6	3.5	4.7	3.6	4.9	3.9	4.7	3.6	4.6	4.1	4.8
Carelessness	2.7	4.3	3.2	4.0	3.0	3.8	3.2	3.8	2.9	3.8	3.2	3.6
Similarity	3.1	3.7	3.6	3.6	3.7	4.5	2.8	2.8	3.1	2.7	2.8	3.1
School Achievement	3.5		3.6		3.6		3.9		3.6		3.4	

Table 10 . Discrepancy Values of Self-Concept Test

	1988						1993					
	CL		CP		CLP		CL		CP		CLP	
	real	ideal	real	ideal	real	ideal	real	ideal	real	ideal	real	ideal
Discrepancy												
Industriousness	1.1	1.3	1.1	1.4	0.9	1.3	1.4	1.2	1.0	1.2	1.2	1.1
Intelligence	1.5	1.0	1.0	1.2	1.2	1.6	1.2	0.8	0.7	1.0	1.1	1.1
Talents	1.6	1.0	1.4	1.5	1.3	1.5	1.3	1.2	1.1	1.3	1.4	0.7
Leadership	0.8	0.6	0.3	0.4	0.2	0.1	0.6	0.1	0.4	0.0	0.3	-0.5
Liveliness	-0.7	-0.8	-1.0	-0.4	-0.6	0.3	-0.3	0.2	-0.3	0.3	0.2	0.3
Inhibition	0.5	1.2	1.1	1.0	0.9	1.6	1.1	1.0	0.8	1.3	1.2	0.7
Attractiveness	1.1	1.3	1.4	1.2	1.3	1.4	1.2	1.7	1.3	1.8	1.5	1.2
Factual Orientation	0.6	-0.7	0.4	0.1	-0.3	0.4	0.0	0.0	-0.4	0.2	0.2	0.5
Sociability	0.4	0.8	0.8	0.7	0.5	1.1	0.6	1.3	0.8	1.0	1.1	0.6
Satisfaction with Appearance	-0.2	0.6	0.8	0.9	1.1	1.8	0.8	1.5	0.8	1.5	1.0	1.5
Talkativeness	-0.3	0.0	-0.2	-0.2	-0.2	0.0	0.5	0.5	0.3	0.2	0.5	-0.1
Actively engaged in Lessons	0.7	0.8	0.8	0.5	0.7	0.2	0.6	0.3	0.7	0.5	0.6	0.7
Popularity	1.1	1.2	0.8	1.0	1.0	1.7	0.7	1.3	1.0	1.0	0.9	0.7
Stability	0.5	1.2	1.0	1.2	1.0	1.3	1.0	0.8	0.8	1.0	0.8	0.7
Carelessness	1.1	1.6	0.8	0.8	0.8	0.8	0.9	0.6	0.5	0.9	0.7	0.4
Similarity	0.4	0.6	0.2	0.0	0.6	0.8	-0.6	0.0	0.2	-0.4	-0.3	0.3
School Achievement							0.1	0.3	-0.1	0.0	0.0	-0.2

The discrepancy values were calculated by subtracting the ideal-self component values from the real-self component values. The discrepancy values of cleft children are rather low and positive. The results of both testing periods are presented to illustrate the discrepancy values of each disability and gender group. The discrepancy value helps to outline the longitudinal dimension of self-concept and the overall developmental character of each subject group. When the discrepancy value remains rather constant from one time to another they indicate that the interaction between the subjects opinions of his or her real and ideal self is stable through time. The real and ideal self-concept figures for each disability and gender are gathered in the appendix.

7.3 Characteristics of Self

Instead of conducting factor analysis, this study used the characteristics of self, performed earlier in Finland (Rauste, 1973 & 1974; Kääriäinen & Rikkinen, 1988). Rauste (1973) formed characteristics of self after the factor analysis. Kääriäinen and Rikkinen (1988) used characteristics of self after Rauste's model. The characteristics of self can also be considered as the test variables for the research.

Table 11. Characteristics of Self

Characteristics of Self	
Type of Characteristics	Variables (5 points quality)
Intelligence & Performance	Hard Working
	Intelligent
	Talented
Leadership	Likes to Lead Others
	Sociable
Emotional Balance	Pragmatic
Determination	Stamina
Self-Confidence	Unconstrained
	Care Free
Spontaneity	Lively
	Talkative
	Actively engaged in Lessons
Attractiveness	Charming
	Satisfied with Appearance
	Popular
	Similar to Class Mates

Characteristics of self can be presented as line figures that make it simpler to observe the differences between the real and ideal self of the subject group. These line figures are also presented in the chapter appendix.

In all figures it can be observed that the average level of the self-concept is over the middle point of the scale. Only one item of the characteristics of self (emotional balance) gathered scores under the mathematical average of the scale. The scores of that item were low among each disability and gender group. Through these figures it can also be observed that average scores of ideal self are slightly higher than the average scores of real self.

Table 12. Characteristics of Self of Cleft Boys

	1988						1993					
	CL		CP		CLP		CL		CP		CLP	
	real	ideal	real	ideal	real	ideal	real	ideal	real	ideal	real	ideal
BOYS												
Characteristics of self												
Intelligence–Performance	3.24	4.67	3.42	4.62	3.53	4.65	3.43	4.73	3.61	4.56	3.47	4.70
Leadership	3.29	3.85	3.35	3.89	3.61	3.95	3.59	4.21	3.48	4.09	3.39	4.10
Emotional Balance	2.65	3.24	2.40	2.76	3.33	2.97	2.88	2.88	3.05	2.68	3.04	3.15
Determination	4.18	4.71	3.80	4.80	3.85	4.76	3.71	4.71	3.90	4.72	4.03	4.79
Self-Confidence	3.68	4.44	3.22	4.18	3.50	4.38	3.26	4.26	3.38	4.02	3.36	4.27
Spontaneity	3.59	3.51	3.70	3.56	3.70	3.67	3.57	3.81	3.44	3.65	3.24	3.71
Attractiveness	3.63	4.26	3.42	4.22	3.34	4.34	3.44	4.01	3.38	4.20	3.33	4.14
School Achievement	3.4		3.3		3.4		3.5		3.2		3.3	
Alpha												.7512

Table 13. Characteristics of Self of Cleft Girls

	1988						1993					
	CL		CP		CLP		CL		CP		CLP	
	real	ideal	real	ideal	real	ideal	real	ideal	real	ideal	real	ideal
GIRLS												
Characteristics of self												
Intelligence–Performance	3.41	4.54	3.33	4.68	3.20	4.67	3.38	4.44	3.39	4.55	3.54	4.52
Leadership	3.42	4.12	3.36	3.95	3.19	3.83	3.50	4.19	3.57	4.13	3.94	4.00
Emotional Balance	3.00	2.31	2.72	2.78	2.89	3.28	2.31	2.31	2.34	2.51	2.22	2.71
Determination	3.38	4.62	3.48	4.70	3.61	4.89	3.92	4.69	3.61	4.64	4.06	4.78
Self-Confidence	3.12	4.50	3.36	4.26	3.06	4.28	3.35	4.15	3.17	4.27	3.53	4.08
Spontaneity	3.46	3.46	3.71	3.66	3.74	3.91	3.54	3.87	3.58	3.87	3.65	3.93
Attractiveness	3.48	4.42	3.40	4.20	3.07	4.51	3.06	4.13	3.13	4.11	3.17	4.10
School Achievement	3.5		3.6		3.6		3.9		3.6		3.4	
Alpha												.7512

As mentioned earlier in chapter 7.1, the self-concept of cleft children seems to be mainly positive, with a low discrepancy value. These results indicate that the self-concept of cleft children is about the same level as found earlier in Finland among healthy children (Rauste 1973; Kääriäinen & Rikkinen 1988).

7.4 MANOVA-test of Characteristics of Self

Following hypotheses were mentioned earlier:

- (i) The self-concept of the children with cleft lip and palate (CLP) will be lower than that of the children with the other clefts (CL or CPO).
- (ii) Children with CLP will be more inhibited and more withdrawn than children with CL and CPO.
- (iii) Children with cleft lip and cleft lip and palate (CL and CLP) will have lower self-concept scores in attractiveness than children with cleft palate (CPO).

In order to obtain a more reliable report of the self-opinion of cleft children, this study considers the seven parts of self-concept separately (characteristics of self). The results of the real self-tests are presented before the results of ideal self-tests, as follows:

Three different disability groups and both genders were tested at two intervals over a five-year period. Gender and disability were taken as independent variables.

Table 14. MANOVA test of Characteristics of Self in Gender

MANOVA (repeated measure)				
GENDER	DF	F-value	p-value	Mean Square
School Achievement -88 (Report) School Achievement -93 (Report)	1	5.213	.024	4.012
Real Intelligence & Performance -88 Real Intelligence & Performance -93	1	.376	.541	.360
Real Leadership -88 Real Leadership -93	1	.154	.695	.145
Real Emotional Balance -88 Real Emotional Balance -93	1	5.305	.022	6.551
Real Determination -88 Real Determination -93	1	2.691	.103	3.601
Real Self-Confidence -88 Real Self-Confidence -93	1	1.157	.284	1.269
Real Spontaneity -88 Real Spontaneity -93	1	.789	.376	.354
Real Attractiveness -88 Real Attractiveness -93	1	3.975	.048	2.804

Table 14 continues

Table 14 continues

Ideal Intelligence & Performance -88	1	1.463	.228	.514
Ideal Intelligence & Performance -93				
Ideal Leadership -88	1	.050	.823	.03
Ideal Leadership -93				
Ideal Emotional Balance -88	1	3.540	.062	5.958
Ideal Emotional Balance -93				
Ideal Determination -88	1	.107	.744	.05
Ideal Determination -93				
Ideal Self-Confidence -88	1	.002	.966	.01
Ideal Self-Confidence -93				
Ideal Spontaneity -88	1	1.987	.160	1.176
Ideal Spontaneity -93				
Ideal Attractiveness -88	1	.448	.504	.158
Ideal Attractiveness -93				

Table 15. MANOVA test of Characteristics of Self in Disability

MANOVA (repeated measure)				
INJURY	DF	F-value	p-value	Mean Square
School Achievement -88 (Report)	2	.593	.554	.456
School Achievement -93 (Report)				
Real Intelligence & Performance -88 Real Intel- ligence & Performance -93	2	.132	.877	.126
Real Leadership -88	2	.292	.747	.275
Real Leadership -93				
Real Emotional Balance -88	2	1.427	.243	1.762
Real Emotional Balance -93				
Real Determination -88	2	.807	.448	1.079
Real Determination -93				
Real Self-Confidence -88	2	.202	.817	.222
Real Self-Confidence -93				
Real Spontaneity -88	2	.236	.790	.106
Real Spontaneity -93				
Real Attractiveness -88	2	.856	.427	.603
Real Attractiveness -93				
Ideal Intelligence & Performance -88	2	.098	.906	.03
Ideal Intelligence & Performance -93				
Ideal Leadership -88	2	.484	.617	.258
Ideal Leadership -93				
Ideal Emotional Balance -88	2	2.305	.103	3.880
Ideal Emotional Balance -93				
Ideal Determination -88	2	.725	.486	.332
Ideal Determination -93				
Ideal Self-Confidence -88	2	.816	.444	.563
Ideal Self-Confidence -93				
Ideal Spontaneity -88	2	.877	.418	.519
Ideal Spontaneity -93				
Ideal Attractiveness -88	2	.676	.510	.239
Ideal Attractiveness -93				

Table 16. MANOVA test of Characteristics of Self between Gender and Disability

MANOVA (repeated measure)				
GENDER * INJURY	DF	F-value	p-value	Mean Square
School Achievement -88 (Report)	2	.502	.606	.003
School Achievement -93 (Report)				
Real Intelligence & Performance -88 Real Intelligence & Performance -93	2	.281	.755	.269
Real Leadership -88	2	.012	.988	.01
Real Leadership -93				
Real Emotional Balance -88	2	1.403	.249	1.732
Real Emotional Balance -93				
Real Determination -88	2	.232	.739	.310
Real Determination -93				
Real Self-Confidence -88	2	.228	.796	.250
Real Self-Confidence -93				
Real Spontaneity -88	2	.950	.389	.427
Real Spontaneity -93				
Real Attractiveness -88	2	.156	.856	.110
Real Attractiveness -93				
Ideal Intelligence & Performance -88	2	.877	.418	.308
Ideal Intelligence & Performance -93				
Ideal Leadership -88	2	.554	.576	.295
Ideal Leadership -93				
Ideal Emotional Balance -88	2	1.632	.199	2.746
Ideal Emotional Balance -93				
Ideal Determination -88	2	.371	.691	.170
Ideal Determination -93				
Ideal Self-Confidence -88	2	1.038	.356	.716
Ideal Self-Confidence -93				
Ideal Spontaneity -88	2	.377	.687	.223
Ideal Spontaneity -93				
Ideal Attractiveness -88	2	.763	.468	.270
Ideal Attractiveness -93				

7.4.1 Intelligence and Performance

Cleft children's opinions of their real intelligence and performance showed no significant difference in the MANOVA-test between genders ($F=.376$, $df=1$, $p=.360$). The result was similar with disability ($F=.132$, $df=2$, $p=.877$). Finally, there was no significant interaction effect between gender and disability ($F=.281$, $df=2$, $p=.269$).

Cleft children's opinions of their ideal intelligence and performance showed no significant difference in the MANOVA-test between genders ($F=1.463$, $df=1$, $p=.228$). The result was similar with disability ($F=.098$, $df=2$, $p=.906$). Finally, there was no significant interaction effect between gender and disability ($F=.877$, $df=2$, $p=.418$).

7.4.2 Leadership

Cleft children's opinions of their real leadership showed no significant difference in the MANOVA-test between genders ($F=.154$, $df=1$, $p=.695$). The result was similar with disability ($F=.292$, $df=2$, $p=.275$). Finally, there was no significant interaction effect between gender and disability ($F=.012$, $df=2$, $p=.988$).

Cleft children's opinions of their ideal leadership showed no significant difference in the MANOVA-test between genders ($F=.050$, $df=1$, $p=.823$). The result was similar with disability ($F=.484$, $df=2$, $p=.617$). Finally, there was no significant interaction effect between gender and disability ($F=.554$, $df=2$, $p=.576$).

7.4.3 Emotional Balance

Cleft children's opinions of their emotional balance showed a weak but significant difference in the MANOVA-test between genders ($F=5.305$, $df=1$, $p=.022$, 5%). Boys seem to be more pragmatic than girls. There was no significant difference between disabilities ($F=1.427$, $df=2$, $p=.243$). Finally, there was no significant interaction effect between gender and disability ($F=1.403$, $df=2$, $p=.249$).

Cleft children's opinions of their ideal emotional balance showed no significant difference in the MANOVA-test between genders ($F=3.540$, $df=1$, $p=.062$). There was no significant difference with disability ($F=2.305$, $df=2$, $p=.103$). Finally, there was no significant interaction effect between gender and disability ($F=1.632$, $df=2$, $p=.199$).

7.4.4 Determination

Cleft children's opinions of their determination showed no statistically significant difference in the MANOVA-test between genders ($F=2.691$, $df=1$, $p=.103$). There was no significant difference with disability ($F=.807$, $df=2$, $p=.448$). Finally, there was no significant interaction effect between gender and disability ($F=.232$, $df=2$, $p=.739$).

Cleft children's opinions of their ideal determination showed no significant difference in the MANOVA-test between genders ($F=.107$, $df=1$, $p=.744$). The result was similar with disability ($F=.725$, $df=2$, $p=.486$). Finally, there was no significant interaction effect between gender and disability ($F=.371$, $df=2$, $p=.691$).

7.4.5 Self-Confidence

Cleft children's opinions of their real self-confidence showed no significant difference in the MANOVA-test between genders ($F=1.157$, $df=1$, $p=.284$). The result was similar with disability ($F=.202$, $df=2$, $p=.817$). Finally, there was no significant interaction effect between gender and disability ($F=.228$, $df=2$, $p=.796$).

Cleft children's opinions of their ideal self-confidence showed no significant difference in the MANOVA-test between genders ($F=.002$, $df=1$, $p=.966$). The result was similar with disability ($F=.816$, $df=2$, $p=.444$). Finally, there was no significant interaction effect between gender and disability ($F=1.038$, $df=2$, $p=.356$).

7.4.6 Spontaneity

Cleft children's opinions of their real spontaneity showed no significant difference in the MANOVA-test between genders ($F=.789$, $df=1$, $p=.376$). The result was similar with disability ($F=.236$, $df=2$, $p=.790$). Finally, there was no significant interaction effect between gender and disability ($F=.950$, $df=2$, $p=.427$).

Cleft children's opinions of their ideal spontaneity showed no significant difference in the MANOVA-test between genders ($F=.1987$, $df=1$, $p=.160$). The result was similar with disability ($F=.877$, $df=2$, $p=.418$). Finally, there was no significant interaction effect between gender and disability ($F=.377$, $df=2$, $p=.687$).

7.4.7 Attractiveness

In 1988 cleft children's opinions of their real attractiveness showed one significant difference in the MANOVA-test. There was weak but significant difference with gender ($F=3.975$, $df=1$, $p=.048$, 5%). Girls were less satisfied with their appearance than boys. There was no statistically significant difference in disability ($F=.856$, $df=2$, $p=.427$) and there was no significant interaction effect between gender and disability ($F=.156$, $df=2$, $p=.856$).

Cleft children's opinions of their ideal attractiveness showed no significant difference in the MANOVA-test between genders ($F=.448$, $df=1$, $p=.504$). The result was similar with disability ($F=.676$, $df=2$, $p=.510$). Finally, there was no significant interaction effect between gender and disability ($F=.763$, $df=2$, $p=.468$).

7.4.8 Summary

With the MANOVA test it was found that among real self-concept factors (characteristics of self) there were not any of the self-concept components that were shown to support the hypotheses. There was no statistically significant difference between disabilities, indicating that visual, functional or visual and functional disability (CL, CPO or CLP) have no significant impact of self-concept and possibly also in psychological development.

Results showed that there are significant differences between the genders. Boys were more pragmatic centred than girls (emotional balance). Boys were also more satisfied with their appearance than girls did after five-year period (attractiveness).

The general level of self-concept in this study is constant, meaning that scores change very little over the five-year period. Average scores showed that the movement between levels is not systematic. One cause for these results might be the fact that self-concept is developmental (Allport 1961, Harter 1985), and between the ages of 9–12 years children form their global self. Between the ages of 14–17 years, global self begins to emerge, and the significant differences between the genders are the part of role-related behaviour.

7.5 School Achievement

The following hypothesis were presented earlier:

- (i) Children with cleft lip and palate (CLP) will have a lower level of school achievement than children with other clefts (CL or CPO).
- (ii) Children with CLP will have more linguistic problems than children with CL and CPO.

For the purposes of this study, the mean value of the most recent school report was used as a measurement of school achievement. According to Jöreskog (1979, 129) the scales of the research in social science should be analogous to each other. Therefore, these mean values were divided into five classes, from 1 to 5 (1=the lowest mean value, 5=the highest mean value) in the following way:

Average of Report	Score
10.0–9.0	5
8.9–8.0	4
7.9–7.0	3
6.9–6.0	2
5.9–5.0	1

In an effort to find out if cleft children avoid linguistic oriented school subjects, and to assess the structure of their school achievement, students involved in the research were asked “what is your best subject” and “what is your favourite subject”. The responses indicated that the reported best school subject was not always the favourite school subject. Negatively loaded questions, like “Do you have difficulties with your linguistic skills?” were avoided.

Data on best and favourite subjects was also collected to gather opinions of skills in linguistic and practical school studies. School subjects were divided into educational categories. Mother-tongue language was given its own category, as it is a basic component of the educational curriculum. Mathematics also occupied a single category, as it is a subject with its own “language” and “grammar” which needs to be mastered independently. The Science category consisted of subjects which have a theoretical orientation, such as biology, geography, history, religion, chemistry, physics and foreign languages. Mother-tongue language is only an instrument to study science subjects, not a basic element. The Active school subjects’ category included subjects based on the physical activity of the pupil, such as physical education, home economics, data-education or handicrafts. The Artistic subjects category consisted of music, art and drama subjects.

The scale did not include a hierarchical order. The scale was composed only to reveal the possible changes of the school achievement structure over a five-year period. The content of the scale was based on the main features of school subjects. Furthermore, it was possible to observe changes in school achievement emphasis (tables 19 and 20).

Subjects were scaled in both cases as presented here:

Subject	Scale
Mother Language	1
Mathematics	2
Science	3
Active Subjects	4
Artistic Subjects	5

Figures of favourite subject and best subject were scaled as original school grades from 4 to 10. All these variables can be presented in a correlation matrix (appendix). The MANOVA-table is presented here.

