

1 GENERAL INTRODUCTION TO THE STUDY

Inequalities in health have attracted a lot of attention since last century. It is impossible to review the amount of published literature. The aim in this section is to provide a very brief introduction to socio-economic health differences with regard to Central Europe and also to the explanation of socio-economic health differences. The aims of the study, the theoretical model, the research questions and the structure of the thesis are also included.

1.1. GENERAL BACKGROUND

Socio-economic health differences unfavourable for lower SES groups are present in almost all European countries and with some exceptions in all age groups (*Smith et al. 1990a, Mackenbach 1992, Mackenbach and Kunst 1997, West 1997, Kunst 1997*). Although equity in health is one of the main targets of the WHO strategy “Health for all” (1990, 1999), health inequalities are even increasing in many European countries (*Smith et al. 1990a*). Socio-economic health differences are ethically unacceptable and “it’s society’s moral duty to shape its social and health policy in such a way that in future, children who are worse off will be more likely to enjoy the same status of health and well-being that more fortunate children do today, so that they will have equal opportunities to live a healthy adult life.” (*Halldórsson et al. 1999, p. 47*). Reducing socio-economic health differences would also improve the health of the whole population and also means reduction of health care costs (*Gissler et al. 1998*).

Particular interest regarding health and socio-economic health differences should be focused on Central European countries characterised by enormous social, political and economic changes (*Gissler and Nanda 2000*). Transitional crisis is mostly related to an increase in income inequality, which may have a deteriorious effect on the population's health (*Kaplan et al. 1996*). This process should be noticeable already in adolescence. In 1991-1995 Tichy et al. (1996) monitored health and nutritional status of children particularly because they anticipated undesirable consequences of the transformation process on the population's health. This prognosis supposes that a decrease in the standard of living in a considerable part of the population leads to a decrease in nutritional status. The health consequences are undesirable changes in immunological, haematological and some other somatic indicators. According to Kunst (1997), socio-economic health differences are similar or larger in Eastern and Central European countries in comparison with Western European countries. Lower socio-economic groups are more affected

(Kunst 1997). More recent findings supporting this conclusion come from Bulgaria (Balabanova 2000) and Russia (Maximova 2000).

There are several reasons for studying socio-economic health differences among adolescents. Firstly, health from childhood and adolescence extends in adulthood (Smith *et al.* 1990a). The differential degrees of deprivation in childhood could contribute to inequalities in health in later life (Smith *et al.* 1990a).

Secondly, many patterns of behaviour are established in adolescence, including health related behaviour such as eating habits, exercise activities, drug use and ways of responding to stress. Future adult health could therefore be improved by influencing the factors which determine health-related behaviour in adolescence (Power *et al.* 1998).

Thirdly, socio-economic health differences are age specific. A U-shaped relation between socio-economic health differences and age seems to be present. Youth, in contrast to childhood (van der Lucht 1992, Bor *et al.* 1993, van der Lucht and Groothoff 1995, Cesaroni *et al.* 2000, Humblet *et al.* 2000) or adulthood (Lahelma and Valkonen 1990, Ford *et al.* 1994, Kaplan *et al.* 1996, Kunst 1997, Power and Matthews 1997) is characterised more by the absence than presence of class gradients in health. Socio-economic health differences re-emerge quite dramatically after this relative equalisation in youth (West 1988, MacIntyre *et al.* 1989, West *et al.* 1990, Bor *et al.* 1993, Rahkonen *et al.* 1995, Tuinstra 1998). To study adolescents can help us to understand the determination of socio-economic health differences and to find out efficient reduction strategies.

Fourthly, youth is “5 minutes to 12” with regard to the final adult stratification. The 15-year-old cohort is ideally suited for exploring the relative importance of health selection and social causation and the processes involved, as young people move from their social class of origin to their achieved social class within a period of approximately 10 years (MacIntyre *et al.* 1989).

