Health status: does it predict choice in further education?

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Abstract

Study objective – To study the significance of a young person's health to his or her choice of further education at age 16.

Design – A cross sectional population survey

Setting – The whole of Finland.

Participants – A representative sample of 2977 Finnish 16 year olds. The response rate was 83%.

Measurements and main results – The three outcome variables reflected successive steps on the way to educational success: school attendance after the completion of compulsory schooling, the type of school, and school achievement for those at school. Continuing their education and choosing upper secondary school were most typical of young people from upper social classes. Female gender and living with both parents increased the probability of choosing to go on to upper secondary school. Over and above these background variables, some health factors had additional explanatory power. Continuing their education, attending upper secondary schools, and good achievement were typical of those who considered their health to be good. Chronically ill adolescents were more likely to continue their education than the healthy ones.

Conclusions – School imposes great demands on young people, thus revealing differences in personal health resources. Adaptation to the norms of a society in which education is highly valued is related to satisfying health status. In a welfare state that offers equal educational opportunities for everyone, however, chronically ill adolescents can add to their resources for coping through schooling. Health related selection thus works differently for various indicators of health and in various kinds of societies. Social class differences in health in the future may be more dependent on personally experienced health problems than on medically diagnosed diseases.

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Three models – artefactual, causal, and selectional – have been proposed to explain social inequality in health. According to the selectional model, health determines social class through a process by which healthy people are more likely to move up the social hierarchy, and unhealthy people to move down.¹ This

process might mean that unhealthy people are not capable of acquiring a good education. As a result, their chances of entering the labour market in general, and their chances of attaining higher social positions in particular, are reduced.² Two types of selection have been described. The first, direct selection, regards health status as a determinant of class position. In the second type, indirect selection, a common background factor affects both health status and social position.³ One possible factor is the parents' socioeconomic position, but individual characteristics such as height and intelligence may also influence health and social position.⁴

Published studies on the healthy worker effect provide evidence that there is health related selection in adult life.^{5,6,7} There is also considerable research which shows that being tall is associated with many kinds of success in life.⁷⁻¹² Height is then supposed to measure health or health potential as a consequence of childhood living conditions.^{7,13-15} Except for long term illness,¹⁶ there are only a few studies that use other indicators of health in youth, and the role of education in the selection process has been overlooked. Health selection, however, has been taken as a possible explanation for the phenomenon that class differences in health care are not evident in youth but emerge soon afterwards.¹⁷

Depending on the type of illness, there are different kinds of problems in intellectual development, social coping, and school achievement, influenced by many factors in the family, school, and society.¹⁸ Functional impairment or chronic health problems which are likely to interfere with peer communication or to reduce school attendance, as well as psychological problems, have an especially adverse effect on school outcomes.¹⁹ The process of allocating individuals an occupational social class via the educational system is thus sociological in nature. Health, as well as other individual attributes, take on different meanings depending on their relative importance for success in a particular society.

In almost all societies, people with visible illnesses or handicaps suffer from many kinds of negative attitudes and prejudices.^{18,6} The stigma, or fear of possibly becoming stigmatised, may cause problems with self esteem and identity. This, in turn, restricts capacities and aspirations and thus reduces educational and occupational achievement. Discrimination may lead to lowered educational expectations and to self fulfilling prophecies.^{9,20-24}

Because of its dependence on societal factors, the generally supposed direction of health re-

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lated selection may be criticised. Even a severe illness does not necessarily mean that someone will not receive any education. Many severely ill children are particularly motivated in terms of intellectual work and circumvent the impairment by compensating creatively for it.^{19 25–27} In a welfare state that provides free education right up to university level, it seems more probable that ill people will continue to study rather than take a manual job. This would lead to ill health increasing the chances of belonging to higher social groups, thus concealing class differences in health.¹⁶ Health related selection is not therefore a uniform phenomenon, but works differently for different diseases and for different groups of people, and is dependent on the type of society.