Table 17. Descriptive Statistics of School Variables among Boys

Descriptives	CL Boys		CP Boys		CLP Boys	
	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.
Report 1988	3.4	.6	3.3	.7	3.4	.6
Report 1993	3.5	.9	3.2	.9	3.3	.8
Best Subject 1988	3.2	.9	3.4	1.0	3.0	1.0
Best Subject 1993	3.6	.7	3.7	.7	3.7	.7
Number of Best Subject 1988	8.7	.4	8.7	.5	8.7	.4
Number of Best Subject 1993	8.8	.5	8.7	.5	8.8	.4
Favourite Subject 1988	4.0	1.2	3.9	1.0	3.7	1.2
Favourite Subject 1993	3.7	.8	3.9	.6	3.8	.6
Number of Favourite Subject 1988	8.3	.6	8.3	.6	8.5	.7
Number of Favourite Subject 1993	8.6	.7	8.6	.7	8.5	.7

Table 18. Descriptive Statistics of School Variables among Girls

Descriptives	CL Girls		CP Girls		CLP Girls	
	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.
Report 1988	3.5	.5	3.6	.7	3.6	.6
Report 1993	3.9	.7	3.6	.8	3.4	.6
Best Subject 1988	2.8	1.1	2.8	1.0	2.7	1.0
Best Subject 1993	3.2	.7	3.4	.8	3.4	.5
Number of Best Subject 1988	9.0	.1	8.8	.4	8.7	.5
Number of Best Subject 1993	8.9	.3	8.9	.3	8.9	.1
Favourite Subject 1988	3.8	1.2	3.4	1.1	3.7	1.2
Favourite Subject 1993	3.6	1.1	3.6	.7	3.7	.6
Number of Favourite Subject 1988	8.8	.4	8.4	.6	8.2	.8
Number of Favourite Subject 1993	8.9	.3	8.7	.7	8.6	.5

7.5.1 Level of School Achievement

The examination of school achievement values found one significant difference:

Table 19. MANOVA test of School Achievement Variables

MANOVA (repeated measure)	DF	F-value	p-value	Mean Square
Gender				
School Achievement -88 (Report)	1	5.213	.024	4.012
School Achievement -93 (Report)				
Favourite school subject in 1988	1	3.453	.065	2.819
Favourite school subject in 1993				
Number of favourite subject in 1988	1	1.872	.173	.947
Number of favourite subject in 1993				
Best school subject in 1988	1	12.392	.001	8.230
Best school subject in 1993				
Number of best subject in 1988	1	3.503	.063	.647
Number of best subject in 1993				
Injury				
School Achievement -88 (Report)	2	.593	.593	.456
School Achievement -93 (Report)				
Favourite school subject in 1988	2	.191	.856	.156
Favourite school subject in 1993				
Number of favourite subject in 1988	2	1.453	.237	.735
Number of favourite subject in 1993				
Best school subject in 1988	2	.626	.536	.416
Best school subject in 1993				
Number of best subject in 1988	2	.588	.557	.109
Number of best subject in 1993				
Gender & Injury				
School Achievement -88 (Report)	2	.398	.672	.306
School Achievement -93 (Report)				
Favourite school subject in 1988	2	1.241	.292	1.013
Favourite school subject in 1993				
Number of favourite subject in 1988	2	1.999	.139	1.011
Number of favourite subject in 1993				
Best school subject in 1988	2	.185	.831	.123
Best school subject in 1993				
Number of best subject in 1988	2	.655	.521	.121
Number of best subject in 1993				

There was a weak but significant difference in the MANOVA-test between genders ($F=5.213$, $df=1$, $p=.024$, 5%), with females having higher mean value scores than males on school reports. However, there was no significant

difference in disability ($F=.593$, $df=2$, $p=.593$) and there was no significant interaction effect either ($F=.398$, $df=2$, $p=.672$).

Results show that females have significantly better school achievement during early school years than males. Five years later, girls still have better school achievement performance.

7.5.2 Structure of School Achievement

The comparison of respondent opinion on best and favourite school subjects examined the structure of school achievement.

Cleft children's opinions of their best school subject showed one statistically significant difference in the MANOVA-test. There was a very significant difference with gender ($F=12.392$, $df=1$, $p=.001$). Girls considered theoretical subjects as their best subject significantly more often than boys. There was no significant difference in disability ($F=.626$, $df=2$, $p=.536$). Finally, there was no significant interaction effect between gender and disability ($F=.185$, $df=2$, $p=.831$).

Respondents were asked to report their best subject at school and to assign a rating of their school performance in that best subject on a scale from 4 (weak) to 10 (strong). There was no statistically significant difference in gender ($F=3.503$, $df=1$, $p=.063$) and there was no statistically significant difference in disability ($F=.588$, $df=2$, $p=.557$). Finally there was no statistically significant interaction effect between the gender and disability ($F=.655$, $df=2$, $p=.521$).

Cleft children's opinions of their favourite school subject showed no significant difference in the MANOVA-test. There was no statistically significant difference with gender ($F=3.453$, $df=1$, $p=.065$). There was no significant difference in disability ($F=.191$, $df=2$, $p=.856$). Finally, there was no significant interaction effect between gender and disability ($F=1.241$, $df=2$, $p=.292$).

The subjects were asked to list the type of favourite subject and to assign a rating of their school performance in that favourite subject on a scale from 4 (weak) to 10 (strong). Cleft children's favourite school subject's number did not show any significant differences in the MANOVA-test. There was no significant difference with gender ($F=1.872$, $df=1$, $p=.173$). There was no significant difference in disability ($F=1.453$, $df=2$, $p=.237$) and there was no significant interaction effect between gender and disability ($F=1.999$, $df=2$, $p=.139$).

7.5.3 Summary about Gender and Subgroup Differences in School Achievement

The level of school achievement was constant from childhood to adolescence, but the structure of school achievement changed. The school achievement level for female students (mean grade of the school report) was significantly better than that of male students. The structure of school achievement is very much alike between children with different gender and subgroups. Variables (school report, best subject and favourite subject) did not directly support the hypothesis.

Table 20. Selections of Best School Subjects

INJURY	CL girl	CP girl	CLP girl	CL boy	CP boy	CLP boy
BEST SUBJECT 1988						
Mother Language	2 18.2%	11 20.4%	3 17.6%	0 0%	0 0%	2 8.7%
Mathematics	3 27.3%	6 11.1%	2 11.8%	3 21.4%	5 21.7%	5 21.7%
Science	2 18.2%	28 51.9%	9 52.9%	7 50.0%	8 34.8%	10 43.5%
Active Subjects	4 36.4%	5 9.3%	3 17.6%	2 14.3%	4 17.4%	1 4.3%
Artistic Subjects	0 0%	4 7.4%	0 0%	2 14.3%	6 26.1%	5 21.7%
BEST SUBJECT 1993						
Mother Language	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
Mathematics	1 9.1%	5 10.2%	0 0%	1 6.3%	0 0%	1 3.8%
Science	8 72.7%	27 55.1%	8 72.7%	6 37.5%	12 48.0%	10 38.5%
Active Subjects	1 9.1%	9 18.4%	2 18.2%	8 50.0%	9 36.0%	11 42.3%
Artistic Subjects	1 9.1%	8 16.3%	1 9.1%	1 6.3%	4 16.0%	4 15.4%

Table 21. Selections of Favourite School Subjects

INJURY	CL girl	CP girl	CLP girl	CL boy	CP boy	CLP boy
FAVOURITE SUBJECT 1988						
Mother Language	1 7.7%	3 4.8%	1 5.6%	0 0%	0 0%	0 0%
Mathematics	1 7.7%	11 17.5%	2 11.1%	3 18.8%	2 13.3%	7 21.2%
Science	1 7.7%	17 27.0%	4 22.2%	2 12.5%	5 16.7%	7 21.2%
Active Subjects	6 46.2%	23 36.5%	6 33.3%	2 12.5%	10 33.3%	7 21.2%
Artistic Subjects	4 30.8%	9 14.3%	5 27.8%	9 56.3%	11 36.7%	12 36.4%
FAVOURITE SUBJECT 1993						
Mother Language	0 0%	1 2.0%	0 0%	0 0%	0 0%	0 0%
Mathematics	3 27.3%	2 4.0%	0 0%	1 5.9%	1 4.0%	2 7.7%
Science	2 18.2%	16 32.0%	5 45.0%	5 29.4%	4 16.0%	4 15.4%
Active Subjects	3 27.3%	28 56.0%	4 46.4%	9 52.9%	16 64.0%	18 69.2%
Artistic Subjects	3 27.3%	3 6.0%	2 18.2%	2 11.8%	4 16.0%	2 7.7%

A very noticeable point is the unpopularity of mother language and mathematics reported by all students in the 1993 study (Best and Favourite). Regardless of disability type, cleft children do not like mother language or mathematics, and they do not consider these to be their best subject in school.

7.6 Cross-Lagged Model between the Characteristics of Self and School Achievement

7.6.1 Structure of Self-Concept and School Achievement

Research provides the following hypothesis: Good school achievement and good self-concept will not necessarily be very strongly positively related (Korpinen 1990; Scheinin 1990).

This hypothesis has been examined with the partial correlations gathered by data collection. Self-concept (meaning the factor values of children's opinions about themselves) and school achievement (mean values of the school report) was examined in stages to scrutinise each section of self-concept during the periods of data collection (1988, 1993).

The cause and effect relations of self-concept and school achievement was examined through cross-lagged correlation, a methodical design which reveals cause and effect through partial correlation values (Cruts 1994, 107–124). It is a technique which is suitable for quasi-experimental research, although there are opinions that cross-lagged designs do not warrant pretensions (Rogosa 1980). It is also noted that cross-lagged design is suitable for research that serves self-fulfilling forecasts (Cornwall & Grimes 1987; Crano & Mellon 1978; Hubbard 1989; Rich & Scovel 1987). The advantage of this design is that cause and effect can be observed as a statistically significant positive correlation in two different ways (Cruts 1994, 107–124).

Partial correlation values are presented in the correlation matrix. Each factor was standardized individually during the partial correlation analysis.

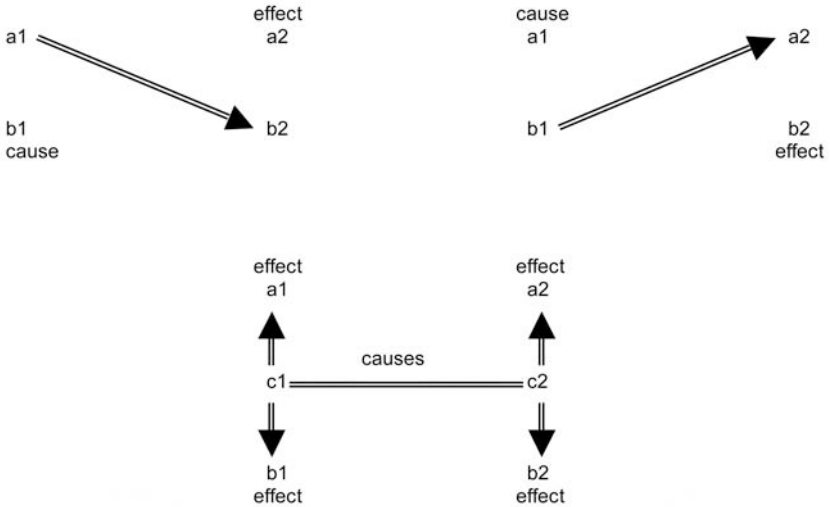


Figure 6. Cause and Effect in Cross-Lagged Model

It is possible that there is a third factor (c) that affects points a and b and gives a spurious correlation between a and b (Cruts 1994, 107–124). Thus, all the self-concept structures (intelligence & performance, leadership, emotional balance, determination, self-confidence, spontaneity and attractiveness) were tested with school achievement individually. Previous examinations only presented gender and subgroup differences in self-concept and school achievement.

It is possible to find significant connections between different self-concept components and school achievement, using the same testing procedures as Shavelson, Hubner, Stanton (1976) and Shavelson and Byrne (1996). These associations can be divided into three groups:

1. Structure between different components in 1988
2. Structure between different components in 1993
3. Structure between different components in 1988 and in 1993

In this study the following adjectives are used to describe the strength of the correlations (Tabachnick and Fidell 1989):

strong correlations

correlation values are from .70 to 1.000

moderate correlations

correlation values are between .30 and .70

weak correlations

correlation values are from .00 to .30

7.6.2 Intelligence and Performance

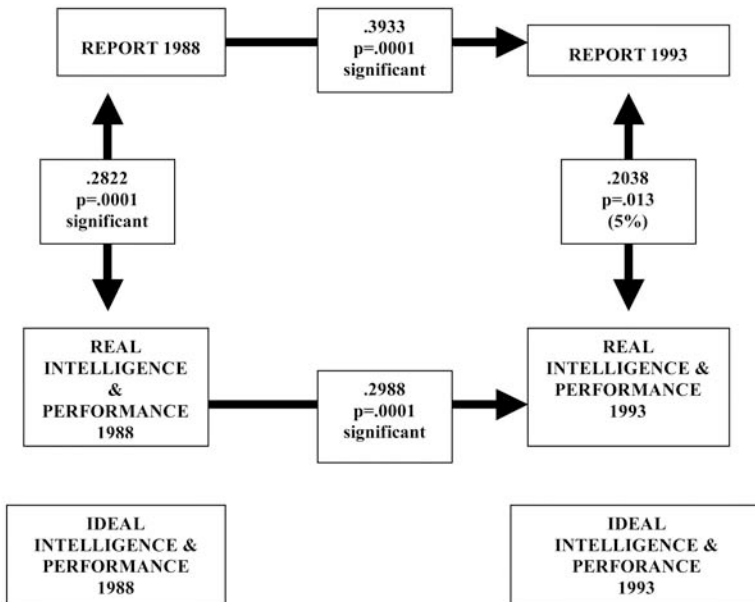


Figure 7. School Achievement with Intelligence and Performance

There was a moderate and statistically very significant correlation between school achievement in 1988 (school report) and school achievement in 1993 (school report) ($r=.3933$, $p=.0001$).

A weak but statistically very significant correlation was found between the children’s opinions about real intelligence and performance in 1988 and 1993 ($r=.2988, p=.0001$).

School achievement in 1988 had a weak but statistically very significant correlation with the subject opinion of real intelligence and performance ($r=.2822, p=.0001$). This can be interpreted in two ways: (i) strong reports have a positive impact on subject opinion of intelligence or (ii) strong intelligence has a positive impact on school achievement. A weak but significant result was found also in 1993 ($r=.2038, p=.0001$).

In summary we can say that age does not have a very direct influence on school achievement, and that age does not affect subject opinion of their own intelligence and performance. As a descriptive comment, we can say that school achievement and opinions of intelligence and performance are established before the age of 9 years, in this student population. The correlation values remained constant over the five-year period, indicating a substantial cause and effect relationship between school achievement, age and the opinions of intelligence and performance of the subjects. In other words, a thirteen year old male with CL may have a high level of intelligence and performance that this study has found to be related to the school report but is non the less unaffected by his age.

7.6.3 Leadership

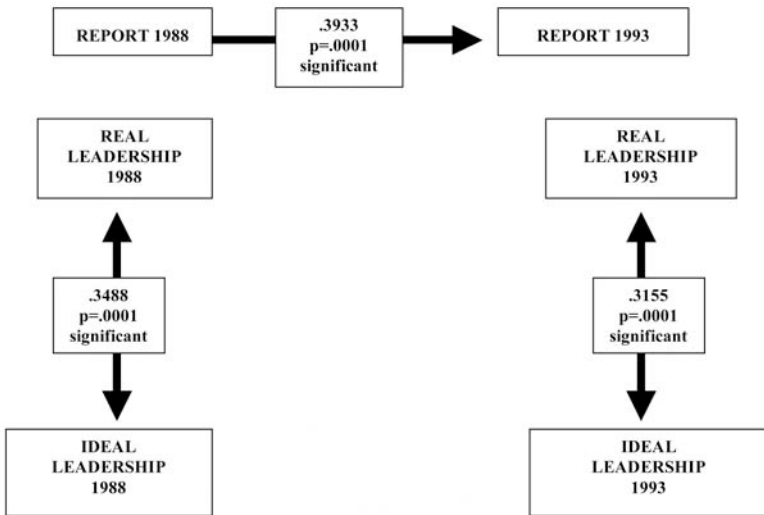


Figure 8. School Achievement with Leadership

As reported earlier, a moderate and statistically very significant correlation was found between school achievement in 1988 and school achievement in 1993 ($r=.3933$, $p=.0001$).

Real leadership in 1988 had a moderate and statistically very significant correlation with subject opinion of ideal leadership in 1988 ($r=.3403$, $p=.0001$). A similar moderate but statistically very significant result was found in 1993 ($r=.3419$, $p=.0001$). This can be interpreted in two ways: (i) strong opinion of real leadership has a positive impact on subject opinion of ideal leadership or (ii) strong ideal leadership has a positive impact on real leadership.

7.6.4 Emotional Balance

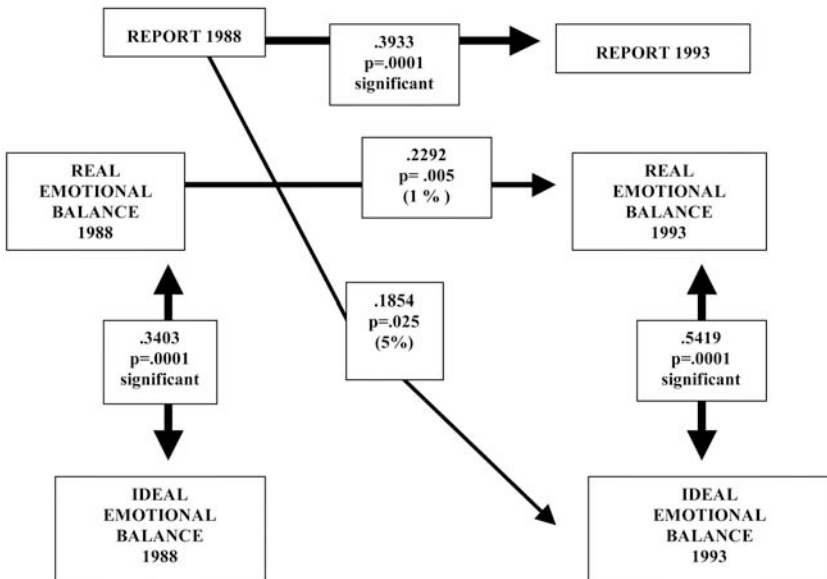


Figure 9. School Achievement with Emotional Balance

As reported earlier, a moderate and statistically very significant correlation was found between school achievement in 1988 and school achievement in 1993 ($r=.3933$, $p=.0001$).

A weak but statistically significant correlation was found between subject opinion of real emotional balance in 1988 and 1993 ($r=.2292$, $p=.005$, 1%), which shows that subject opinion of real emotional balance remains constant over the five-year period.

Real emotional balance in 1988 had a moderate but statistically very significant correlation with subject opinion of ideal emotional balance in 1988 ($r=.3403$, $p=.0001$). Similarly, a moderate but statistically very significant result was found in 1993 ($r=.5419$, $p=.0001$). This can be interpreted in two ways: (i) strong opinion of real emotional balance can have a positive impact on subject opinion of ideal emotional balance or (ii) strong ideal emotional balance can have a positive impact on real emotional balance.

There was a weak but statistically significant correlation between school achievement in 1988 and subject opinion of ideal emotional balance ($r=.1854$, $p=.025$, 5%).

In summary we can say that age does not have a very direct influence on school achievement, and that age does not affect subject opinion of their emotional balance. As a descriptive comment, we can say that school achievement and opinions of emotional balance are established before the age of 9 years, in this student population. Correlation values remained constant over the five-year period, indicating some cause and effect between school achievement, age and the opinions of emotional balance of the subjects. In other words, a thirteen year old male with CLP may have a high level of emotional balance that this study has found to be related to the school report and his ideal emotional balance.