Fifthly, interventions are more effective the sooner they are implemented (Wadsworth 1997). Adolescence offers possibilities for intervention with the intention of reducing the health differences. The ultimate goal of studies into health differences is always the reduction of the differences, mostly by an improvement of the health status of the less privileged group. A better health status for the population as a whole can be reached in this way.

1.2. THEORETICAL BACKGROUND

There are several explanations of socio-economic health differences discussed in literature: **artefact, health selection, social causation** (*MacIntyre 1986, MacIntyre 1987, West 1988, West 1991, Mackenbach et al. 1994, Stronks 1997, Tuinstra 1998*). The mechanism of social causation is described in more detail by the hypotheses of **different vulnerability, different exposure** (*Blaxter 1990, Kooiker and Christiansen 1995, Ranchor et al. 1996a, Tuinstra 1998, Stronks et al. 1998, Call and Nonnemaker 2000*). Several authors try to explain the absence of socio-economic health differences among adolescents using the hypothesis of the **buffer effect** and the hypothesis of **latent differences** (*West et al. 1990, Van der Lucht and Groothoff 1995, Tuinstra 1998*). A short description of them follows.

1.2.1. Artefact

This approach suggests that the definition or measurement of either the social position or the health status produces the observed difference (*MacIntyre 1987*). This most radical version contends that there is no relation between class and health and what we observe is an artefact of the measurement. In a less radical version it means that the magnitude of the observed class gradients will depend on the measurement of both class and health (*MacIntyre 1997*). This can be particularly important in adolescence, when parent's SES becomes an increasingly invalid measure of SES, but adolescent's SES is not appropriate either. In this age group a high level of occupational mobility is experienced (*West 1988*). West et al. (1990) used a range of health indicators, from subjective assessment to objective physical measures and found very little evidence of socio-economic health differences in adolescence. Similarly MacIntyre and West (1991) explored the artefact explanation using several SES indicators, but did not confirm it. Despite their findings, it seems to be reasonable to explore socio-economic health differences among adolescents using different indicators of SES and health, and to take this hypothesis in to account in the explanation of the results.

1.2.2. Health selection

This view stresses the influence of health on socio-economic mobility. Its radical version states that health determines class position, and not vice versa. The less radical version describe health as a factor contributing to the achieved class position (*MacIntyre 1997*) or in other words healthier youngsters experience upward social mobility, less healthy ones downward mobility (*MacIntyre et al. 1989, Smith et*

al. 1990a, West et al. 1990). Health selection may proceed through success and failure in job market during adulthood - **intragenerational mobility**, but also through educational achievement during adolescence - **intergenerational mobility** (Stronks 1997). The validity of this hypothesis of health selection was discussed by West (1991), and MacIntyre (1986). To explain the relative importance of health selection and social causation a longitudinal design should be used (MacIntyre 1987).

1.2.3. Social causation

According to Hertzman (1999, p.85) "those whose circumstances most closely approximate the hospitable niche would enjoy the longest, healthiest lives and those whose lives diverge the most from it would live lives that were increasingly unhealthy and short". Lower SES in terms of smaller amounts of disposable money has objective consequences (less money means poorer living standard with regard to housing, nutrition, relaxation), but also subjective consequences (psycho-social stress). Poor people have reduced control over their life, experience a gap between themselves and those who are unaffected, and the tension originating from economic stress is also higher.

There are three broad approaches in research and policy formulation (MacIntyre 1987, MacIntyre 1986): life circumstances; life style; and knowledge, attitudes and values.

1.2.3.1. Life circumstances: the materialist explanation

There are life circumstances which influence health and are unequally distributed between social groups (MacIntyre 1986). Among them are occupation and its related work settings, unemployment, housing, and access to other amenities (inside toilet, baths, running hot water, car ownership). Social position may contribute to socio-economic health differences through stress or exposure to life events, chronic problems related to dealing with difficult situations, economic hardship (unpleasant neighbours, problems related to housing, income). Being <low SES> can affect disposable income, wealth, access to material resources (telephone, car), access to healthy food, use of time or housing and these changes could influence health either separately from or in interaction with stress, stigma or alterations in self-esteem (MacIntyre 1987).