Education nowadays plays a fundamental role in shaping an individual's life chances and social status. While, previously, skills learned in work were useful capital on the labour market, now with the highly specialised occupational structure, even entering paid labour is difficult without an adequate education. Now there is a polarisation into two strata – the highly educated elite and the less educated, marginalised people, deprived in many fields of life. In Finnish society, an individual's socio-economic status and social standing are related more obviously to his education than in many other countries.²⁸ As a result of rapid social and economic change, and the expansion of the functions of the welfare state, faith in education as a guarantee of good social position has been justified, at least until now.²⁹

Along with the rising level of education in the labour force, the fight for places has become harder, and a proportion of each generation is left either outside education or without employment corresponding to their education. It has been estimated that from 2%³⁰ to 10%³¹ of each Finnish birth cohort is at risk of becoming marginalised from society. In 1986, the unemployment rate in people without vocational education was 11%, while it was 5% in people who had acquired vocational education.³² Several studies show that dropping out of school places a person at risk of a lifetime of personal and career problems, as well as creating problems for society at large.^{33–35}

Besides producing a qualified labour force, the other goal set for education is to promote equality and democracy. Schooling is considered an end in itself, a resource that influences other factors in an individual's lifestyle and standard of living.³⁶ It is strongly connected with social coping capabilities and control over one's own life, with possibilities for acquiring knowledge, and with the ability to utilise new information. There has been a great faith in the idea that both the economic and equalizing goals could be reached by creating a system that offers people from all social backgrounds maximum equality of educational opportunity right through to higher education. In Finland, this thinking was reflected in a continuous expansion of public expenditure on education throughout the 1980s. At the beginning of the 1990s, 13% of the group aged 20–24 years were studying in universities.^{37 38}

The educational system of Finland differs greatly from those in America and Britain.^{39 40} Children go through a comprehensive system from the age of 7 years, and education is compulsory up to the age of 16. Dropping out of school before this age is extremely rare. At an average age of 16, adolescents continue their studies either in upper secondary schools or in vocational education. The decision made at this point is crucial for their future, because upper secondary school is still practically the only route to a university education. Theoretically, all children have an equal chance of attending all levels of education, but equality according to social background has not been attained in reality. Children of highly educated white collar families still end up with the most education.^{41–45}

This study aimed to investigate the association of health in adolescence with the chosen educational path, and thus to learn about the contribution of the selectional model in explaining the formation of health differences between social groups. This was done by finding out whether some measures of a young person's health were, independently of social background, associated with the choice of educational path after the completion of compulsory schooling. Educational pathway is one way of measuring social position in young people. The concept of the social group is problematic at this age, because of the shift from the social position of origin to that based on a young person's own achievements.^{17 46} An association between health in youth and the chosen educational career may be an indication that there is a health related social selection into different types of careers, which, in turn, anticipates the range of possible social positions in adulthood.

Methods

The study is a part of the adolescent health and lifestyle survey, focussed on Finnish adolescents. Data were collected in 1987 by postal questionnaires sent to a national sample of 12, 14, 16, and 18 year old Finns. The first questionnaire was sent in February and was followed by two further questionnaires to non-respondents. All those born between 14 and 31 July were included in the sample, which was drawn from the National Population Register Centre. In this study, only the 16 year olds are considered, because by that age the division into those who are or are not going to continue their studies has generally taken place. The total sample comprised 2977 adolescents. The final number of respondents included in analyses was 2467. The response rate was 83%: 77% (n = 1183) in boys and 89% (n = 1284) in girls. In relation to the geographical region of residence, the response rate was lowest (79%) in central west Finland and highest (88%) in the north.

The questionnaire was voluntary and the purpose of the study was explained in a covering letter. The study protocol was accepted by the ethical committees of the University of Helsinki and of the Department of Public Health.

OUTCOME VARIABLES

The outcome variables were chosen to form a hierarchy, reflecting successive steps on the ladder to educational achievement. The first of these was a dichotomous variable called *school attendance*, which indicated whether the respondent was (92%) or was not (8%) attending school at the time of inquiry. The second one, *the type of school*, divided the students into two categories: upper secondary school (55%) or vocational and other (mostly vocational school or institute or some other school or institute) (45%). The third variable was *school achievement*, measured by the pupil's own assessment of his or her position in the class, according to the average school marks in the preceding end of term school report. Pupils with an above average report belonged to the first group (43%) and those with an average level or below average level school report formed the second group (57%).

INDEPENDENT VARIABLES

The independent variables were divided into two main categories as follows.

Socioeconomic background

Father's or other guardian's education was defined according to the number of years of education as: low (at most, 8 years), middle (from 8 to 11 years), or high (12 or more years).

Father's or other guardian's occupation was classified by the 1970 status classification of the Central Statistical Office of Finland as: upper white collar worker, lower white collar worker, farmers, or blue collar worker.