7.6.5 Determination

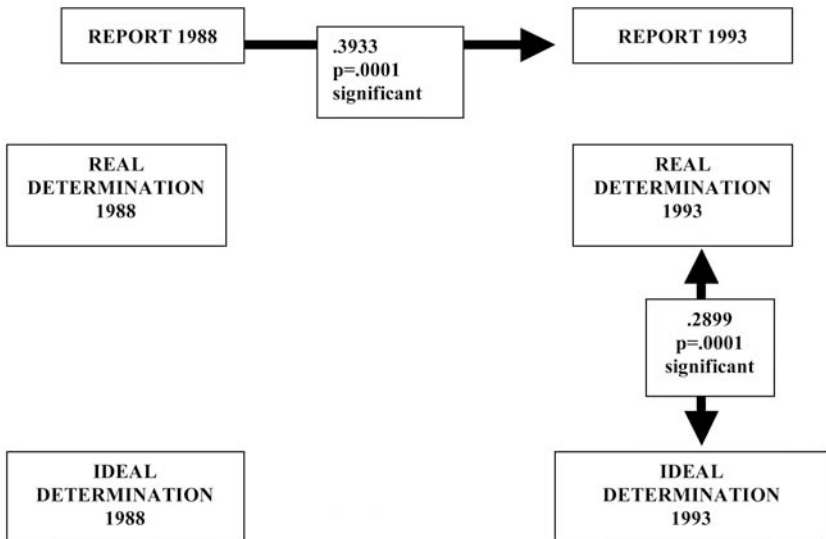


Figure 10. School Achievement with Determination

As reported earlier, a moderate and statistically very significant correlation was found between school achievement in 1988 and school achievement in 1993 ($r=.3933$, $p=.0001$).

Real determination in 1993 had a weak but statistically significant correlation with subject opinion of ideal determination ($r=.2899$, $p=.0001$). This can be interpreted in two ways: (i) strong opinion of real determination can have a positive impact on subject opinion of ideal determination or (ii) strong opinion of ideal determination has a positive impact on real determination of the individual.

7.6.6 Self-Confidence

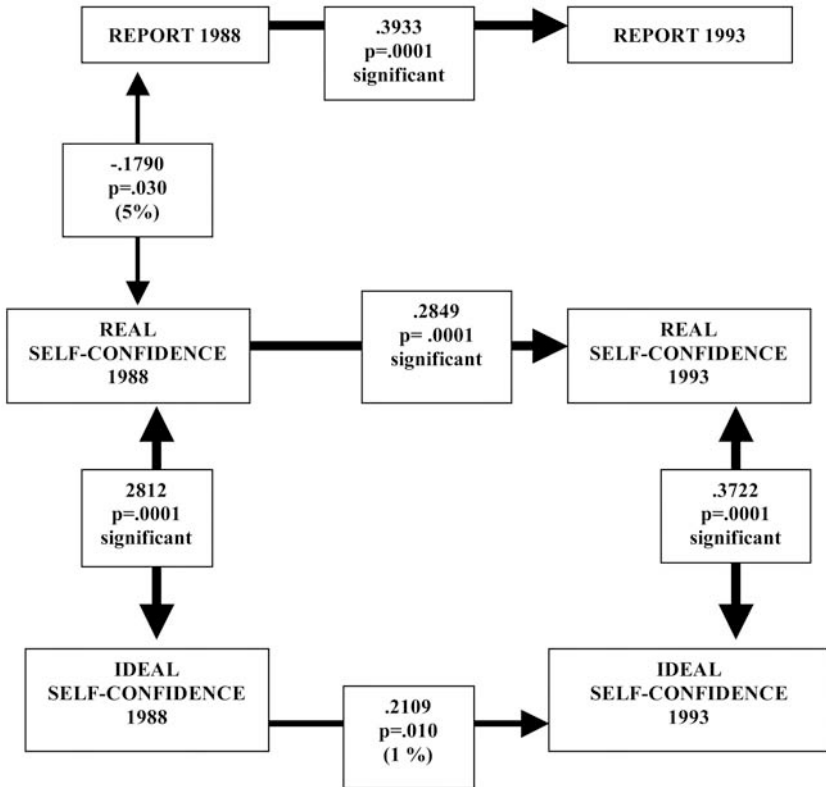


Figure 11. School Achievement with Self-Confidence

As reported earlier, a moderate and statistically very significant correlation was found between school achievement in 1988 and school achievement in 1993 ($r=.3933$, $p=.0001$).

A weak but statistically significant correlation was found between subject opinion of real self-confidence in 1988 and 1993 ($r=.2849$, $p=.0001$). This means that in this population, student opinion of their self-confidence remains constant.

A weak but statistically significant correlation was found between subject opinion of ideal self-confidence in 1988 and 1993 ($r=.2109$, $p=.010$, 1%). Again, subject opinion of their ideal self-confidence remains constant over the five-year period in this population.

There was a weak but statistically significant correlation between school achievement in 1988 and subject opinion of real self-confidence ($r=-.1790$, $p=.030$, 5%).

Reported self-confidence levels in 1988 had a weak but statistically very significant correlation with subject opinion of ideal self-confidence ($r=.2812$, $p=.0001$). A similar moderate but statistically very significant result was found in 1993 ($r=.3722$, $p=.0001$). This can be interpreted in two ways: (i) strong opinion of real self-confidence have a positive impact on subject opinion of ideal self-confidence or (ii) strong ideal self-confidence has a positive impact on real self-confidence.

Given this, we can say that age does not have a very direct influence on school achievement, and that age does not affect subject opinion about their self-confidence. As a descriptive comment, we can say that school achievement and opinion of self-confidence are established before the age of 9 years, in this student population. Correlation values remain constant, indicating some cause and effect between school achievement, age, and the opinion of self-confidence of the subjects. In other words, a thirteen year old male with CPO may have a high level of self confidence that this study has found to be related to his ideal self confidence, but is non the less unaffected by his age.

7.6.7 Spontaneity

As reported earlier, a moderate and statistically very significant correlation was found between school achievement in 1988 and school achievement in 1993 ($r=.3933$, $p=.0001$). A weak but statistically significant correlation was found between the children's opinion of real spontaneity in 1988 and 1993 ($r=.1708$, $p=.039$, 5%). Furthermore, a weak but statistically significant correlation was found between the children's opinion of their ideal spontaneity in 1988 and 1993 ($r=.2189$, $p=.008$, 1%). This means that in this population, student opinion of their spontaneity remains constant. A weak but statistically significant result was found in 1993 between school achievement and real

spontaneity ($r=.1843$, $p=.025$, 5%). Thus in this population, student opinion of their spontaneity and their school achievement have an impact on one another after the general self has formed.

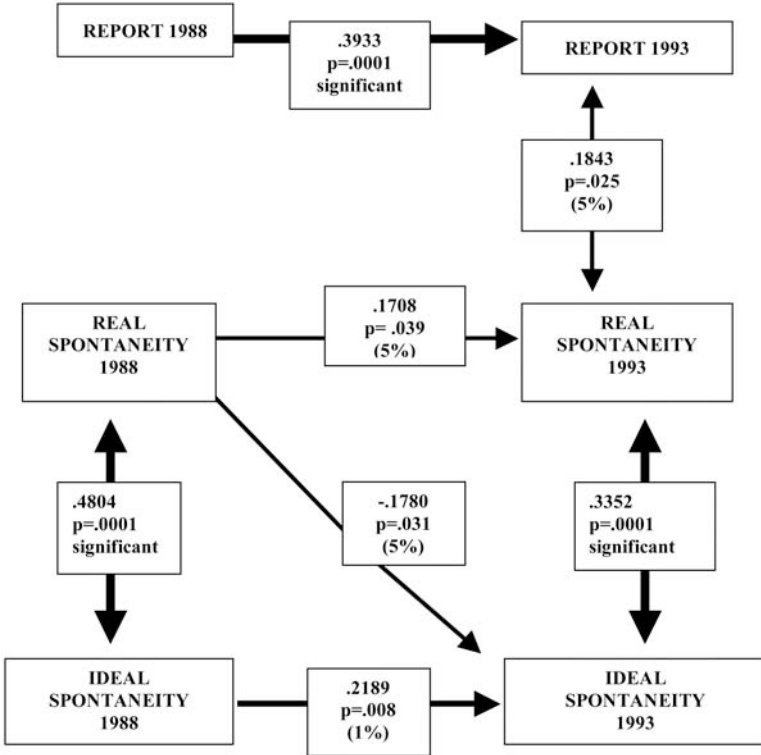


Figure 12. School Achievement with Spontaneity

Real spontaneity in 1988 had a moderate and statistically very significant correlation with the subject opinion of ideal spontaneity ($r=.4804$, $p=.0001$). A similar moderate but statistically significant result was also found also in 1993 ($r=.3352$, $p=.0001$). This can be interpreted in two ways: (i) strong opinion of real spontaneity has a positive impact on subject opinion about ideal spontaneity or (ii) strong ideal spontaneity has a positive impact on real spontaneity. The cross-lagged study indicates strong cause and effect between these two factors.

Furthermore, the subject opinion of real spontaneity in 1988 had a weak but significant correlation to opinion of ideal spontaneity in 1993 ($r=-.1780$, $p=.031$, 5%).

In summary we can say that age does not have a very direct influence on school achievement, and that age does not affect subject opinion of their spontaneity. As a descriptive comment, we can say that school achievement and opinion of spontaneity are established before the age of 9 years, in this student population. Correlation values remain constant, indicating some cause and effect between school achievement, age and the opinion of spontaneity of the subjects. In other words, a fourteen year old female with CLP may have a high level of spontaneity that this study has found to be related to the school report and her ideal spontaneity, but is non the less unaffected by his age.

7.6.8 Attractiveness

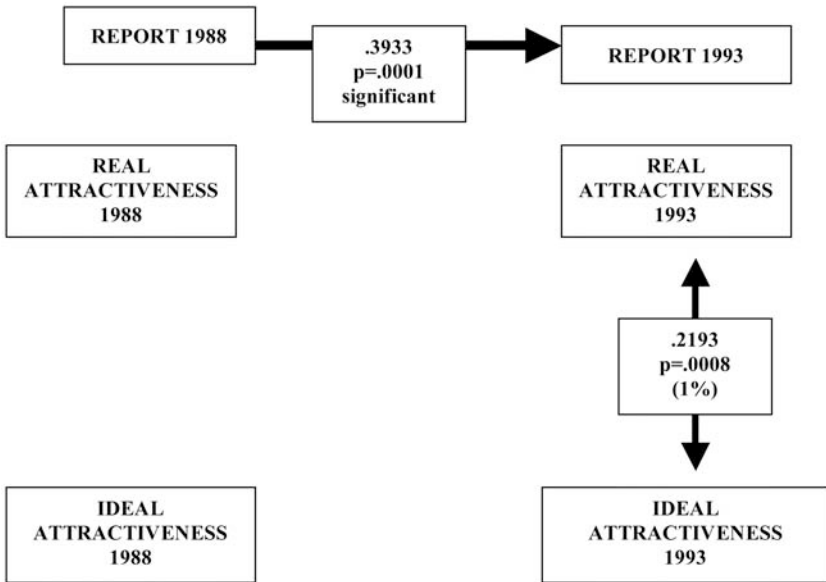


Figure 13. School Achievement with Attractiveness

As reported earlier, a moderate and statistically very significant correlation was found between school achievement in 1988 and school achievement in 1993 ($r=.3933$, $p=.0001$).

There was a weak but statistically significant correlation between the subject opinion of real attractiveness in 1993 and the subject opinion of ideal attractiveness in 1993 ($r=.2193$, $p=.0008$, 1%).

7.7 General Self

7.7.1 MANOVA-test of General Self

Finally connections between school achievement and self-concept can be observed through the concepts of general self that were presented in chapter 7.1.

Table 22. MANOVA test of General Self

MANOVA (repeated measure)				
	DF	F-value	p-value	Mean Square
Gender				
School Achievement -88 (Report)	1	5.213	.024	4.012
School Achievement -93 (Report)				
Real Self in 1988	1	1.858	.175	160.275
Real Self in 1993				
Ideal Self in 1988	1	.002	.965	.08
Ideal Self in 1993				
Injury				
School Achievement -88 (Report)	2	.593	.593	.456
School Achievement -93 (Report)				
Real Self in 1988	2	.027	.973	2.363
Real Self in 1993				
Ideal Self in 1988	2	1.123	.328	48.966
Ideal Self in 1993				
Gender & Injury				
School Achievement -88 (Report)	2	.398	.672	.306
School Achievement -93 (Report)				
Real Self in 1988	2	.029	.971	2.544
Real Self in 1993				
Ideal Self in 1988	2	.179	.836	7.801
Ideal Self in 1993				

Cleft children's opinion of their real self showed no significant difference in the MANOVA-test between genders ($F=1.858$, $df=1$, $p=.175$). The result was similar with disability ($F=.027$, $df=2$, $p=.973$). Finally, there was no significant interaction effect between gender and disability ($F=.029$, $df=2$, $p=.971$).

Cleft children's opinion of their ideal self-concept showed no significant difference in the MANOVA-test between genders ($F=.002$, $df=1$, $p=.965$). The result was similar with disability ($F=1.123$, $df=2$, $p=.328$). Finally, there was no significant interaction effect between gender and disability ($F=.179$, $df=2$, $p=.836$).

7.8 Model between the General Self-Concept and School Achievement

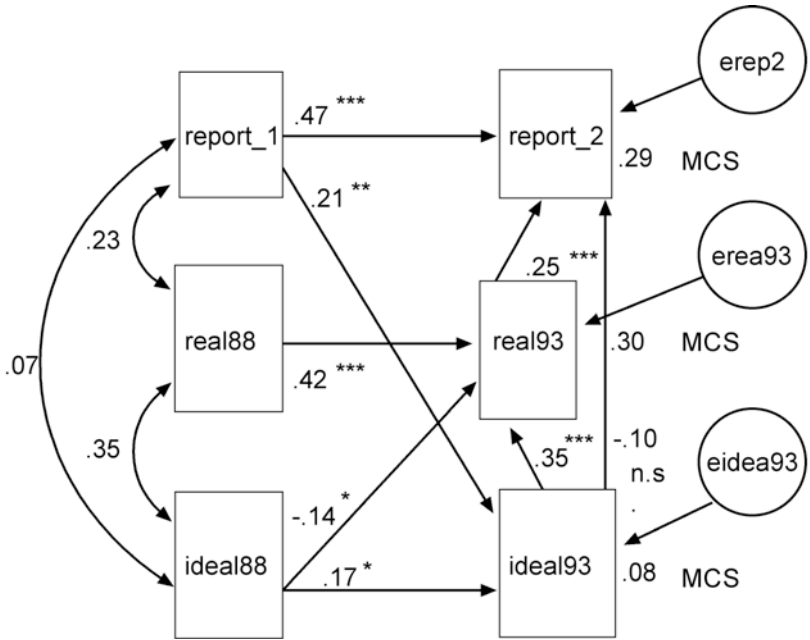


Figure 14. School Achievement and General Self with the Standardized Regression Weights (model a) (***) p=.0001, ** p=1%, * p=5%, n.s.=non significant)

Structures of school achievement and general self were tested. This test was done by using path-modeling, which is based on the SEM-principal (Structural Equation Modeling) (Bijleveld and van der Kamp 1998, 208). The SEM model is based on regression analysis that may also be considered as one type of confirmatory factor analysis (Metsämuuronen 2003, 551). The path analysis was done by using the AMOS-programme.

The structure of the model was based on the significant correlations of cross-lagged models. The model (a) indicates good statistical significance: $\chi^2=1.422$ (4), $p=.840$, $GFI=.997$, $IFI=1.015$, $CFI=1.000$ and $RMSEA=.000$. The regression weights (B) and p values of the model (a) are presented in table 23.

The school report acts as a stable, constant presence throughout the five-year investigation ($\beta=.47$, $p=.0001$). The subject opinion of real self in 1988 and 1993 shows that children’s opinion of their real self remains constant ($\beta=.42$, $p=.0001$). School achievement in 1988 had a relation with subject opinion of real self in 1988 ($r=.23$, $p=.003$, 1%). This result can be interpreted in

two ways: (i) good school reports have a positive impact on subject opinion of self or (ii) high opinion of self has a positive impact on school achievement.

Subject opinion of real self in 1993 had a relation with school achievement in 1993 ($\beta=.25$, $p=.0001$). This result can be interpreted in the following way: good self-concept has a positive impact on school achievement.

There was a relation between school achievement in 1988 and subject opinion of ideal self in 1993 ($\beta=.21$, $p=.004$, 1%). Here we can say that the 1988 school report has a strong effect on the future of subjects' opinions of ideal self.

In 1988, real self showed a relation with subject opinion of ideal self ($r=.35$, $p=.0001$). This result can be interpreted in two ways: (i) strong opinion of real self has a positive impact on subject opinion of ideal self or (ii) strong ideal self has a positive impact on real self.

In 1993, real self had a relation with subject opinion of ideal self in 1993 ($\beta=.35$, $p=.0001$). This result can be interpreted in the following way: strong ideal self has a positive impact on real self.

Table 23. The Regression Weights (B), the Standardized Regression Weights (β) and Multiple Correlation Squares (MCS) of the model (a)

REGRESSION WEIGHTS	B	β	p
REPORT 1988 – REPORT 1993	.579	.47	.0001
REPORT 1988 – IDEAL 1993	1.681	.21	.004
REAL 1988 – REAL 1993	.451	.42	.0001
IDEAL 1988 – REAL 1993	-.161	-.14	.049
IDEAL 1988 – IDEAL 1993	.133	.17	.019
REAL 1993 – REPORT 1993	.025	.25	.0001
IDEAL 1993 – REAL 1993	.537	.35	.0001
IDEAL 1993 – REPORT 1993	-.016	-.10	.136 (ns)
MULTIPLE CORRELATION SQUARES	MCS		
REPORT 2	.29		
REAL 93	.30		
IDEAL 93	.08		

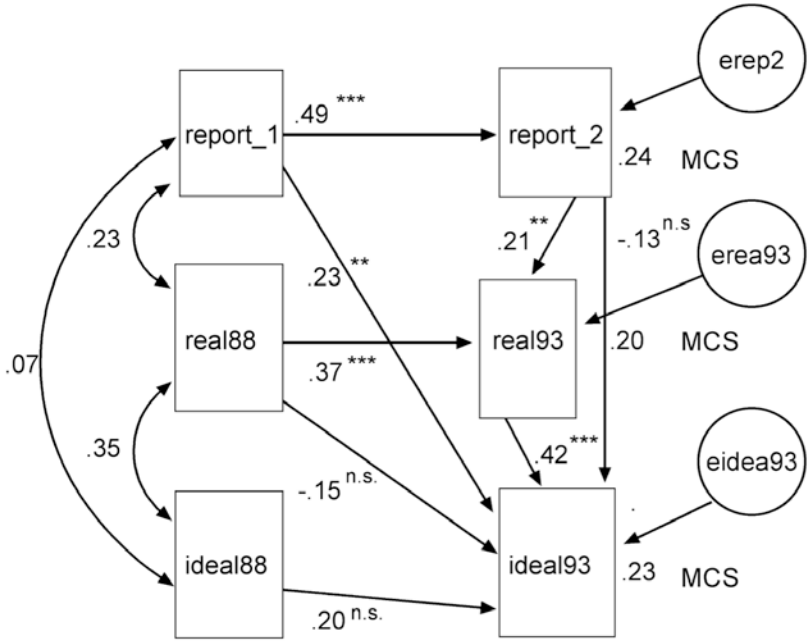


Figure 15. School Achievement and General Self with the Standardized Regression Weights (model b) (***) $p=.0001$, ** $p=1\%$, * $p=5\%$, n.s.=non significant)

The model (b) illustrates statistical significance: $\chi^2=5.083$ (4), $p=.279$, GFI=.990, IFI=.993, CFI=.993 and RMSEA=.039. The regression weights (B) and p values of the model (b) are presented in table 24.

School report acts as a stable, constant presence throughout the five-year investigation ($\beta=.49$, $p=.0001$). The subject opinion of real self in 1988 and 1993 shows that children’s opinion of real self remains constant ($\beta=.37$, $p=.0001$). Ideal self in 1988 had a relation with subject opinion of ideal self in 1993 ($\beta=.20$, $p=.005$, 5%). This result can be interpreted in the following way: ideal self remains constant over a 5 year period.

School achievement in 1988 had a relation with subject opinion of real self in 1988 ($r=.23$, $p=.003$, 1%). This result can be interpreted in two ways: (i) good reports have a positive impact on subject opinion of self or (ii) good self-concept has a positive impact on school achievement.

School achievement in 1993 had a relation with subject opinion of real self in 1993 ($\beta=.21$, $p=.003$, 1%). This result can be interpreted in the following way: good school achievement has a positive impact on self-concept.

There was a relation between school achievement in 1988 and subject opinion of ideal self in 1993 ($\beta=.23$, $p=.003$, 1%). Here we can say that the school report has a strong effect on the future of subject opinion of ideal self.

In 1988 real self had a relation with subject opinion of ideal self in 1988 ($r=.35$, $p=.0001$). This result can be interpreted in two ways: (i) strong opinion of real self has a positive impact on subject opinion of ideal self or (ii) strong ideal self has a positive impact on real self.