Based on the materialistic explanation, interventions should include improvements in the circumstances in which a person lives and works (Macintyre 1997, Stronks 1997).

1.2.3.2. Life style: behavioural explanations

The behavioural explanation shifts the attention from external constraints to voluntarily chosen behaviours associated with health and differentially engaged in by different social groups (*MacIntyre 1987, Smith et al. 1990a*). Such types of behaviour are for example smoking, alcohol consumption, drug use, physical exercise, diet, engaging in risk activities, sexual and contraceptive practices. "The voluntary character of behaviour" may be a questionable issue in the case of socio-economic health differences. What people eat may depend less on their ideas about the value of fibre or the dangers of cholesterol, and more on accessibility and affordability of food (*MacIntyre 1987*). Moreover, the association between health related behaviour and health does not explain all the variations between these groups in health (*MacIntyre 1986*).

To reduce socio-economic health differences from this perspective we are encouraged to use culturally sensitive methods for encouraging changes in lifestyle.

1.2.3.3. Knowledge, attitudes and values

Knowledge, attitudes and values may contribute to socio-economic health differences directly, by having some more diffuse and general impact on health independently of behaviour. For instance coping strategies, locus of control, learned helplessness, sense of coherence may influence the way people respond to their lives and environments. But they may contribute also indirectly, by shaping the behaviours which are more proximate causes of health (*MacIntyre 1986*). Health knowledge (nutritional values of foodstuffs, advantages of breastfeeding, benefits and hazards of oral contraception), cultural or sub-cultural norms relating to health behaviour, or the importance of individual health may be examples of this indirect influence.

Materialistic and behavioural explanations can be seen as competing, but it seems to be that they interact in their contribution to socio-economic health differences (*MacIntyre et al. 1989*). The "knowledge" is usually conceptualised as mediating between social position and health, either by moderating the impact of life circumstances on health by causing the behaviours that influence health, or acting directly on health (*MacIntyre 1987*).

1.2.4. Different exposure and different vulnerability

According to Stronks (*1997*), SES influences health indirectly through more specific determinants of health and illness. This hypothesis of social causation supposes that people in lower socio-economic groups live in less favourable

circumstances and more frequently engage in health risk behaviour. The question is whether the uneven distribution of health determinants (hypothesis of different exposure) or differential health impact of these determinants (hypothesis of differential vulnerability) can explain the unequal distribution of health in the population (*Ranchor 1994, Kooiker and Christiansen 1995, Stronks 1997, Tuinstra 1998, Call and Nonemaker 2000*).

According to the hypothesis of **different exposure**, socio-economic health differences may be explained by the varying occurrence of health determinants among SES groups. Determinants of detrimental effects on health (health risk behaviour, long-term difficulties, life-events) occur more frequently, and determinants of protective effects on health (physical exercise, social support) occur less frequently in lower SES groups in comparison with higher SES groups.

The **differential vulnerability** model supposes that higher SES groups have some mechanism at their disposal which inhibits detrimental effects and stimulates the protective effects of health determinants. Lower SES groups are less well equipped to cope with stress (*Stronks 1997, Tuinstra 1998*).

1.2.5. Explanation of absence of socio-economic health differences in adolescence

The absence of socio-economic health differences in adolescence triggers debate about possible explanations. In the literature one can find an intensive debate about the two following hypotheses: the hypothesis of latent differences and the hypothesis of the buffer effect of youth subculture. The hypothesis of **latent differences** supposes the prelude of the differences in health in adolescents already being present, but not yet measurable with the current outcome measure of health. The prelude is visible in the unequal distribution of different determinants of health and disease among social groups. According to **buffer hypothesis**, favourable social circumstances and related compensation mechanisms form a buffer for youngsters against the health-damaging effects of an unhealthy lifestyle.