The urbanisation level of the place of residence was defined by the population density as: capital area (Helsinki and the adjoining towns), large town (population over 100 000), small town/village (densely populated areas in rural type municipalities) and, sparsely populated rural municipalities (isolated home-steads in rural type municipalities).

The five geographical regions of residence, described the south–north dimension, the most industrialised areas being in the south and south west, these were: south (provinces of Uusimaa and Kymi), south west (provinces of Turku and Pori, Häme), central west (provinces of Keski-Suomi, Vaasa), east (provinces of Kuopio, Pohjois-Karjala, Mikkeli), and north (provinces of Oulu, Lappi).

Family type was dichotomous: either a nuclear family (living with both parents) or non-nuclear family (parents divorced, father, mother or both dead or not living with parents).

Health

All information was self reported. The following variables were used:

Chronic illness, disability, and/or continuous medication prescribed by a doctor: no/yes. Severely handicapped adolescents who could not fill in a self administered questionnaire were not included in the study.

Height: the values were divided into four classes, using the distribution quartiles as cut off points; the information was reported to an accuracy of 1 cm and the quartiles were calculated separately for boys and girls.

The number of influenza episodes during the preceding six months: at least two, one, or none.

The number of diagnosed new dental caries during the preceding two years in people who had visited a dentist: more than once, once, or not at all. The 3% of respondents who had not visited a dentist were classified as "missing data".

The number of medical consultations during the preceding two years grouped as: three or more, two, one, or none.

Perceived health at the time of inquiry: bad (combines classes very bad and bad), moderate, and good (combines classes quite good and good).

Use of over the counter medicines during the preceding month, for headache or other pains, cold or fever, cough, insomnia, stress or anxiety, abdominal pains or constipation or other ailments: yes/no.

Tiredness in the daytime at the time of inquiry: more than school friends or no more than school friends.

Feeling active in the morning at the time of inquiry: seldom or never, occasionally, or every morning or quite often.

Number of symptoms occurring at least weekly; a sum index constructed of nine symptoms felt weekly or more often, during the preceding six months (abdominal pains, anxiety, irritability or fits of anger, difficulties in sleeping, headache, tremor of hands, fatigue or weakness, fits of dizziness, pains in head or neck): at least three symptoms, two, one, or none.

STATISTICS

For each outcome variable, stepwise logistic regression analyses were performed in two phases. Firstly, those socioeconomic background variables that showed independent associations with the outcome variables were selected. Then, to get the final multivariate model of health variables which were independently associated with the outcome variable, a stepwise procedure was used, with adjustment for the background variables selected above. For school achievement, the analyses were made separately for upper secondary schools and for vocational or other schools. The odds ratios (OR) with 95% confidence intervals (CI) were calculated for the variables showing significant explanatory power in the final model. Decisions regarding statistical significance were made on the 5% risk level. The analyses were carried out using the LR program in the statistical software *BMDP*.⁴⁷ The logistic regression functions were computed using only the cases which had values for every variable. The number of cases with missing data varied between 5 and 14% of the respondents in different models.

Table 1 The distribution of further education in relation to gender in a sample of Finnish 16 year olds

Educational career	Boys (%)	Girls (%)	Total (%)
Upper secondary school	41	60	51
Vocational or other school	51	32	41
Not attending school	8	8	8
Total	100	100	100
No	1257	1021	189

Table 2 Factors associated with school attendance: *p* values of the model and odds ratios with 95% confidence intervals

Independent variable	<i>p</i> value	OR	(95% CI)
Socioeconomic background			
Father's occupation:	0.0015		
Blue collar worker		1.00	
Farmer		0.65	(0.39, 1.08)
Lower white collar worker		1.18	(0.79, 1.76)
Upper white collar worker		3.13	(1.54, 6.36)
Family type:	0.030		
Non-nuclear family		1.00	
Nuclear family		1.52	(1.04, 2.22)
Health*			
No of new caries:	0.0002		
>1		1.00	
1		1.35	(0.90, 2.04)
0		2.45	(1.60, 3.74)
No of symptoms occurring at least weekly:	0.0068		
≥3		1.00	
2		1.92	(1.12, 3.31)
1		2.02	(1.21, 3.37)
0		1.85	(1.22, 2.81)
Chronic illness, or disability, or medication prescribed by a doctor:	0.017		
Yes		1.00	
No		0.46	(0.24, 0.87)

* For health variables, adjustment for the socioeconomic background variables presented above was made.