In 1993 real self had a relation with subject opinion of ideal self in 1993 ($\beta=.42$, $p=.0001$). This result can be interpreted in the following way: strong real self has a positive impact on ideal self.

Table 24. The Regression Weights (B), the Standardized Regression Weights (β) and Multiple Correlation Squares (MCS) of the model (b)

REGRESSION WEIGHTS	B	β	p
REPORT 1988 – REPORT 1993	.603	.49	.0001
REPORT 1988 – IDEAL 1993	1.869	.23	.003
REAL 1988 – REAL 1993	.394	.37	.0001
REAL 1988 – IDEAL 1993	-.107	-.15	.052 (ns)
IDEAL 1988 – IDEAL 1993	.158	.20	.005
REAL 1993 – IDEAL 1993	.277	.42	.0001
REPORT 1993 – REAL 1993	2.036	.21	.003
REPORT 1993 – IDEAL 1993	-.843	-.13	.100 (ns)
MULTIPLE CORRELATION SQUARES			MCS
REPORT 2			.24
REAL 93			.20
IDEAL 93			.23

In this research, the model (a) was chosen as a final model of General Self-Concept and School Achievement. There were two reasons: (i) model (a) is statistically superior to model (b) and (ii) model (a) supports theory on, how the interaction with ideal and real self creates a potential discrepancy for further consequences; and how self-fulfilling prophecies function.

In summary, we can say that age does not have a very direct influence on school achievement, and that age does not affect subject opinion of their own self. As a descriptive comment, we can say that school achievement and opinion of self are established before the age of 9 years, in this student population. The correlation values over the five-years remained constant, indicating some cause and effect between school achievement, age and the opinions of self of the subjects. It is very interesting to observe that subject opinion of real self at the ages of 9–13 years has a statistically significant connection

with school achievement in late adolescence. Furthermore, subjects' school achievement at the ages of 9–13 significantly affects these concepts in late adolescence. In other words, a thirteen year old male with CPO may have a good self-concept that this study has found to be related to the school report and his ideal self, but is nevertheless unaffected by his age.

7.8.1 Summary about the General Self-Concept and School Achievement

The results supported the hypotheses. Good self-concept (in this research: subject opinion of their own qualities) does not require good school achievement, a result very similar to the findings in Finnish comprehensive school studies (Korpinen 1990.) However, results also indicated that good self-concept supports school achievement. This result is also parallel to those results found earlier in Finland (Kääriäinen, Rikkinen 1988; Rauste 1973 and 1974). The results did not support hypothesis number 1, as children with CLP did not have less positive self-concept when compared to children with other clefts. This result is parallel to those found in Sweden (Persson, Anianson, Becker, Svensson 2002.)

VIII Discussion

It has not been easy to do this study. There have been many problematic situations during this fifteen-year period, one of the most difficult being the point that this area of research is educationally very limited. Conclusions made through this research are not easily generalised, although the tasks of the research—self-concept and school achievement—are an essential part of education.

It is possible to speculate that different results would have been found had the survey been conducted in the last few years. Notwithstanding these factors, I am able to present my research together with my arguments.

8.1 Self-Concept

The original hypothesis of self-concept predicted that there would be differences between the subgroups. This study proves that in equal comprehensive schools in Finland there are no significant differences in self-concept between cleft conditions (as seen in MANOVA-tables) after the general self has formed.

Gender is the factor that reveals significant differences in self-concept: the self-concept of cleft boys was found to be stronger than that of girls. Boys have significantly more positive opinions about self-concept than girls. They were more satisfied with their appearance and they are more pragmatic than girls.

Among this population there are significant gender differences but not significant disability differences. There were two statistically significant differences (emotional balance, attractiveness). Boys were more pragmatic than girls. This means that the results do not support the original hypotheses and former studies (Jones 1984, 132–138; Leonard, Dwyer Brust, Abrahams & Sielaff 1991, 347–353; Kapp 1979, 171–176.)

There was no significant difference with disability. It is possible that in social interaction situations, the Scandinavian cultural values are more interested with what people say and do, rather than what they look like.

The multidimensional self-concept factors, which were used in the research, indicated a statistically significant stability from 1988 to 1993. The MANOVA-test indicated that among real self-concept factors there were statistically significant differences in two self-concept factors after the five-year period. One of those two (emotional balance) shows a significantly improved self-concept for the boys, and the other (attractiveness) was weakened for all the subjects. These self-concept factors were more likely to be attributed to behaviour, as expected among the late-adolescent population. At this

age its quite normal to feel emotional, be less impulsive and less satisfied with one's appearance. It can be said that the differences found were an illustration of the focusing of the self-concept through its developmental processes. However, despite these significant differences, the levels of self-concept factors were quite constant before and after the five-year measurement.

The ideal self-concept factor examination generated results similar to those of the real self-concept study. This means that the individual forms opinions of his or her own abilities at an early age in life, as Erikson (1962) noted. These opinions seem to be quite stable throughout the pre-adolescent and adolescent period, as Shavelson et al (1976) noted. In other words, the multidimensional self, which Gergen (1991) defined, is unified and harmonized (Lifton 1993).

This result is very much like those found earlier in Finland among healthy children (Rauste 1974, 145; Kääriäinen & Rikkinen 1988). These results are also parallel to those found in other countries among children with clefts (Kapp 1979, 171–176; Leonard & Dwyer Brust & Abrahams & Sielaff 1991, 347–353; Richman & Eliason 1982, 249–257; Madison 1986, 337–341; Brantley & Clifford 1979, 177–182).

The individual person links up the experiences to his or her own observations (Aho 1987, 3; Mead 1962), and self-concept includes both the physical and the psychic self (Korpinen 1983, 11). The person will have the consciousness of his or her own existence and action (Rogers 1965). The results of this research indicate that the main elements of that self probably existed at the age of 9 and those elements have a stable foundation. Furthermore, results confirm theories that the basic elements of self-concept are formed very early during the dyadic relation period of infancy (Gest 1997, 467–475; Scheinin 1990, 90; Strauman 1996, 1142–1153; Mahler, Pine, Bergman 1984; Mikkonen, Posti, Vuorinen 1985; Reenkola 1984; Vuorinen 1984, 1986A, 1986B.) A person's stable impressions of his or her talents at an early age are needed as a defence against the world. The developing child is able to endure negative feed back of different kinds of experience when his or her personal elements already exist.

Coopersmith (1967, 20) describes self-concept as the quantity of individual belief in oneself as being capable, successful and dignified. The opinion of the child's cognitive capacity (intelligence & performance) was the primary self-concept factor which had a statistically significant correlation to school achievement during both testing times in this research. We can conclude that the more positive opinion the children had about their academic skills the better their school achievement; or vice-versa, the better the school achievement, the more positive were the opinions of cognitive talents. The point is the interaction, at which the stability of self-concept and school achievement is formed. Thomas and Chess (1980, 251–254) defined the con-

cept as a goodness of fit, meaning that positive results in one area create positive results in another area (in this study self-concept and school achievement).

The result that school achievement is linked to this kind of self-concept factor is also confirmed by international studies (Shavelson et al 1976). The consistency of the relationship between self-concept and school achievement needs to be noted: success needs enterprise.

An important decision in this research was to examine the self-concept of children with clefts as a whole entity. The results prove that girls reported a significantly lower self-concept than boys but perform at a significantly higher school achievement level than boys. This shows us that strong self-concept does not necessarily improve the school achievement level. These results parallel those found by Korpinen (1990, 90) using Finnish subjects. In a related and paradoxical study, Scheinin (1990, 190) found a group of students who reported good self-concept but poor school achievement. For these subjects, low school performance would prevent some vocational selections in their future. However, this group did not view school achievement as a "measurement of existence". As described in chapter 8.3, a meaningful point of this research was to reveal strategies for successful school achievement.

In addition to surveying the elements and stability of self-concept of children with clefts, a further purpose of the study was to find out how a disability influences self-concept. Of all the subgroups investigated, there were no significant differences from 1988 to 1993. These results can be explained by Shavelson's developmental self-concept structure. Between the ages of 6 to 12, children are merely becoming conscious of their self-concept skill profile; whereas, at late adolescence, when the global self begins to emerge, young people start to accept their self-concept (Shavelson et al. 1976; Allport 1961; Harter 1985, 76–80). Guthrie (1938) and Scheinin (1990, 190) have noted similar findings: the feedback of self-esteem may change the behaviour: the self concept is focusing.

8.2 School Achievement

The hypotheses, which were formulated in accordance with international studies, predicted that there would be differences between the subgroups. The mean scores of school academic reports in this study showed that there were no significant differences between the disability subgroups. The results did show that the school achievement level of the female subjects was significantly higher than that of the male subjects, a result also found by Korpinen (1990, 90) in her study with Finnish children. There was also significant difference in best school subject. Girls were significantly more orientated to school subjects, including reading. This means that girls will have better

readiness for further studies. Despite the fact that the results were not statistically significant between the disabilities, this may still have an impact on the future of children with clefts.

The study found that children with cleft lip and palate in 1993 performed at lower school achievement levels than children with other clefts. However, children with cleft lip and palate as well as boys with cleft palate only recorded the highest mean scores from academic reports in 1988. This result is quite interesting and problematic, because the mean score of the academic report is approximately at the same level over a five-year period. This makes the academic performance of the subjects appear stable and constant, but during this period there has been a movement of focus within student school achievement, away from linguistic subjects and towards active school subjects.

Furthermore, during the same five-year period the mean of the reports of other disability subgroups increased or remained unchanged (from 0,0 to 0,4 inside the scale used in this study). Kuusinen (1986, 192–197 and 1992, 47–56) noted that the level and structure of school achievement is stable among Finnish school children. The level of school achievement can be seen during the very first school years. The result of school achievement level in this research was similar to that of Kuusinen's study in 1986. On the other hand, the school achievement structure of cleft students seems to be different than that of non-cleft students.

By observing the school achievement structure, two reasons can be given for the change from linguistic subjects to active subjects. Firstly, as school achievement correlates so strongly with the self-concept element of intelligence & performance, these changes can be examined in terms of self-concept development.

Allport (1961) emphasises that the lasting basis of self-concept is created between the ages of 0–3 years, and in the period between the ages 6–12 years the individual person becomes realistically conscious of his or her skills and learns to manage this awareness with reason. During adolescence, the child comes to terms with his or her own limitations, and makes the necessary adjustments prior to the emergence of the global self. Thus, the pre-adolescent child with a cleft condition may be inclined towards linguistic subjects until the age of adolescence, when the subject becomes fully aware of his or her linguistic limitations and chooses to specialise in non-linguistic school subjects.

A second reason for the shift away from linguistic subjects over a five-year period can be explained in terms of cognitive psychological design and the learning process. Here, personal change arises from the conflict between internal and external completeness, or in this instance, the conflict between the components of self-concept and the perceived performance in linguistic subjects at school. As both elements are unable to reach a state of complete-

ness, the pupil alters his or her study plans to include more active subjects and fewer linguistic subjects, thus resolving the conflict (Del Polito 1980; Neisser 1976; von Wright 1976.)

The results on linguistic problems found in this study are parallel to international studies (Brantley & Clifford 1979; 183–187; Pannbacker 1979, 124–125; Richman & Eliason 1982, 249–257; McWilliams & Paradise 1973, 223–229; Richman & Eliason 1984, 1–6; Broder, Richman, Matheson 1998, 127–131; Endriga, Kapp-Simon 1999, 3–11) and to those found recently in Finland (Ceponiene, Haapanen, Ranta, Näätänen, Hukki 2002a, 554–567). These findings need to be observed through the results of self-concept. The changing of the school achievement structure, a movement away from linguistic subjects, does not weaken the feeling of self, which is relatively good and very much alike that of other Finnish children. This means that children with oral clefts have the keys for happy living regardless of their linguistic problems and changes in the content of school achievement.

Even though the overall school achievement of children with clefts is stable, and the level of school achievement at the beginning of school predicts the level of school achievement after five years, this does not provide any detailed information on the changing structure of school achievement. Indeed, the apparent stability of school achievement level may not necessary be indicative of the future orientation of the child. Linguistic problems and the declining number of linguistic subjects may result in a totally different occupation than the child had previously considered. This kind of result will also mean that the comprehensive school in Finland is not able to perform its duty as an equal educator, if children with clefts are dropping out of linguistic subjects (Kuusinen 1986 and 1992.) Schein (1990, 190) has noted that dropping out of studies and blanks in basic knowledge are likely to cause problems for the future lives of children.

In general, results that confirm the stability of school achievement should be taken seriously. School children should be able to have realistic feedback about the level of their knowledge and skills during the entire school period. This means that the child has right to have reconstructive measures as early as possible in case the profile of school achievement becomes low. Mäensivu (1999, 177) suggests that the evaluation system should consist of pupils self evaluation, verbal evaluation, tests, evaluation discussions, portfolios as well as teachers' and school's self-evaluation.

8.3 The Self Concept Factor of School Achievement between Genders

The most interesting result of this research was to reveal those self-concept factors that formulate successful school achievement. There were no statistical significant differences between boys and girls opinion of intelligence and

performance. The statistically significant factor between genders correlating to school achievement was emotional balance. Boys feel themselves to be significantly more pragmatic than girls. However, as emotional balance correlates with school achievement this will not promote boys' school achievement in itself. The other factor that correlated with school achievement was spontaneity. Girls have higher scores than boys, which means that they feel themselves livelier, more talkative and more actively engaged in lessons. This combination probably creates female school achievement, in that females are part of the pedagogic discussion and move through school with the same target as the teacher. This result is parallel to that of Korpinen (2000, 27–47). She found that the Finnish comprehensive school meet the needs of girls better than those of boys. The male approach is more pragmatic, in that they concentrate on the essential part of the school substance but are less inclined to engage in the pedagogic discussion, which is one of the basic elements of the school institution. Lindroos (1997) also found this phenomenon in her research. She studied boys and girls' different roles in the classroom. Males were found to be noisier and more pragmatic in the pedagogic discussion, whilst exhibiting a practical approach to the subject.

8.4 Meaning of the Ideal Self for the School Achievement

This study also revealed the structure between school achievement, real self and ideal self (figure 14). Here it can be seen how school achievement may influence an ideal self-concept. Early experiences in school partly can form the person's opinion of his or her potential capacity in the future. The ideal self may have an influence on the real self-concept, which in turn influences school achievement.

It can be said that a person's school achievement and a person's ideals are connected. This means that the reports given to students in school should be informative and very encouraging. This procedure includes the structure of self-fulfilling prophecies (Merton 1968; Rosenthal & Jacobson 1968).

8.5 Early Intervention

This research has proved that school achievement and self-concept are stable, and that the basic elements of school achievement and self-concept form at an early age. However, the consequences of the disability can be seen during the early adolescent phase. Children with clefts should be able to receive the early intervention programs suggested by Brennan (1987), who notes that linguistic problems may adversely affect the future school achievement of the child.

In consideration of these results, it can be said that the time of early intervention should be before school; ideally starting at the age of one, when the child's symbolic function begins. The child needs the model of language, linguistic interaction, and the support of a speech therapist and parents, as well as the multi-disciplinary team help of a dentist, surgeon and phoniatic personnel. Early intervention should happen all around the child and it should be part of his or her everyday life, as eco-cultural design demands. In an international study by Peterson-Falzone (1995, 125–128), she notes that children with clefts who have received team treatment had less speech problems than children without team treatment. Riski (1995, 109–113) describes multi-disciplinary teamwork and how it improves the speech of children with clefts. Schaefer (1995, 95–98) suggests that a team should be available to work with adolescents with cleft conditions, in order to intervene if any signs of problems in neuroendocrine and neurophysiologic functions are observed.

The supportive position of the school is also very important after early intervention, so that it can be said that the comprehensive school is truly able to offer equal opportunities to each child.

There is variation among early intervention programs: some concentrate on directly supporting socialisation, while others provide an indirect socialisation support system. The intervention strives to develop the self-image of the child through rehabilitation. Kalland (1995) made the first successful intervention in Finland among children with clefts, using a program that concentrated on the dyadic relations between infant and parents. Here, the dyadic relation was used as a basic element for intervention, as it has been found that the more parents feel guilty about having a disabled child, the weaker the process of adaptation will be for that child (Leskinen, 1994).

Korhonen (1993, 16–20) has developed the P-Y: Person–Environment rehabilitation design, in which the person is treated as an individual in the rehabilitation process. The P-Y design considers the variations between the social identity and personal identity of the child, and also considers the personal experience of the disability (Goffman, 1990.) The content of this intervention program is flexible, and will be different for males and females, and also for populations with visible and functional disadvantage.

Other intervention programs include the Boston parent's group, which works with children from the age of six years to adolescence. In the group, the parents of cleft children work actively to support the self-concept of their children (MacDonald 1979, 188–192.) An intervention program for teenage students, reported by Kapp-Simon (1995, 104–108) uses a program called the Self-Understanding Model, which actively promotes self-awareness.

8.6 Conclusions

This research can be seen as a missing link in the Finnish research tradition concerning cleft conditions. Lahti et al. (1972) studied social adaptation after the school years, and Kalland (1995) investigated early bonding processes and the dyadic relation. The results have international significance because Finland is one of the few countries in the world in which it is possible to gather detailed information on the entire age group population, all of whom attend comprehensive schools with equal education policies. It is to be hoped that this research will provide a new perspective for professionals involved with cleft conditions, one that considers the child as an individual, and not merely as an object of clinical treatment.

The Research Tasks were:

1. What is self-concept of children with clefts?
2. What is school achievement of children with clefts?
3. What happens to self-concept and school achievement after five years period?

This study shows that, in Finland, there are no significant differences between the cleft condition subgroups in self-concept or in school achievement. This can be attributed to the factor that the Finnish comprehensive school is an equal educational system, which is capable of promoting equality. Indeed, the results of this study directly oppose arguments, which are currently being made in favour of a return to the binary secondary school system.

The study also reveals the structural developmental change of self-concept from pre-adolescence to adolescence. It is possible to observe that puberty is needed as a compulsory element of personality development. This study also revealed the meaning of the ideal self as in the developmental framework of self-concept and school achievement.

This investigation supports theory on the developmental, multidimensional, and stable nature of self-concept, which was found to exist quite early in the dyadic relation and provides the developing child with a framework for personal development. Although the structure of school achievement may change, the level of school performance was found to be constant over the five-year period, and was most strongly related to the self-concept factor of intelligence-performance. The study also brings attention to the developmental adaptation process and the related psychosocial aspects of children with clefts.

As a deductive study, it can be said that the level of self-concept of children with oral clefts is relatively good. The results are very similar to those found in research of non-cleft Finnish adolescents.

Changes in the content of school achievement may be the consequence of adaptation and the development of the self-concept factor of intelligence-performance. We can only conclude that the adaptation process, which begins in the dyadic relation and gives direction to the whole life of the child, is an agent of change for the growing individual. After the formation of the developmental self-concept and the onset of the adaptation process, the child will require supportive relations during the years up to adulthood, and here the role of the parent or teacher is most important. It is also possible that the changes in the content of school achievement are consequences about learning disabilities related to the oral clefts. Through the school years the child will have feed back of his or her level of knowledge. Gradually, the child will learn which are his or her best school subjects. The student starts to avoid difficult subjects or turns his or her interests to subjects, which demand different kinds of skills and knowledge.

The study also revealed the structure of school achievement of boys and girls, and provided an explanation of how females have higher school grades than males. Exploratively, we can presume that the structure between school achievement and self-concept with non-clefted children is comparable to the structure of children with oral clefts.

The significant differences between overall self-concept and gender indicate that the adaptation of males is more effective than that of females. This result demands more public attention, especially when we consider ourselves to be living in an age of gender equality. Adaptation and the process of coming to terms with the challenges of life do not entail brilliant school achievement. When faced with this challenge, however, there is a measurable advantage in favour of students belonging to the male population. It seems that the patriarchal culture of western civilization is still more supportive of males than females. We know that our children are immersed in a complicated life, which consists of the family micro system and the cultural macro system, but we hope that these systems will change sufficiently to reverse this imbalance for the benefit everyone in our society.

8.7 Further Research

The study provides the following suggestions for further research:

1. What is the social placement of children with clefts (ex. drop out, employment, marriage, family structure)?

2. What is the meaning of the early intervention programme for the self-concept (a research of the development and testing of intervention programme)?