1.3. AIMS OF THE STUDY

The aim of this study is to document associations between social position and health. Whereas there is a long tradition of socio-economic health differences research in West Europe, we lack such information related to Central European adolescents. Moreover our aim is to move beyond documenting towards explaining these associations. Slovakia is rapidly changing, the unemployment rate is increasing fast and the living standard of the population is decreasing. Despite some promising

economic indicators the part of the population, which is affected by the transitional crisis is growing. The health care system is in a critical situation. A lot of people are disappointed: it takes a lot of time to restructure the economy, and this has direct negative consequences for a considerable part of the population. It takes time for people to find adequate coping mechanisms and learn to manage the new situation. Youth is more vulnerable, but also may be more flexible, so it is interesting to explore socio-economic health differences in this age group.

Figure 1 Theoretical model

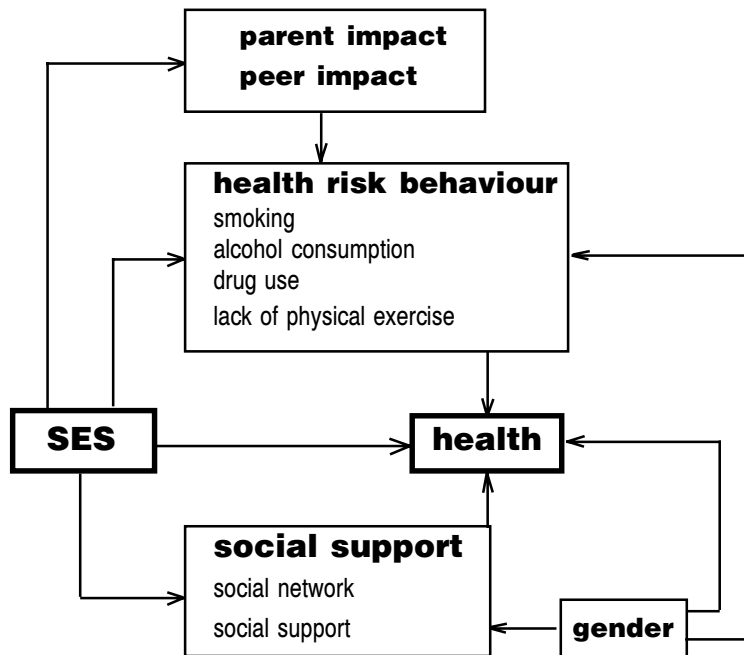


Figure 1 describes the theoretical model of this research. A similar model was explored in the Dutch population by Ranchor et al. (1990), Stronks (1997) and Tuinstra (1998). MacIntyre (1986) also recommended focusing attention on the whole area of psychosocial factors, and not only directly on the social effects on health. Interest has to be shifted from the material conditions of life to psychosocial factors (MacIntyre 1986).

SES and the **health** of adolescents are the basic elements of the theoretical model. **Health risk behaviour, social network, and social support** are three of the factors which are related to health and possibly unequally distributed among socio-economic groups. **Parent and peer impacts** are extra factors and we presumed

strong association with SES and health risk behaviour, not directly with health. **Gender** differences are expected to be present in health, health risk behaviour, and social support, so they are included in the model and will be checked for their influence and interaction effects.

Before studying the socio-economic context of health, we would like to know something about the health (self-reported health problems) of Slovak adolescents. This is particularly important because self-reported health indicators are used very rarely in Slovakia.

Secondly, there is a question if there are any socio-economic health differences among Slovak adolescents. According to the West European surveys (*West 1988, West et al. 1990, MacIntyre and West 1991, Rahkonen and Lahelma 1992, Rahkonen et al. 1995, Tuinstra 1998*) they should not be present, but we cannot generalise from West European findings to Central Europe without research. Findings from studies of socio-economic health differences among Central European adults are not very optimistic in any case: socio-economic differences are similar or larger.

Thirdly, more needs to be known about several factors (health risk behaviour, social support) which we suppose are related to health, but also to SES. In other words, we were looking for how SES influences health. So we explored socio-economic differences in these factors and interaction effects between SES and these factors. If we found such relationships, we could assume that SES influenced health through health risk behaviour or social support.

Parent and peer impact is a special issue, because they influence health indirectly through health risk behaviour. The influence of parents' and peers' smoking on adolescents' smoking behaviour with regard to SES were explored.