Table 3 Factors associated with the type of school. *p* values of the model, and odds ratios with 95% confidence intervals

Independent variable	<i>p</i> value	OR	(95% CI)
Socioeconomic background			
Father's occupation:	<0.0001		
Blue collar worker		1.00	
Farmer		1.43	(1.02, 2.01)
Lower white collar worker		1.90	(1.48, 2.43)
Higher white collar worker		3.37	(2.21, 5.15)
Gender:	<0.0001		
Male		1.00	
Female		2.90	(2.35, 3.58)
Father's education:	<0.0001		
Low		1.00	
Middle		1.73	(1.24, 2.41)
High		4.08	(2.46, 6.75)
Family type:	<0.0001		
Non-nuclear family		1.00	
Nuclear family		1.70	(1.33, 2.17)
Health*			
Perceived health:	0.0001		
Bad		1.00	
Moderate		1.72	(1.31, 2.24)
Good		1.86	(1.38, 2.51)
No of medical consultations:	0.0062		
≥3		1.00	
2		1.02	(0.76, 1.37)
1		1.60	(1.21, 2.13)
0		1.19	(0.91, 1.56)
No of new caries lesions:	0.030		
>1		1.00	
1		1.09	(0.83, 1.43)
0		1.37	(1.07, 1.76)
Height:	0.027		
Shortest quartile		1.00	
Second quartile		1.34	(1.01, 1.77)
Third quartile		1.43	(1.09, 1.87)
Tallest quartile		1.46	(1.09, 1.97)

* For health variables, adjustment for the socioeconomic background variables presented above was made.

Results

Most of the adolescents continued their education after the compulsory phase. Attending upper secondary schools was more typical of girls than of boys, who more often chose vocational education (table 1).

SCHOOL ATTENDANCE

The background variable most strongly, independently related to school attendance was father's occupation (table 2). The likelihood of continuing studies was highest in the upper white collar families. In addition, family type was independently associated with attendance, with adolescents from nuclear families more likely to continue their education than adolescents from other kinds of families.

When the social background was taken into account, three health variables had a significant independent association with school attendance in the final, best fitting model (table 2). Adolescents who continued their education had fewer new caries lesions during the preceding six months. The association with chronic illness was the opposite – adolescents with chronic illness were more likely to continue their studies than the healthy ones.

TYPE OF SCHOOL

The type of school was strongly related to background variables (table 3). Again, the most important factor was the father's occupation. Choosing an upper secondary school was least typical in blue collar families, and most typical in upper white collar families. Girls were more interested in upper secondary education than boys. Independently of occupation, father's education had an influence on the choice of the type of school: the higher the father's education, the more probable was attendance at upper secondary school. This type of school was selected more frequently in nuclear families than in other families.

Four health variables appeared in the final model (table 3). Compared to young people in vocational and other schools, those in upper secondary schools had better perceived health, a smaller number of medical consultations, more often belonged to higher height quartiles, and had a smaller number of new dental caries.

SCHOOL ACHIEVEMENT IN UPPER SECONDARY SCHOOLS

In upper secondary schools, above average achievement was most often found in adolescents from families with highly educated fathers (table 4). In upper secondary schools, girls did better than boys. In the final analysis, one health variable significantly improved the fit of the model (table 4). Doing well was characteristic of young people with moderate or good perceived health.

SCHOOL ACHIEVEMENT IN VOCATIONAL AND OTHER SCHOOLS

In stepwise analysis, the geographical region of

Table 4 Factors associated with good school achievement in adolescents attending upper secondary schools. *p* values of the model and odds ratios with 95% confidence intervals

Independent variable	<i>p</i> value	OR	(95% CI)
Socioeconomic background			
Father's education:	0.011		
Low		1.00	
Middle		1.29	(0.93, 1.79)
High		1.58	(1.16, 2.15)
Gender:	0.025		
Male		1.00	
Female		1.33	(1.04, 1.72)
Health*			
Perceived health:	0.0071		
Bad		1.00	
Moderate		1.42	(1.01, 2.01)
Good		1.81	(1.25, 2.63)

* For health variables, adjustment for the socioeconomic background variables presented above was made.