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Appendix 1—the Questionnaire

The following questionnaire was given to subjects in 1988 / 1993

Questions:

1. I am girl/boy

2. My age is _____ years

3. I have _____ CL _____ CPO _____ CLP

4. I am _____ grade

5. When I leave to school in the mornings it is

_____ nice _____ indifferent _____ unpleasant

6. Do you have headache, stomach pain, or nausea in the mornings?

headache _____ often _____ sometimes _____ never

stomach pain _____ often _____ sometimes _____ never

nausea _____ often _____ sometimes _____ never

7. What is your favourite subject at school?

8. Which number did you get about it to your last report?

9. About which subject did you get the best number?

10. What was the number?

11. The mean of your last report?

12. How many really good friends have you got?

13. Are you teasing at school because of you disability?

_____ often _____ sometimes _____ never

14. What kind of pupil you are?

_____ good one _____ average one _____ bad one

15. In what way you would like to be different?

16. What kind of hobbies you have got?

17. What is your favourite hobby?

18. Are you doing it _____ alone

_____ with soon class mates

_____ together with the kids in the neighbourhood

_____ together with the kids doing the same hobby

19. How old are your best friends as comparing to you?

_____ younger than you

_____ about the same age

_____ older than you

_____ some older, some younger

20. Are your best friends from home area, from school or from hobby area?

_____ home area

_____ school

_____ hobby area

21. Is your best friend a girl or a boy?

_____ girl _____ boy

22. Who are you admiring?

23. What phenomena are admiring about him/her?

24. Who of your class mates you like to have as your best friend?

25. Why?

CSEI-test

	True	False
1. I spend a lot of time daydreaming	_____	_____
2. I'm pretty sure of myself	_____	_____
3. I often wish I were someone else	_____	_____
4. I'm easy to like	_____	_____
5. My parents and I have a lot of fun together	_____	_____
6. I never worry about anything	_____	_____
7. I find it very hard to talk in front of the class	_____	_____
8. I wish I were younger	_____	_____
9. There are lots of things about myself I'd change if I could	_____	_____
10. I can make up my mind without too much trouble	_____	_____
11. I'm a lot of fun to be with me	_____	_____
12. I get upset easily at home	_____	_____
13. I always do the right thing	_____	_____
14. I'm proud of my schoolwork	_____	_____
15. Someone always has to tell me what to do	_____	_____
16. It takes me a long time to get used to anything-new	_____	_____
17. I are often sorry for the things I do	_____	_____
18. I'm popular with kids my own age	_____	_____
19. My parents usually consider my feelings	_____	_____
20. I'm never unhappy	_____	_____
21. I'm doing the best work that I can	_____	_____
22. I give in very easily	_____	_____
23. I can usually take care of myself	_____	_____

-
- | | | | |
|-----|---|-------|-------|
| 24. | I'm pretty happy | _____ | _____ |
| 25. | I would rather play with children younger than me | _____ | _____ |
| 26. | My parents expect too much of me | _____ | _____ |
| 27. | I like everyone I know | _____ | _____ |
| 28. | I like to be called on in class | _____ | _____ |
| 29. | I understand myself | _____ | _____ |
| 30. | It's pretty tough to be me | _____ | _____ |
| 31. | Things are all mixed up in my life | _____ | _____ |
| 32. | Kids usually follow my ideas | _____ | _____ |
| 33. | No one pays much attention to me at home | _____ | _____ |
| 34. | I never get scolded | _____ | _____ |
| 35. | I'm not doing as well in school as I'd like to | _____ | _____ |
| 36. | I can make up my mind and stick to it | _____ | _____ |
| 37. | I really don't like to being a boy-girl | _____ | _____ |
| 38. | I have a low opinion of myself | _____ | _____ |
| 39. | I don't like to be with other people | _____ | _____ |
| 40. | There are many times when I'd like to leave home | _____ | _____ |
| 41. | I'm never shy | _____ | _____ |
| 42. | I often feel upset in school | _____ | _____ |
| 43. | I often feel ashamed of myself | _____ | _____ |
| 44. | I'm not as nice looking as most people | _____ | _____ |
| 45. | If I have something to say, I usually say it | _____ | _____ |
| 46. | Kids pick on me very often | _____ | _____ |
| 47. | My parents understand me | _____ | _____ |
| 48. | I always tell the truth | _____ | _____ |
| 49. | My teacher makes me feel I'm not good enough | _____ | _____ |
| 50. | I don't care what happens to me | _____ | _____ |
| 51. | I'm a failure | _____ | _____ |
| 52. | I get upset easily when I scolded | _____ | _____ |
| 53. | Most people are better liked than I am | _____ | _____ |
| 54. | I usually feel as if my parents are pushing me | _____ | _____ |
| 55. | I always know what to say to people | _____ | _____ |
| 56. | I often get discouraged in school | _____ | _____ |
| 57. | Things usually don't bother me | _____ | _____ |
| 58. | I can't be depended on | _____ | _____ |

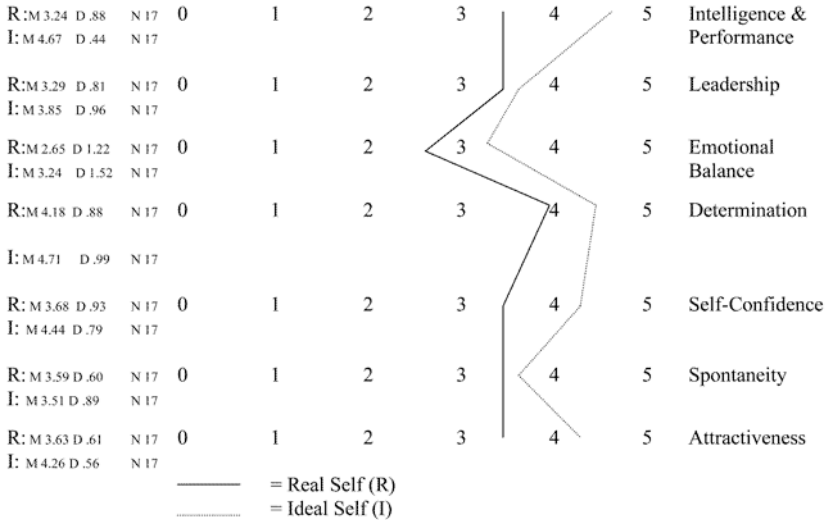
Real and Ideal self

hard working	_____	less hard working
not very intelligent	_____	intelligent
Talented	_____	only average
likes to lead others	_____	likes to follow directions
Peaceful	_____	lively
Constrained	_____	unconstrained
Charming	_____	not charming
emotion centred	_____	pragmatic
Shy	_____	sociable
satisfied with	_____	not satisfied
Appearance	_____	with appearance
Talkative	_____	quiet
disturb during lessons	_____	actively engaged in lessons
Popular	_____	not very popular
easily tired	_____	lasting
Worried	_____	care free
similar to most	_____	different than
Classmates	_____	most of class mates
hard working	_____	less hard working
not very intelligent	_____	intelligent

Appendix 2—Line Figures of Each Disability and Gender

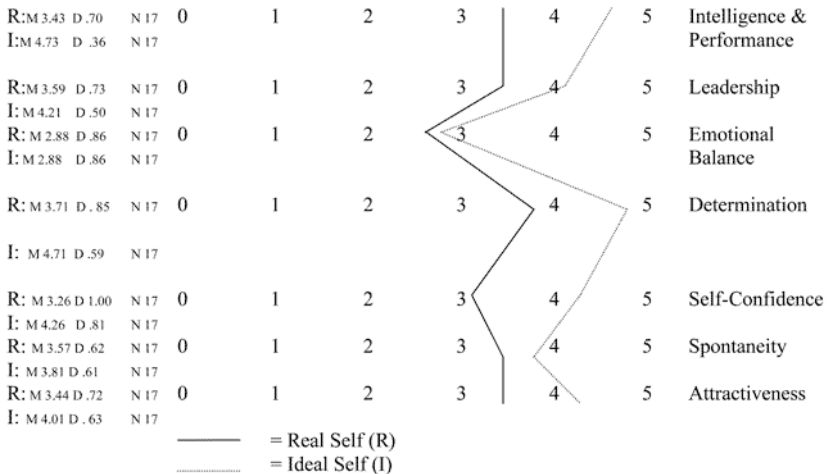
CHARACTERISTIC OF SELF

REAL AND IDEAL SELF OF CLEFT LIP BOYS IN 1988

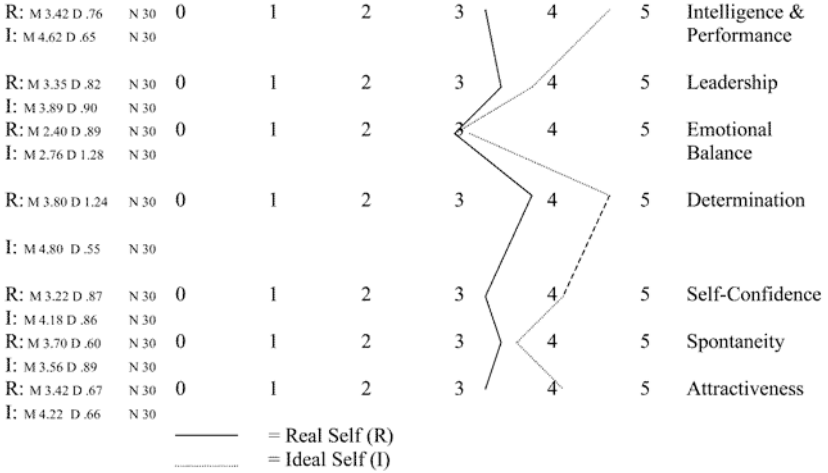


CHARACTERISTIC OF SELF

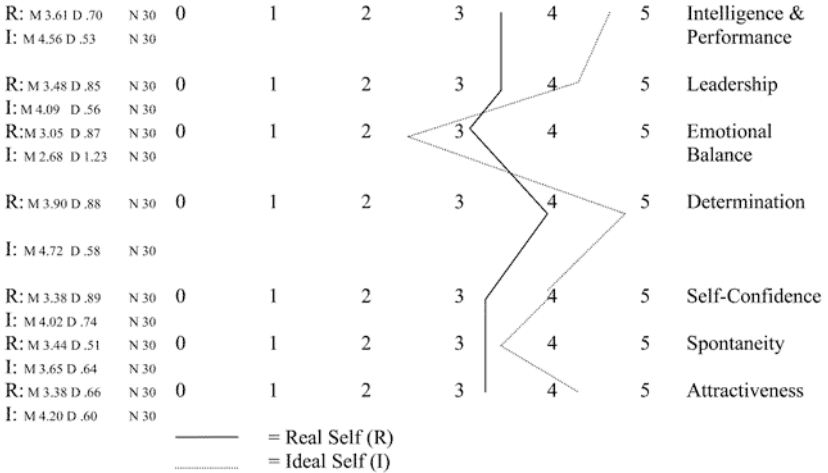
REAL AND IDEAL SELF OF CLEFT LIP BOYS IN 1993



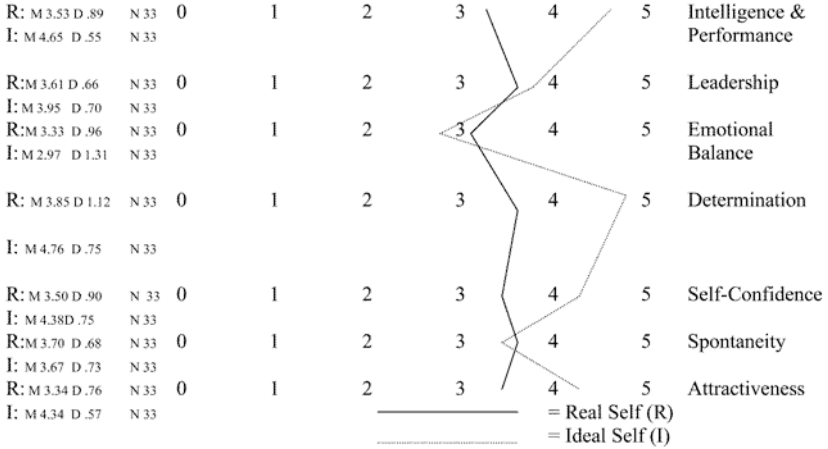
**CHARACTERISTIC OF SELF
REAL AND IDEAL SELF OF CLEFT PALATE BOYS IN 1988**



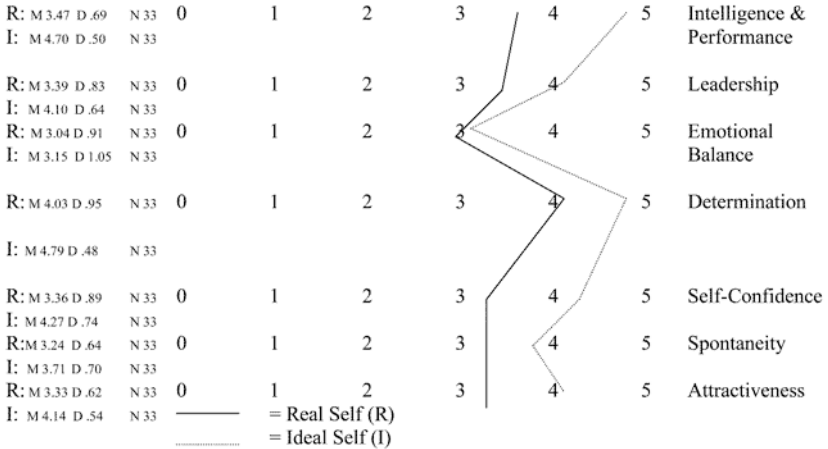
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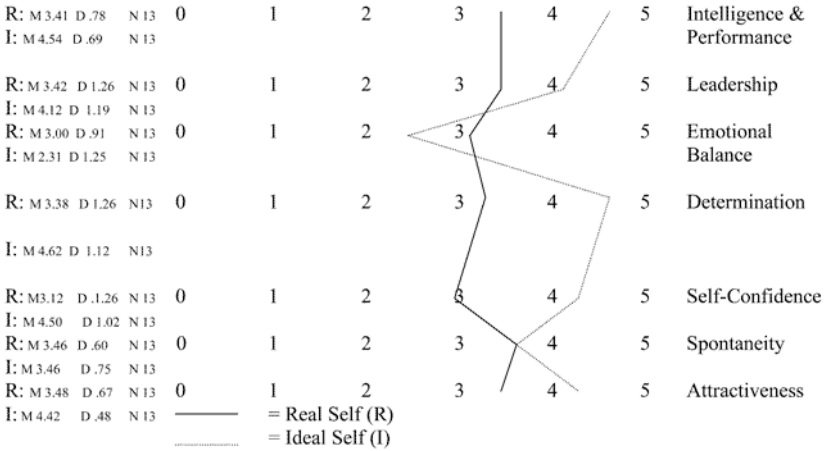
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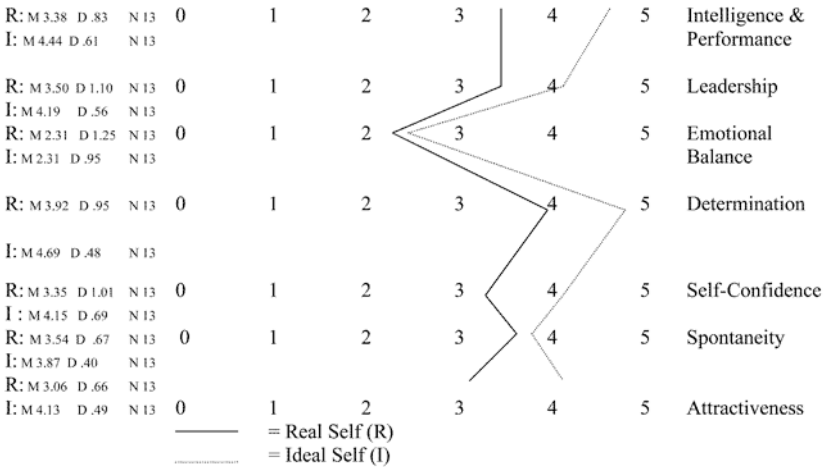
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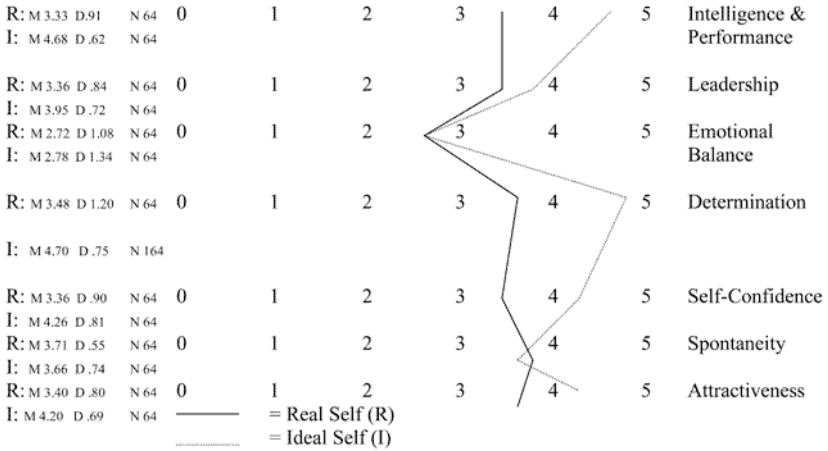
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REAL AND IDEAL SELF OF CLEFT LIP GIRLS IN 1988**



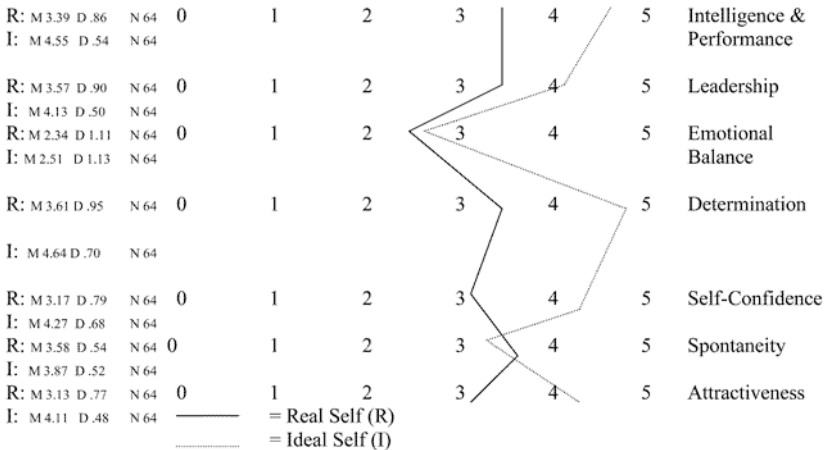
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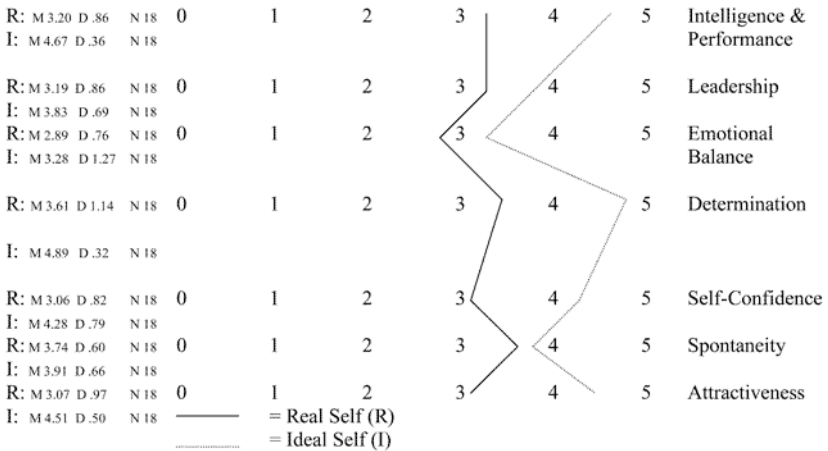
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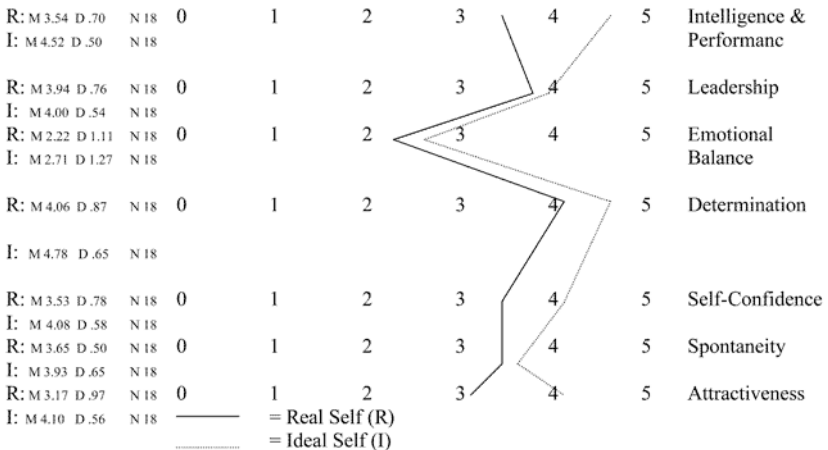
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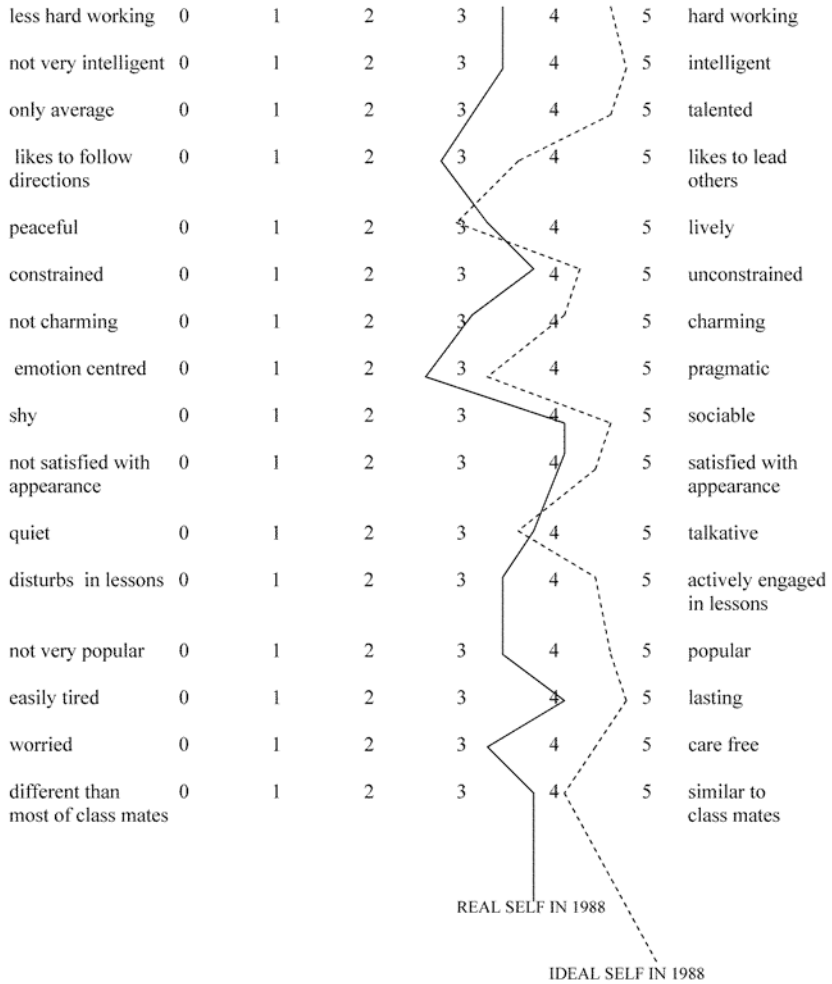
**CHARACTERISTIC OF PERSONALITY
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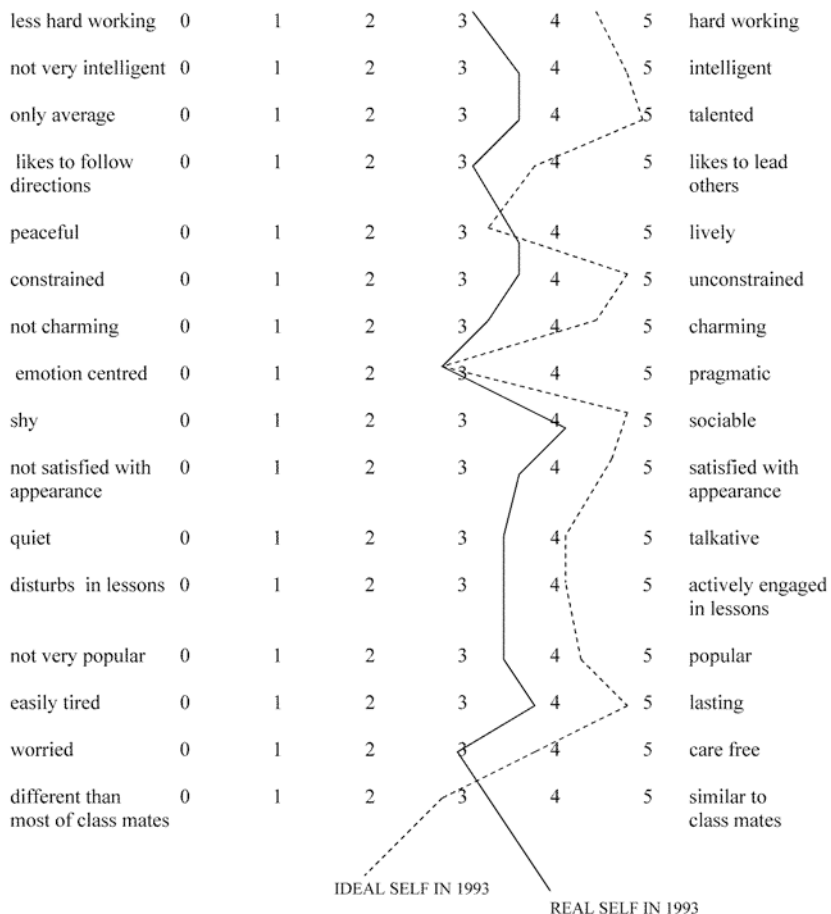
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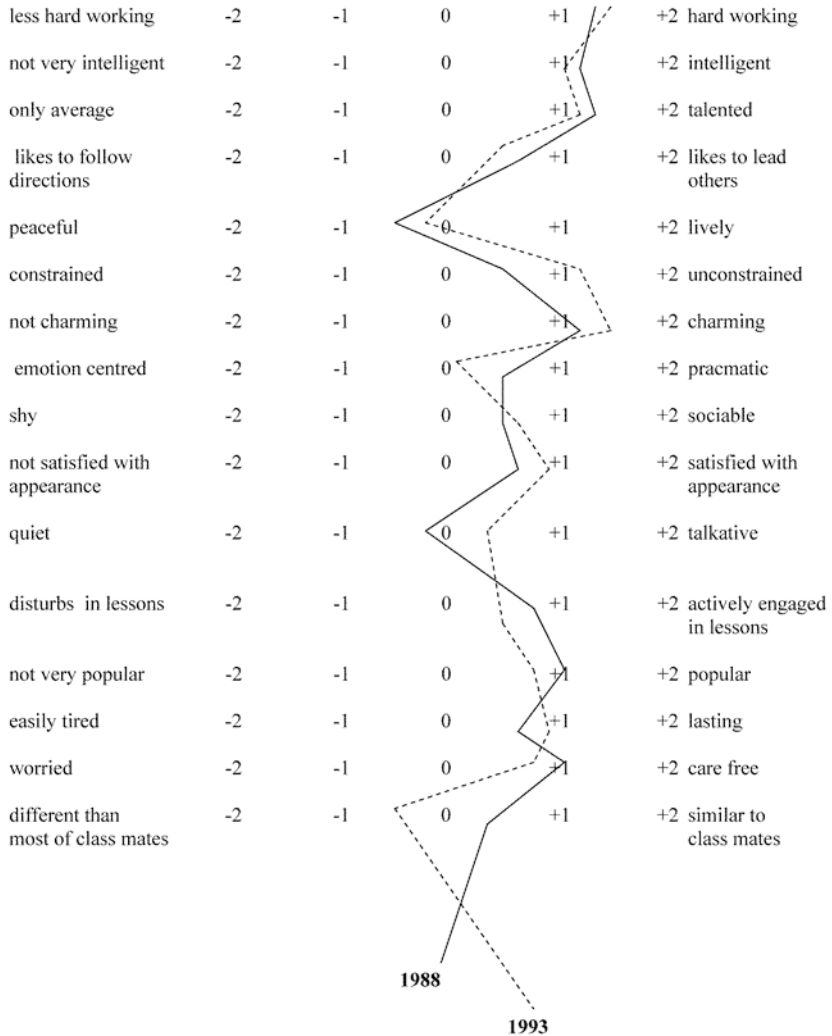
REAL AND IDEAL SELF OF CLEFT LIP BOYS IN 1988



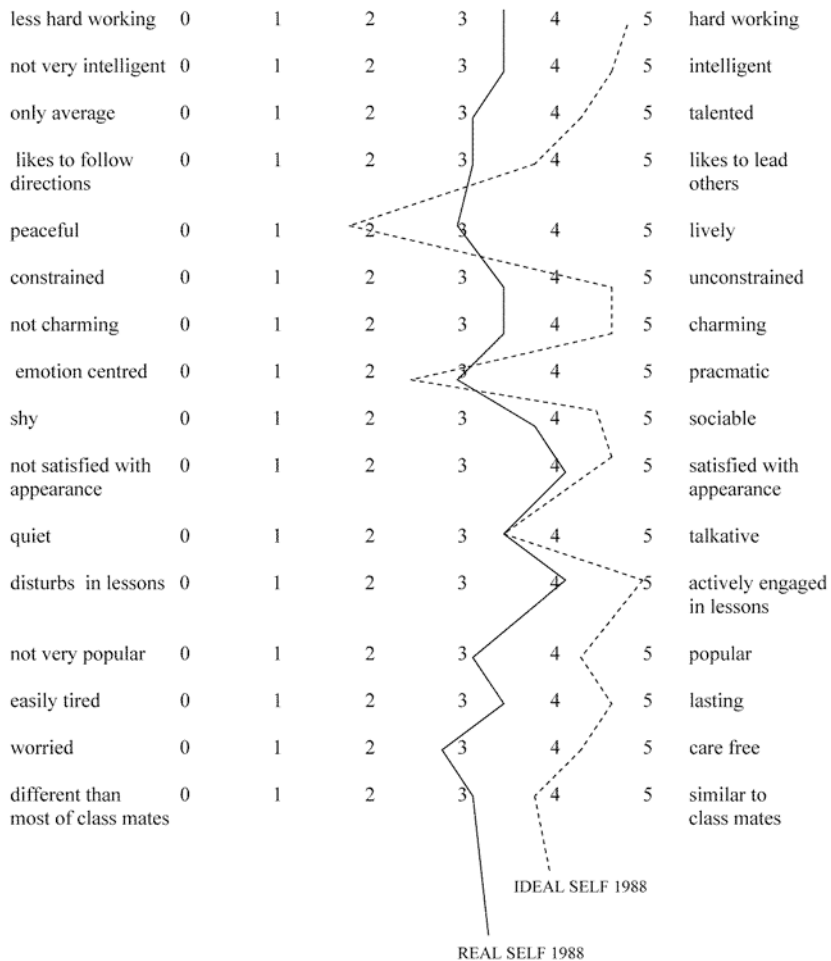
REAL AND IDEAL SELF OF CLEFT LIP BOYS IN 1993



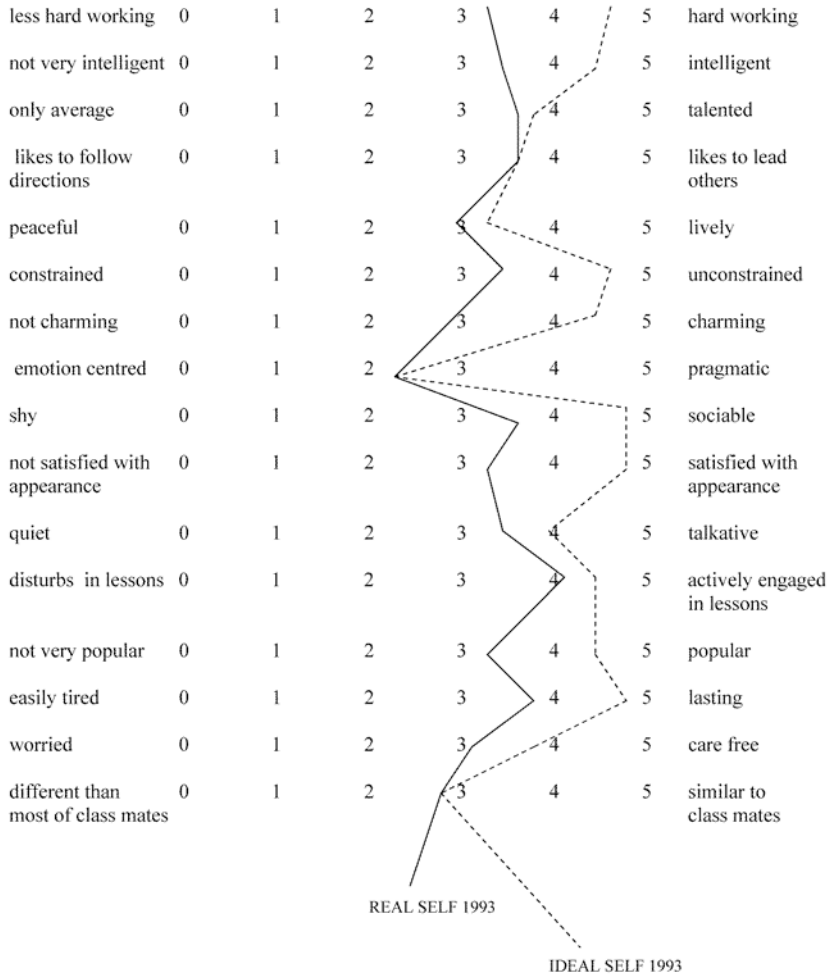
DISCREPANCIES OF REAL AND IDEAL SELF AMONG CLEFT LIP BOYS IN 1988 AND 1993



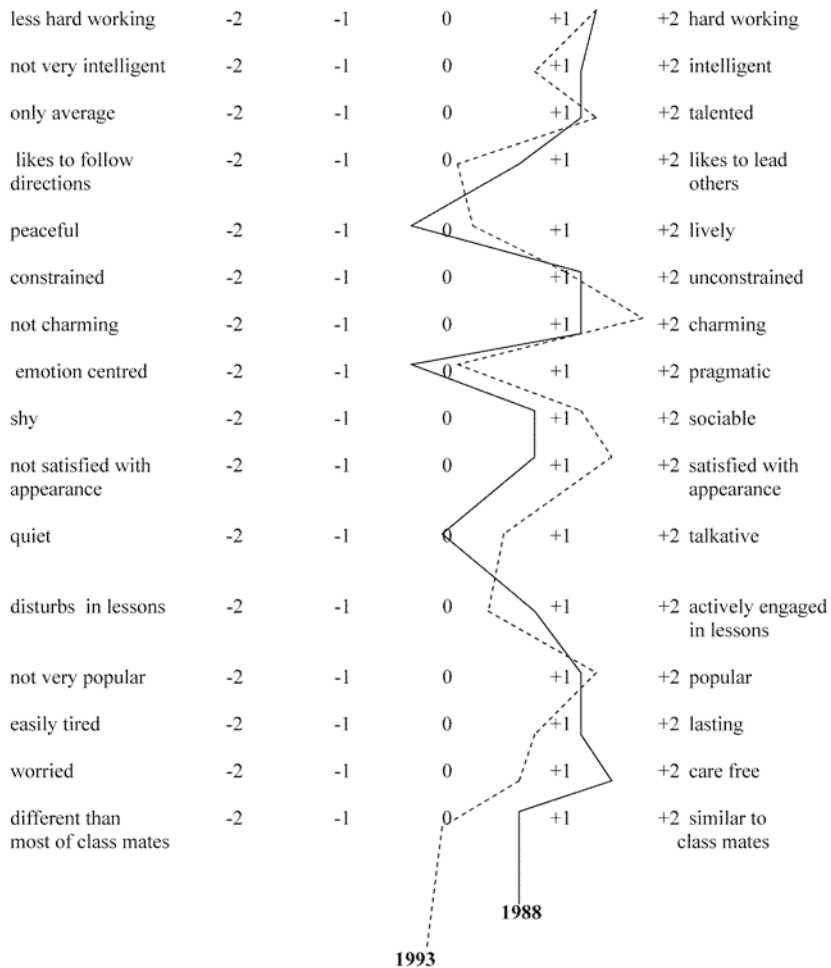
REAL AND IDEAL SELF OF CLEFT LIP GIRLS IN 1988



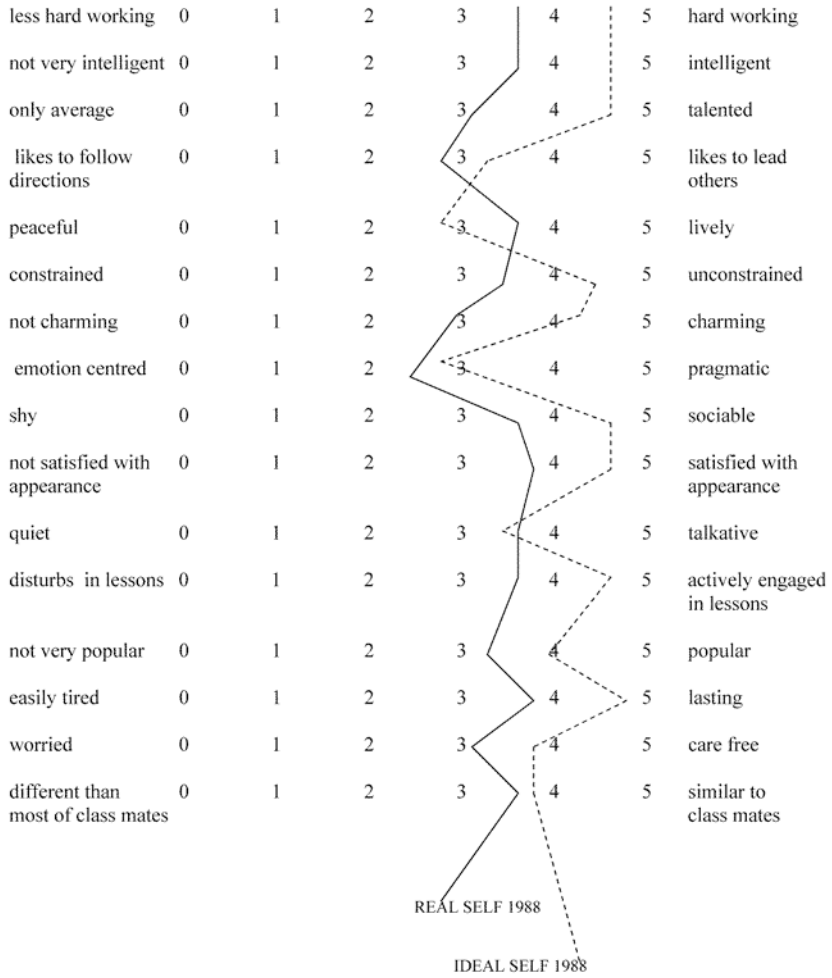
REAL AND IDEAL SELF OF CLEFT LIP GIRLS IN 1993