Table 5 Factors associated with good school achievement in adolescents attending vocational and other schools. *p* values of the model, and the odds ratios with their 95% confidence intervals

Independent variable	<i>p</i> value	OR	(95% CI)
Socioeconomic background			
Geographical region of residence:	0.033		
South		1.00	
South west		1.14	(0.65, 1.98)
Central west		1.12	(0.65, 1.94)
East		0.72	(0.44, 1.18)
North		1.40	(0.86, 2.28)
Health*			
Chronic illness, or disability, or medication prescribed by doctor:	0.0014		
Yes		1.00	
No		0.50	(0.32, 0.76)
No of symptoms occurring at least weekly:	0.035		
≥ 3		1.00	
2		1.25	(0.75, 2.10)
1		1.24	(0.74, 2.06)
0		1.85	(1.18, 2.89)
Use of over the counter medicines:	0.039		
Yes		1.00	
No		0.72	(0.52, 0.98)
Tiredness in the daytime:	0.043		
More than school friends		1.00	
No more than school friends		1.57	(1.01, 2.42)

* For health variables, adjustment for the socioeconomic background variables presented above was made.

residence was the only background variable that was significantly associated with good school achievement (table 5).

The probability of having had a good school report was higher in adolescents with a chronic illness than in the healthy ones (table 5). Clearly, pupils who had not had weekly symptoms did better than those who had suffered from symptoms. Tiredness in the daytime was typical of those not doing well at school. The use of over the counter medicines was associated with doing well at school.

Discussion

The distribution of educational careers, in both genders, was similar in this study to the respective distribution in official Finnish statistics of the mid and late 1980s.^{48 49} Thus, the fact that boys were less active than girls in returning the questionnaire, had not caused distortion in this respect.

SOCIOECONOMIC BACKGROUND

The decision to continue education at age 16 and the choice of school type, were dependent on social background. This agrees with pre-

vious findings, showing the unchanged power of social background in the formation of a young person's educational career.^{41-45 46 50} Socioeconomic background is related to the material resources available to children and the family's educational values.^{19 33 51} Parents in different social groups are, to varying degrees, involved in their children's school work and in their plans for the future.^{33 41 51-53} School practices may also favour children whose families have a positive attitude to education.^{42 54-57} Father's occupation and education were independently associated with the type of school, which may mean that highly educated parents even in lower status occupations put great value on studies offering the possibility of going on to higher education.

Children from social backgrounds that do not give much weight to education, probably do not trust education as a source of social advancement. For them, school may become a place of failure, which leads to withdrawal.^{33 58-61} Adolescents who are studying with minor resources, may more easily than others experience low achievement and setbacks as obstacles to continuing their education.⁶² For some groups of people it is important to stabilise the basic structures of life, like work and children at a young age.^{63 64} This may partly explain why children in blue collar and farming families are less eager to go on with their studies. Thus, remaining outside education may be either an autonomic decision or the result of a selection process.⁶⁵

The power of father's education extended to achievement in upper secondary school. Thus, even among those who had chosen the route leading to the highest level of education, there was the division into two groups, the successful children of highly educated parents and the less academic or less motivated children of other families. Adolescents attending vocational education were already a selected group according to family background, and among them father's education did not play any role with regard to school achievement.

The type of family seemed to have a role in the educational career. This agrees with previous findings, that parental separation or living in one parent families is associated with school problems.^{66 67} Living with one parent may influence school achievement negatively either via the economic deprivation caused by the lack of a second parent's earnings⁶⁸ or via the student's misbehaviour, caused by the frustrating and distracting life situation. Whatever the mechanism, young people from single parent homes, irrespective of whether they live with their mothers or fathers, are less likely to connect with school and to meet the school's demands.^{66 69} Good relations between children and parents increase the chances of doing well in school.^{52 70-74}

European studies have shown that equality in relation to gender has increased more than equality in relation to social background during recent decades.⁵⁰ In this study, continuing with education was equally popular among both sexes, but girls favoured going to upper secondary schools and boys to vocational edu-

cation, independently of father's occupational status. Gender was also associated with school achievement, independently of father's education, but only in upper secondary schools. It has been noticed that in school, boys are more often labelled as troublemakers, and that pupils in observation classes are generally boys.⁷⁵ Girls, and especially those from educated families, adapt to school life because teachers are mostly women, who represent a middle class way of life.⁷⁶

HEALTH

School career was connected with health, independently of social background. Good health status, as measured by various indicators, was typical of adolescents who had decided to go on with education, who went to upper secondary schools, or who did well in either of the two types of schools. The interpretation of the associations is problematic, because the indicators of health used in this study may reflect the health status of the present moment or they may have their origin in an earlier phase of life.