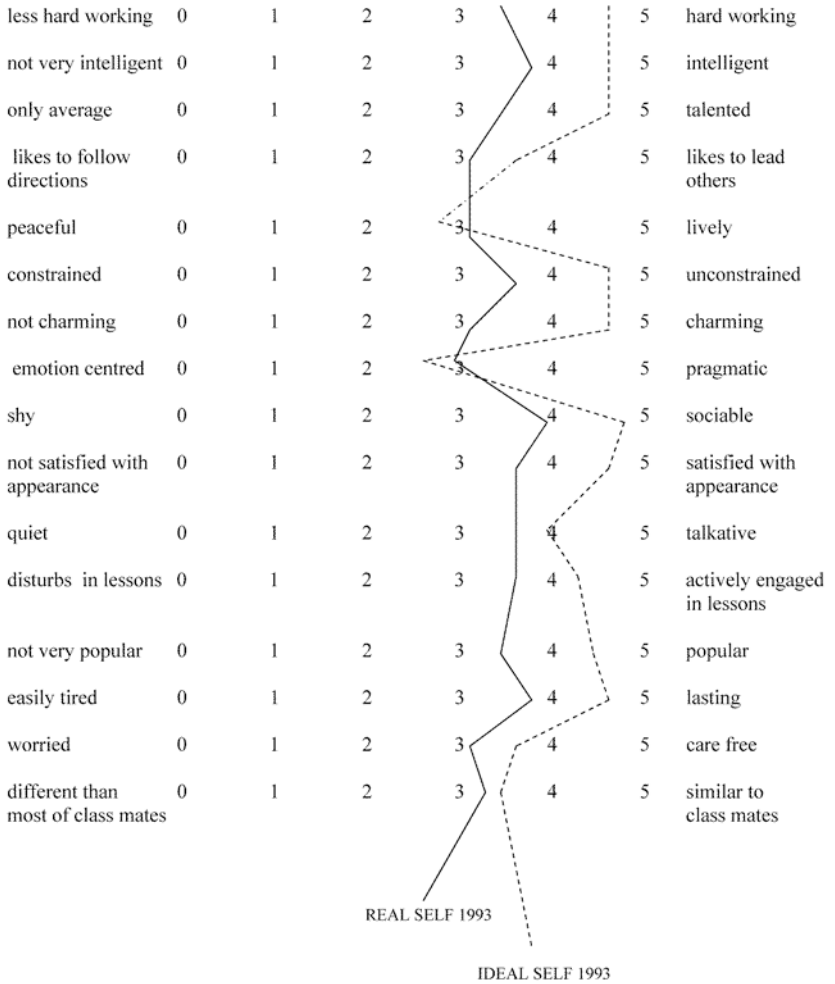
DISCREPANCIES OF REAL AND IDEAL SELF AMONG CLEFT LIP GIRLS IN 1988 AND 1993



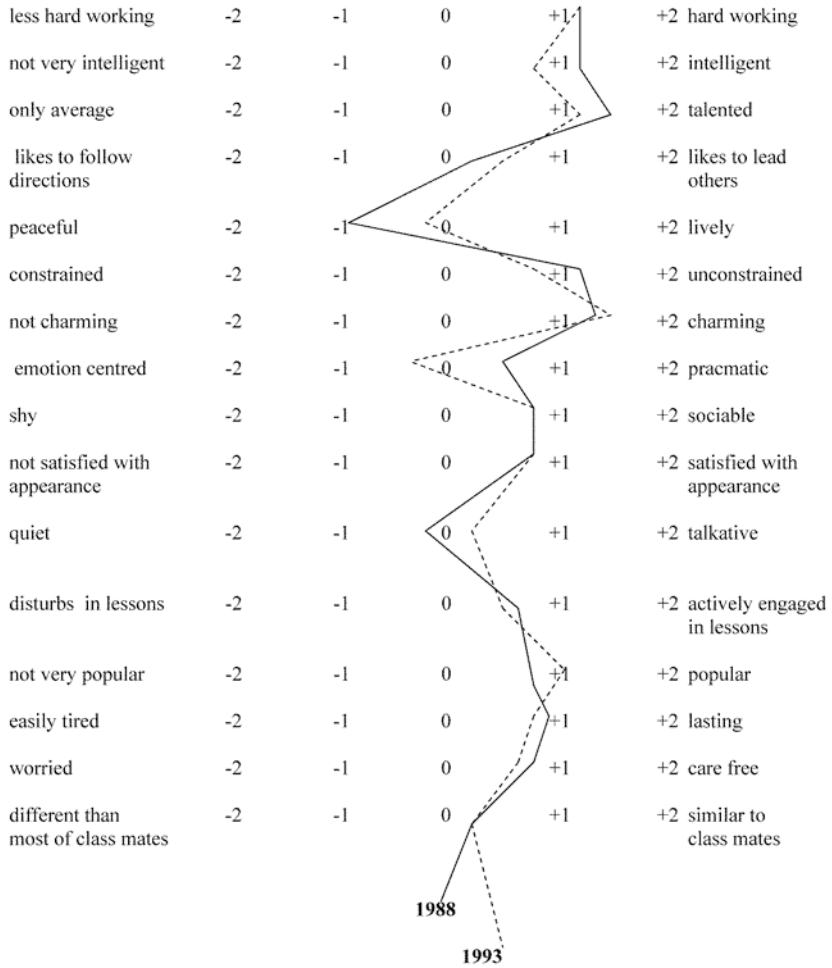
REAL AND IDEAL SELF OF CLEFT PALATE BOYS IN 1988



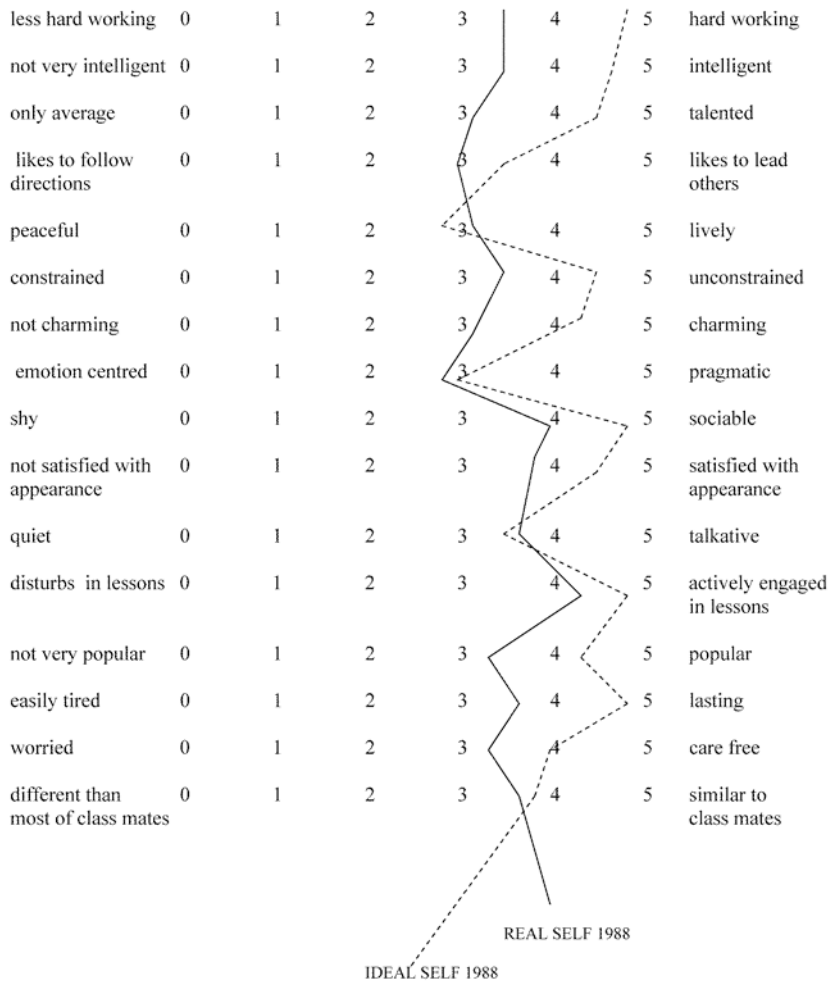
REAL AND IDEAL SELF OF CLEFT PALATE BOYS IN 1993



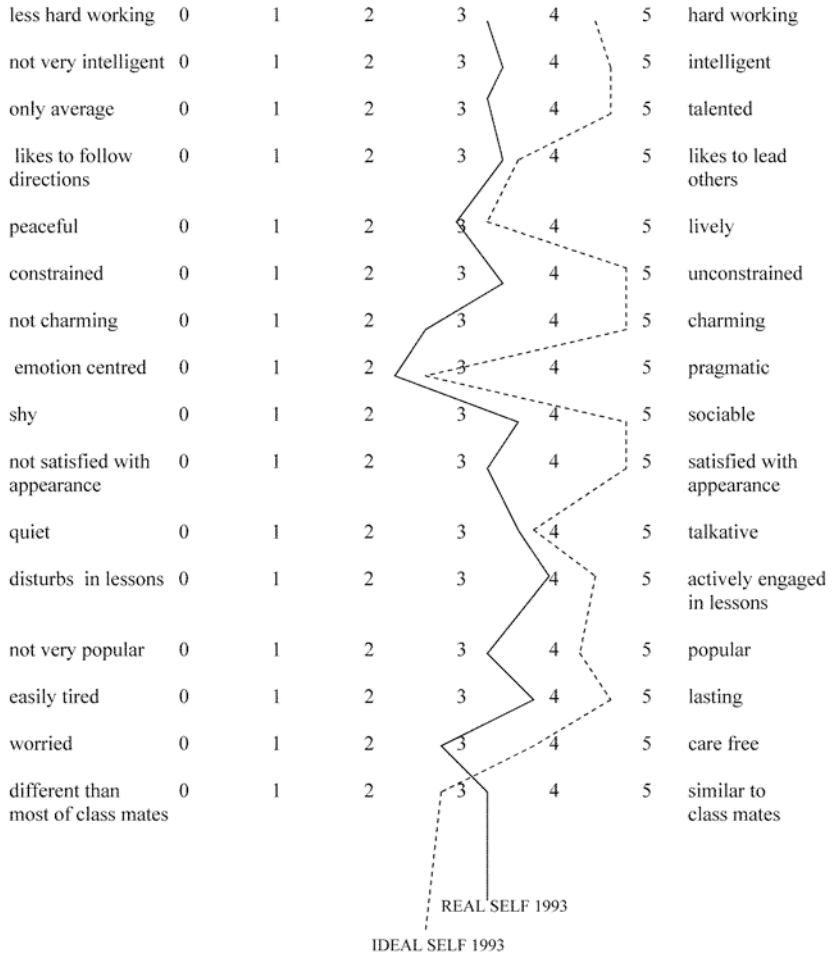
DISCREPANCIES OF REAL AND IDEAL SELF AMONG CLEFT PALATE BOYS IN 1988 AND 1993



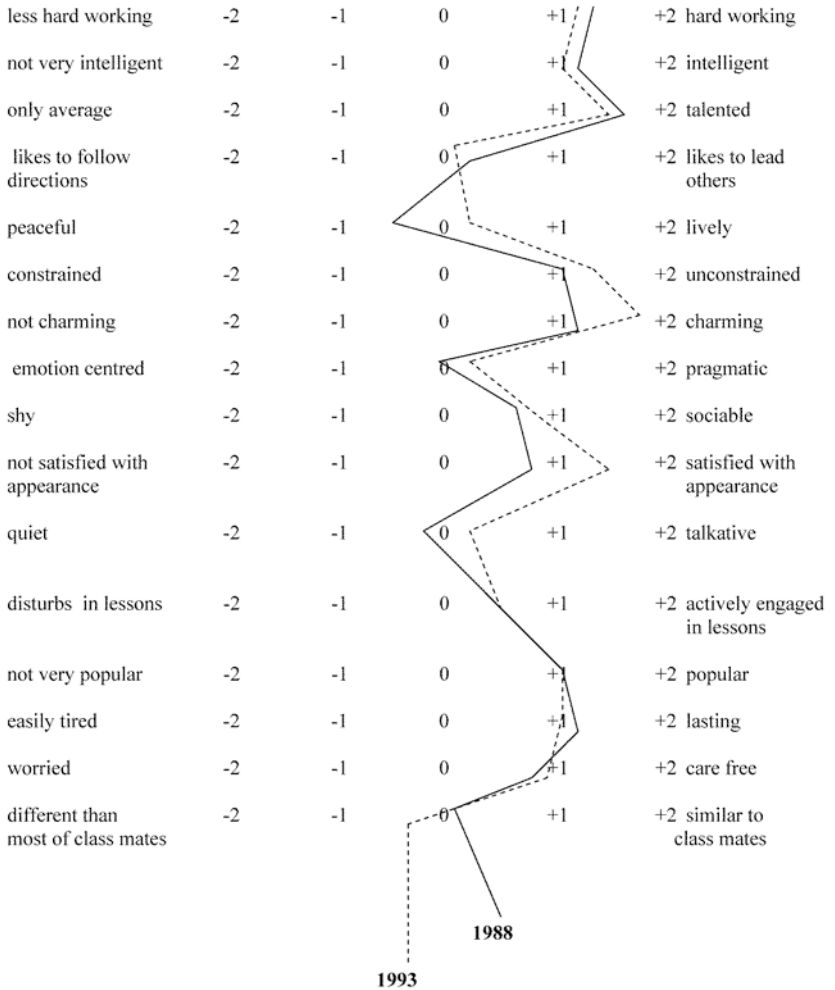
REAL AND IDEAL SELF OF CLEFT PALATE GIRLS IN 1988



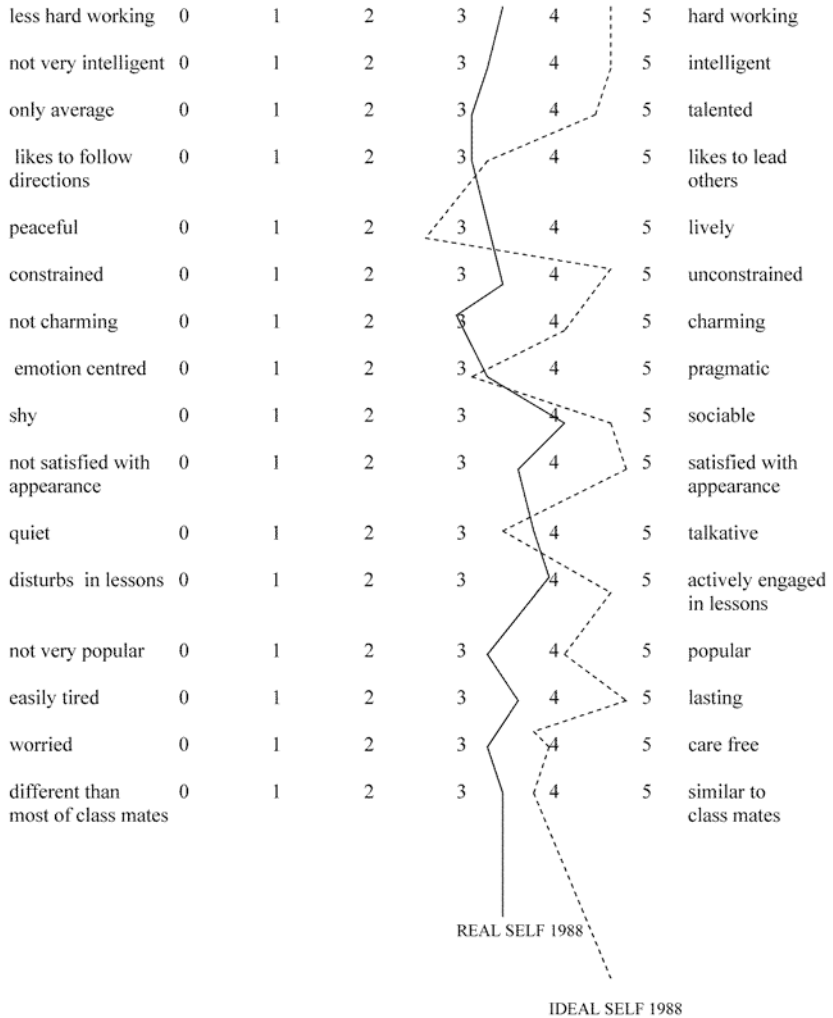
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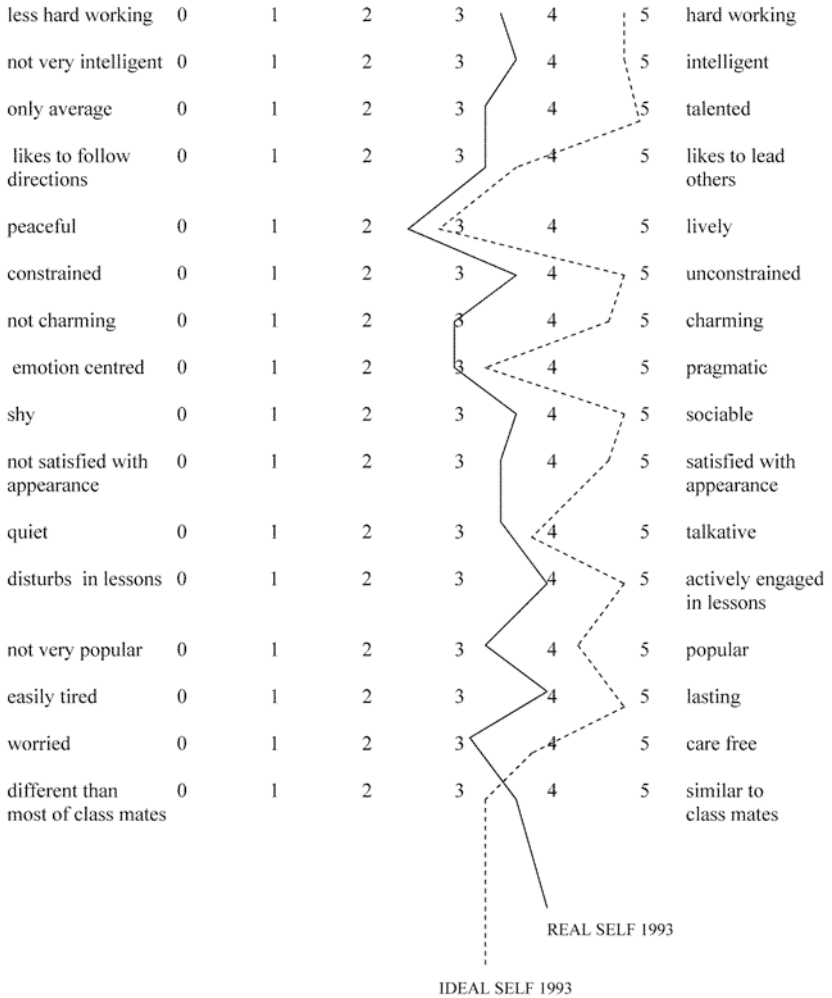
DISCREPANCIES OF REAL AND IDEAL SELF AMONG CLEFT PALATE GIRLS IN 1988 AND 1993



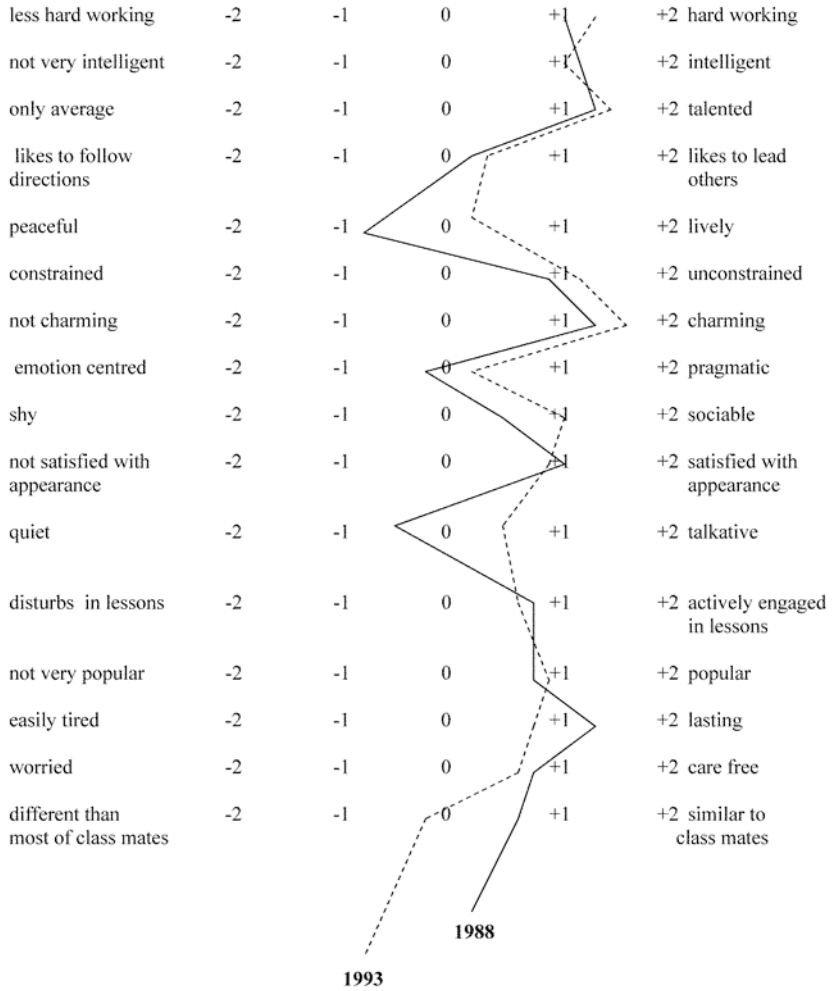
REAL AND IDEAL SELF OF CLEFT LIP AND PALATE BOYS IN 1988



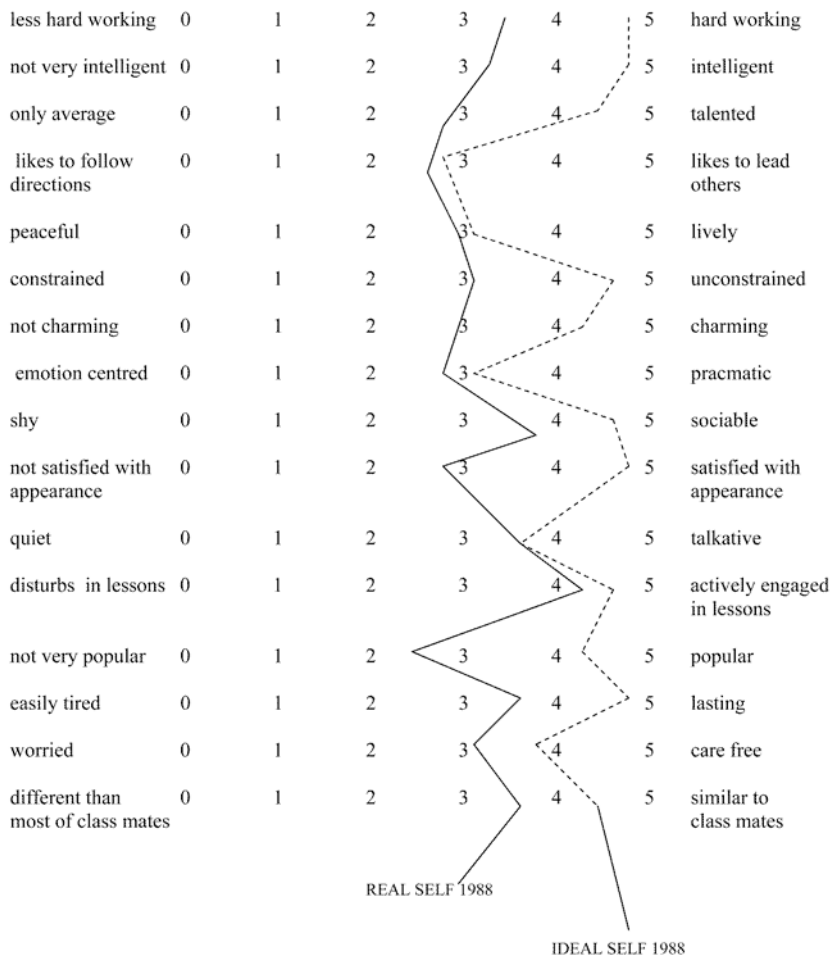
REAL AND IDEAL SELF OF CLEFT LIP AND PALATE BOYS IN 1993



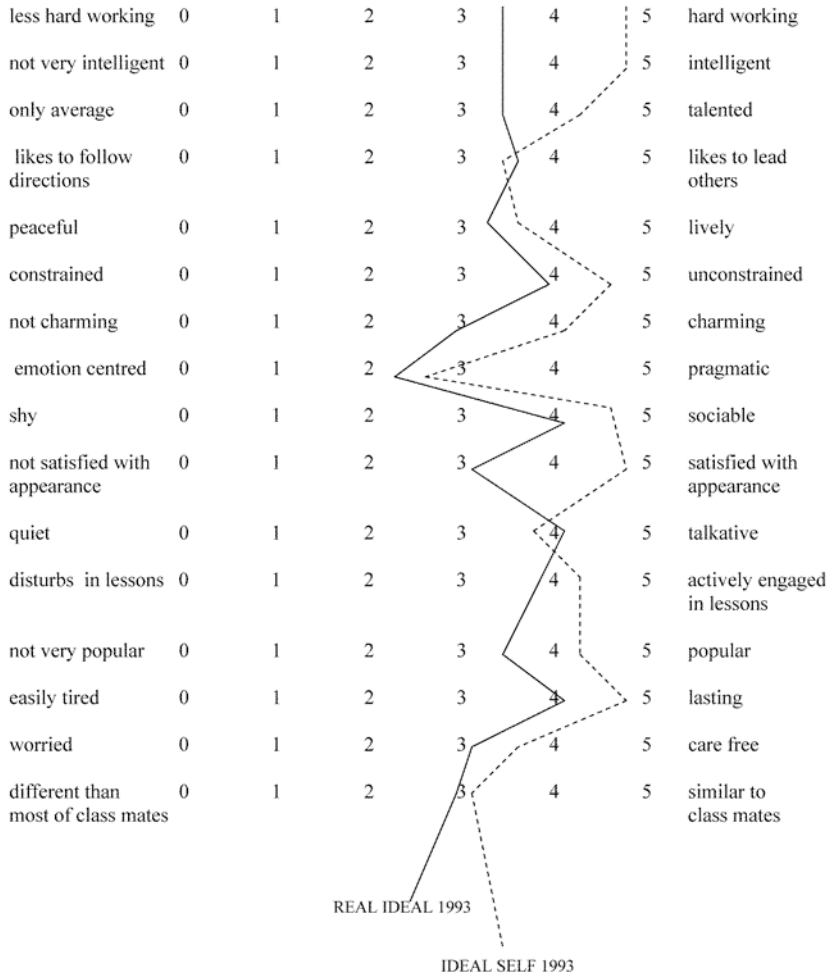
DISCREPANCIES OF REAL AND IDEAL SELF AMONG CLEFT LIP AND PALATE BOYS IN 1988 AND 1993



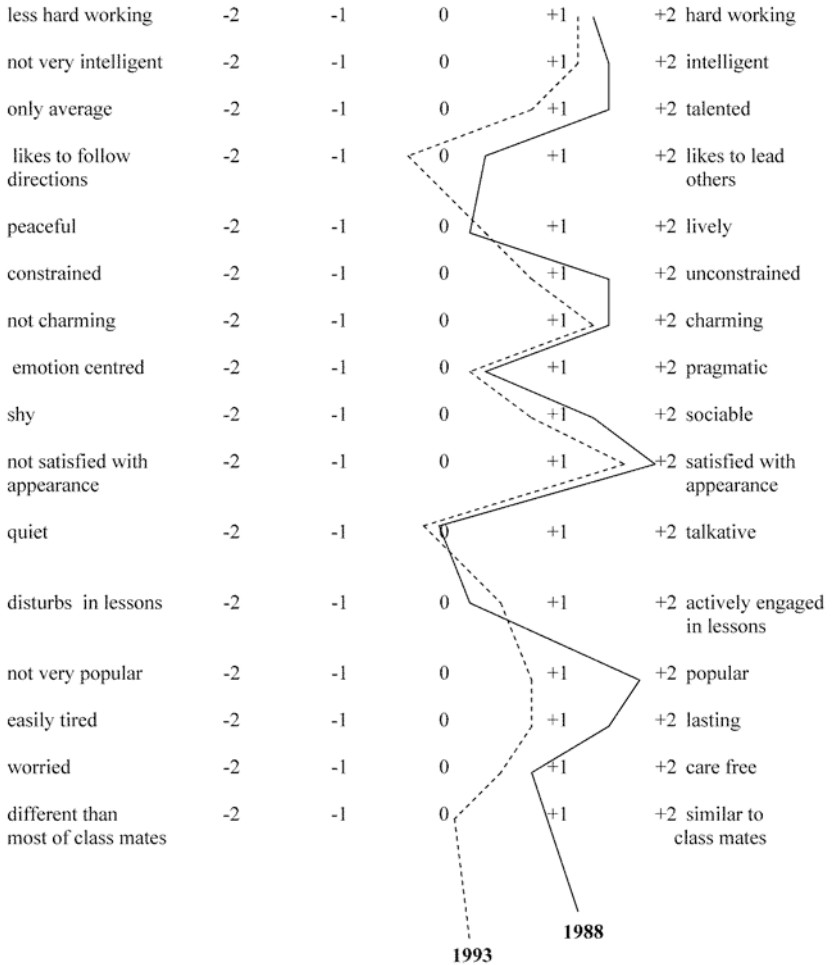
REAL AND IDEAL SELF OF CLEFT LIP AND PALATE GIRLS IN 1988



REAL AND IDEAL SELF OF CLEFT LIP AND PALATE GIRLS IN 1993



DISCREPANCIES OF REAL AND IDEAL SELF AMONG CLEFT LIP AND PALATE GIRLS IN 1988 AND 1993



Appendix 3—Correlation Matrix

Correlation matrix of characteristics of personality—ordinary		Report 88	Report 93	Intellig. 88 / real	Leadershi 88 / r	Emotion 88 / r	Self-Conf 88 / r	Spontaneit 88 / r	Attract. 88 / r	Intellig. 88 / ideal	Leadershi 88 / i	Emotion 88 / i	Self-Conf 88 / i	Spontaneit 88 / i	Attract. 88 / i																	
correlation matrix	Report 88	1.000	.490	.437	.091	.032	.107	-.098	-.019	.168	.106	.006	.059	.160	.026	-.034	.040	.264	.153	.003	.137	.013	.166	.024	.257	.115	.111	.181	.107	.063	.065	
	Report 93	.490	1.000	.343	.086	.098	-.106	.087	-.009	.111	.090	.084	.094	.078	.071	-.024	.071	.371	.214	.092	.174	-.135	.255	.056	.122	.147	.057	.011	-.002	.062	-.018	
	Intellig. 88 / real	.437	.343	1.000	.312	.145	.325	.150	.075	.403	.239	.104	.120	.281	.094	.102	.153	.423	.061	.032	.227	.131	.190	.168	.164	.034	-.006	.072	.037	.087	.057	
	Leadershi 88 / r	.091	.086	.312	1.000	.012	.232	.253	.343	.238	.181	.430	-.090	.249	.087	.246	.137	.197	.268	-.008	.161	-.125	.173	.161	.069	.032	.047	-.072	-.136	.018	-.100	
	Emotional Balance 88 / r	.032	.098	.145	.012	1.000	.084	.095	.022	-.010	.103	.049	.346	.067	.103	.027	.074	.038	.057	.191	-.037	.061	.015	.043	-.036	.059	.083	-.051	.047	.042	.019	
	Determinat. 88 / r	.107	.106	.325	.084	1.000	.256	.069	.196	.250	.190	-.29	.183	.082	.108	.090	.224	.123	.020	.022	-.137	.035	.100	.064	-.020	-.073	.120	.013	.092	.010	.010	
	Self-Confidence 88 / r	-.098	.087	.150	.253	.095	.286	1.000	.146	.180	.120	.187	.021	.083	.274	.033	.176	.176	.080	.162	.356	.145	.133	-.041	.025	.075	.008	-.006	.162	.057	.010	.047
	Spontaneity 88 / r	-.019	-.009	.075	.343	.022	.069	.146	1.000	.081	.030	.105	.135	.051	.128	.506	.004	.086	.230	-.032	.104	.140	.302	.026	.085	.059	-.071	-.080	-.053	.010	.047	
	Attractiv. 88 / r	.168	.111	.403	.238	-.010	.196	.180	.081	1.000	.009	.017	.055	.093	.055	.078	.010	.198	.113	.003	.134	.154	.157	.248	.053	-.021	.096	.076	-.073	.043	.074	
	Intellig. 88 / ideal	.106	.090	.239	.181	.103	.250	.120	.030	.009	1.000	.372	.087	.539	.268	.109	.554	.022	.098	-.129	-.037	-.028	.084	.063	.161	.057	-.062	.020	.045	.184	.027	
	Emotional Balance 88 / i	.059	.094	.120	-.090	.346	.029	.021	.135	.055	.087	-.061	1.000	-.014	-.029	.037	.066	.005	.003	.103	-.069	.136	.033	-.025	.072	.062	.142	.085	.027	.091	.046	
	Determinat. 88 / i	.160	.078	.281	.249	.067	.183	.083	.051	.093	.539	.268	-.014	1.000	.236	.084	.378	.002	.170	-.103	.006	.037	.071	.030	.046	.023	-.083	-.015	-.084	.016	.003	
	Self-Confidence 88 / i	.026	.071	.094	.087	-.103	.082	.274	.128	-.055	.268	.143	-.029	.236	1.000	.113	.243	-.026	.026	-.066	.122	.089	.043	-.068	.000	-.095	-.078	.010	.184	.063	.015	
	Spontaneity 88 / i	.040	.071	.153	.137	.074	.090	.033	.007	.010	.554	.325	.066	.378	.243	1.27	1.000	.007	.065	-.186	.007	.065	-.186	.007	.065	-.186	.007	.065	-.186	.007	.065	
	Attractiv. 88 / i	.264	.371	.423	.197	.038	.224	.176	.086	.198	.022	.001	.005	.002	-.026	.071	.007	1.000	.341	.309	.538	.299	.179	.410	.227	.193	.145	-.102	-.041	.066	.108	
	Intellig. 93 / real	.153	.214	.061	.268	.057	.123	.176	.230	.113	.098	.120	.003	.170	.026	.165	.065	.341	1.000	-.015	.274	.391	.520	.366	.079	.396	.051	.128	.026	.156	.054	
	Emotional Balance 93 / r	.003	.292	.032	-.008	.191	-.020	.080	-.032	-.003	-.129	-.054	.103	-.103	-.066	-.078	-.186	.309	-.015	1.000	.249	.182	-.079	.071	.044	.063	.553	.019	-.072	.009	.030	
	Determinat. 93 / r	.137	.174	.227	.161	-.037	.223	.162	.104	.134	-.037	.069	-.069	.006	.122	.074	.007	.538	.274	.249	1.000	.381	.225	.349	.159	.081	.120	.319	.118	.123	.212	
	Self-Confidence 93 / r	.013	.135	.131	.125	.061	.137	.356	.140	.154	.028	.031	.136	.037	.089	.130	-.045	.299	.391	.182	.388	1.000	.342	.348	.001	.129	.146	.163	.306	.084	.212	
	Spontaneity 93 / r	-.166	.255	.190	.173	.015	.035	.145	.302	.157	.084	-.012	.033	.071	.043	.259	.052	.179	.520	.079	.225	1.000	.230	.152	.307	-.008	.055	.136	.365	.126		
	Attr 93 / r	.024	.056	.168	.161	.0043	.106	.133	.026	.248	.063	-.091	-.025	.030	-.068	.046	.000	.410	.366	.071	.349	.348	.230	1.000	.143	.089	.075	.146	.025	.155	.268	
	Intellig. 93 / ideal	.257	.122	.164	.069	-.036	.064	.041	.085	.053	.161	.081	.072	.046	.000	.054	.111	.227	.079	.044	.159	.001	.152	.143	1.000	.247	.085	.303	.093	.112	.284	
	Leadership Balance 93 / i	.115	.147	.034	.032	.059	.020	.025	.059	-.021	.057	.118	.062	.023	-.095	.168	.114	.193	.396	.063	.081	.129	.307	.089	.247	1.000	.058	.163	.102	.226	.182	
	Emotional Balance 93 / i	.111	.057	.006	.047	-.083	.073	-.075	-.071	.096	-.062	.019	-.142	-.083	-.048	-.072	.145	.051	.553	.120	.146	-.008	.075	-.085	.058	1.000	.018	.006	-.022	-.015		
	Determinat. 93 / i	.181	.011	.072	-.072	-.051	.120	.008	-.080	.076	.020	-.070	.085	-.015	.010	.140	.155	.102	.128	.019	.319	.163	.055	.146	.303	.163	0.18	1.000	.318	.269	.319	
	Self-Confidence 93 / i	.107	-.002	.037	-.136	.047	.013	-.006	-.053	-.073	.045	-.065	.027	-.084	.184	-.061	.005	-.041	.026	-.072	.118	.309	.136	-.025	.093	.102	-.006	.318	1.000	.183	.292	
	Spontaneity 93 / i	.063	.062	.087	.018	.042	.092	.162	.010	.043	.184	.039	.091	.016	.003	.249	.228	.006	.156	.009	.123	.084	.365	.155	.112	.226	-.022	.269	.183	1.000	.166	
	Attractiv. 93 / i	.065	-.018	.057	.100	.019	.010	.057	.047	.074	.027	.005	.046	.003	.015	.030	.108	.054	.030	.122	.126	.268	.284	.183	-.015	.319	.292	.166	1.000	.100		

Correlation matrix of general self—ordinary

correlation matrix-SELF	School Achievement -88	School Achievement -93	Real Self -88	Ideal Self -88	Real Self -93	Ideal Self -93
School Achievement -88	1.00	.490	.232	.067	.173	.220
School Achievement -93	.490	1.00	.232	.105	.290	.094
Real Self -88	.232	.232	1.00	.353	.417	.120
Ideal Self -88	.067	.105	.353	1.00	.079	.185
Real Self -93	.173	.290	.417	.079	1.00	.378
Ideal Self -93	.220	.094	.120	.185	.378	1.00

Correlation matrix of general self—partial correlation

partial correlation matrix-SELF	School Achievement -88	School Achievement -93	Real Self -88	Ideal Self -88	Real Self -93	Ideal Self -93
School Achievement -88	1.0000	.4681	.1653	-.0776	-.1038	.2210
School Achievement -93	.4681	1.0000	.0109	.0782	.2361	-.1222
Real Self -88	.1653	.0109	1.0000	.3664	.4025	-.1430
Ideal Self -88	-.0776	.0782	.3664	1.0000	-.1611	.2095
Real Self -93	-.1038	.2361	.4025	-.1611	1.0000	.3890
Ideal Self -93	.2210	-.1222	-.1430	.2095	.3890	1.0000

Correlation matrix of school variables—ordinary

Correlation matrix of school variables—ordinary

Correlation Matrix	Report 88	Report 93	Best Subject 88	Best Subject 93	Number of Best Sub. 88	Number of Best Sub. 93	Favourite Subject 88	Favourite Subject 93	Number of Fav. Sub. 88	Number of Fav. Sub. 93
Report 88	1.00	.490	-.112	-.171	.601	.302	-.104	-.022	.532	.324
Report 93	.490	1.00	-.101	-.311	.482	.459	.002	-.201	.393	.525
Best Subject 88	-.112	-.101	1.00	-.099	-.057	-.079	.226	.039	.004	.003
Best Subject 93	-.171	-.311	-.099	1.00	-.131	-.019	.000	.190	-.186	-.071
Number of Best Sub. 88	.601	.482	-.057	-.131	1.00	.224	-.077	-.015	.555	.251
Number of Best Sub. 93	.302	.459	-.079	-.019	.224	1.00	.008	-.010	.155	.702
Favourite Subject 88	-.104	.002	.226	.000	-.077	.008	1.00	-.058	-.127	-.024
Favourite Subject 93	-.022	-.201	.039	.190	-.015	-.010	-.058	1.00	-.072	-.072
Number of Fav. Sub. 88	.532	.393	.004	-.186	.555	.155	-.127	-.072	1.00	.209
Number of Fav. Sub. 93	.324	.525	.003	-.071	.251	.702	-.024	-.072	.209	1.00

Correlation matrix of school variables—partial correlation

Correlation matrix of school variables—partial correlation

Partial Correlation Matrix	Report 88	Report 93	Best Subject 88	Best Subject 93	Number of Best Sub. 88	Number of Best Sub. 93	Favourite Subject 88	Favourite Subject 93	Number of Fav. Sub. 88	Number of Fav. Sub. 93
Report 88	1.0000	.1444	-.0946	-.0541	.3492	.0687	-.0338	.0603	.2661	.0499
Report 93	.1444	1.0000	-.1253	-.2749	.2348	.1399	.0860	-.1669	.0831	.2776
Best Subject 88	-.0946	-.1253	1.0000	-.1476	.0105	-.0894	.2418	.0671	.0948	.1341
Best Subject 93	-.0541	-.2749	-.1476	1.0000	.0613	.0717	.0333	.1308	-.0571	.0585
Number of Best Sub. 88	.3492	.2348	.0105	.0613	1.0000	-.0110	-.0047	.0674	.3160	-.0343
Number of Best Sub. 93	.0687	.1399	-.0894	.0717	-.0110	1.0000	.0567	.0781	-.0457	.6035
Favourite Subject 88	-.0338	.0860	.2418	.0333	-.0047	.0567	1.0000	-.0680	-.1115	-.0692
Favourite Subject 93	-.0603	-.1669	.0671	.1308	.0674	.0781	-.0680	1.0000	-.0507	-.0374
Number of Fav. Sub. 88	.2661	.0831	.0948	-.0571	.3160	-.0457	-.1115	-.0507	1.0000	.0080
Number of Fav. Sub. 93	.0499	.2776	.1341	.0585	-.0343	.6035	-.0692	-.0374	.0080	1.0000

Appendix 4—The Summary of the Factory Analysis

Principal Components	Real 1988		Ideal 1988		Real 1993		Ideal 1993	
	Sums of Squared (Eigenvalues)	% of Variance	Sums of Squared (Eigenvalues)	% of Variance	Sums of Squared (Eigenvalues)	% of Variance	Sums of Squared (Eigenvalues)	% of Variance
1st Component	3.37	21	4.02	25	4.37	27	3.44	22
2nd Component	2.155	13	1.57	10	2.51	16	1.60	10
3rd Component	1.448	9	1.32	8	1.38	9	1.48	9
4th Component	1.359	8	1.23	8	1.13	7	1.19	7
5th Component	1.062	7	1.05	7			1.11	7
6th Component			1.01	6			1.05	7
	Number of Principal Components	Cumulative %	Number of Principal Components	Cumulative %	Number of Principal Components	Cumulative %	Number of Principal Components	Cumulative %
	5	58	6	64	4	59	6	62