It may be that in societies where education is generally highly valued, those who successfully aim at high levels enjoy living in harmony with the societal norms. They thus feel satisfied, and this is seen as good perceived health and few symptoms. For those who drop out of education or experience difficulties in finding their place in a society where taking advantage of educational opportunities is desirable, the conflict with norms may cause stress and discontent, which is seen as bad perceived health and many symptoms.⁷⁷⁻⁸⁰ However, the opposite is also possible, so that for adolescents who have generally felt well, success in education is easier to attain. All in all, school seems to impose demands on young people, and thus brings to the surface the differences in personal health related resources. The process is probably chain-like in that health both affects the school career and is influenced by it.⁸¹

Without a properly longitudinal study design, one must be very cautious about the causal impact of health on school career. In this study, only two of the independent variables, chronic illness and height, could be regarded as describing the more permanent health status. Of these two variables, height was associated with success in a similar way to many previous studies.^{7,10-12} Height had an importance independently of home background, which is an indication that it involves something more than the impact of childhood living conditions.^{13,14,82,83} Indirect height related selection may work here, for example, via discrimination according to attractiveness. Height and attractiveness have been found to correlate with each other, independently of social class. Taller people are perceived as being more attractive and are attributed with other desirable characteristics, such as intelligence or competence, which brings them many kinds of social advantage.⁹ In school, this might mean that taller adolescents have more self esteem and a positive impression of their chances of advancing in their educational career.

Compared with the other health variables, chronic illness functioned in the opposite way. Chronically ill adolescents were more likely to continue their studies than the healthy ones, which is understandable in a welfare state, like Finland, which provides free education up to university level. This is not the case in many other societies where, due to strong prejudices, handicapped adolescents are offered few educational opportunities.²⁴ Education gives ill people a possibility to compensate for their illness¹⁸ and to create abilities for controlling their lives.²⁵ To manage in life, an ill person must greatly depend on qualifications gained through education, and this probably increases motivation at school. Also, when it is not possible to orientate oneself towards physical activities as much as one's peers, another possibility is to turn to studying.^{26,27} It must, however, be remembered that the very severely handicapped adolescents, who could not fill in a self administered questionnaire, were excluded from the study.

The role of chronic illness in the educational career thus contradicts the generally assumed hypothesis with regard to the direction of health related selection. It is not a uniform phenomenon, but works differently for various indicators of health and in various kinds of societies and age groups. Some states of health may directly affect the career, but more probably there are social factors involved, giving different meanings to various states of health.^{24,28} It is also possible that people with mild illnesses are left in the middle, without the support and understanding which the severely sick receive⁸⁵ and thus will have more difficulties. Theoretical developments, putting health related mobility into its rightful place, among other processes of social life, are needed.

Conclusion

The three outcome variables were treated as successive steps on the way to educational success. There are associations between the variables, which can only be identified by longitudinal designs. School achievement is known to influence the selection of educational careers, by modifying the motivation and goals which are set for education, as well as opinions regarding a person's own talents and capacities.⁸⁶⁻⁸⁹ Young people who choose the upper secondary school route generally have better school reports, than those who choose vocational education after compulsory schooling.^{40,41,90} Thus, by the time a person has reached the age of 16, school achievement has already played a central role, when educational decisions have been made. In a cumulative way, it summarises a person's positive and negative school experiences right from the first school day, and thus should also be taken into consideration as a mediating factor in a process through which the person's educational career is shaped.

Regardless of socioeconomic background, the health resources of a young person are related to the formation of his or her educational career: good perceived health is typical of those whose careers may lead to high social

positions. In a welfare state, the inconveniences caused by chronic illness or handicap are likely to be compensated for by education. Health related social selection thus seems to work differently for various indicators of health. Further research is needed to clarify which intervening social factors play a role in creating opportunities for social promotion in various kinds of societies. Among these might be the quality of educational opportunities and the social welfare services for people with health problems, prejudices against different types of illnesses and other personal characteristics that influence success at school, and life ideals in various cultural subgroups with corresponding lifestyles. In proving the validity of theoretical developments which relate health selection with other processes of social life in the reproduction of the social class structure, longitudinal study designs are essential.

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