1.4. RESEARCH QUESTIONS

Health of Slovak adolescents

Screening of adolescents' health based on self-reported health measures was the first step in researching socio-economic health differences. The aim was to explore the socio-economic health differences with regard to the prevalence of self-reported health problems and gender differences in health among Slovak adolescents.

Socio-economic health differences among Slovak adolescents

Many papers dealing with socio-economic health differences between Western European adolescents have been published, but, as we know, findings on socio-economic health differences between adolescents from Central Europe have not been published yet. The countries of Central Europe are organised differently and we do not know if findings from Western European countries can be generalised to societies in Central Europe. The question is if there are any socio-economic health differences among Slovak adolescents. The possible gender differences in socio-economic health differences were also an issue of research interest.

Distribution of health risk behaviour in socio-economic stratification

A behavioural explanation of socio-economic health differences stresses the role of risky behaviour. We surmise that adolescents from lower SES groups behave more riskily and their behaviour is the reason of worse health in comparison to adolescents from higher SES. This hypothesis is based on the assumption that risky behaviour occurs more frequently in socio-economic disadvantaged groups. To test this assumption, socio-economic differences in health risk behaviour and attitudes towards health risk behaviour were explored.

Hypothesis of different exposure vs. hypothesis of different vulnerability

Our findings encourage us to explore the role of risky behaviour in explanation of socio-economic health differences deeper. The validity of the hypothesis of different vulnerability and the hypothesis of different exposure in explanation of socio-economic health differences through risky behaviour was tested.

The role of parents and peers

Smoking behaviour attracts a lot of attention due to its undesirable influence on health, high prevalence in the population and early onset. A lot of papers have

explored determinants of smoking behaviour particularly in adolescence with the intention to find out an appropriate prevention strategy. A huge amount of literature reports about socio-economic differences in smoking behaviour, parents' influence on the smoking behaviour of their offspring or peer impact on adolescents' smoking behaviour. Fewer papers attempt to put these determinants together and find the model explaining adolescents' smoking behaviour. Based on literature study and outcomes of our previous analyses we attempted to find such a type of model. We focused on the influence of SES, parents and peers on adolescent's smoking behaviour.

Contribution of social support

Social support may be a protective factor in terms of health and socio-economic health differences. It was the reason to explore the influence of social support on the health of adolescents. There is a question if there are any differences in the influence of social support on health among gender and socio-economic groups and if there are socio-economic differences in distribution of social support. The aim was to explore the contribution of social support in observed socio-economic health differences. The hypothesis of different vulnerability and hypothesis of different exposure in the explanation of socio-economic health differences through social support was explored as well.

1.5. STRUCTURE OF THE THESIS

In the introductory chapter we try to describe the most frequently discussed explanations of socio-economic health differences. Besides this, several specifics of socio-economic health differences research among Slovak adolescents were described. A short description of the theoretical model of this research was also provided. Chapter 2 describes research context, data collection, measurements, and analyses used.

At the present time a lot of attention is being focused on health in adolescence, but there is a lack of information about the health status of Slovak adolescents, especially about self-reported health problems. On the other hand, there is more than only one reason why attention should be focused on this period of human life and on a Central European country, as is described in chapter 3. This chapter deals with self-reported health problems of Slovak adolescents with regard to gender differences. The following chapter, chapter 4, discusses socio-economic differences in health among Slovak adolescents. Chapter 5 continues by testing the hypothesis of socio-economic differences in health risk behaviour and attitudes towards health

risk behaviour among Slovak adolescents. Attention is focused on smoking, alcohol consumption, drug use, lack of physical exercise and combinations of these types of health risk behaviour.

Chapter 6 deals with the influence of health risk behaviour and socio-economic status on the health of Slovak adolescents. The influence of smoking and alcohol consumption on health is explored with the aim of contributing to the explanation of socio-economic health differences present among Slovak adolescents. Two hypotheses, of different exposure and of different vulnerability, are explored.

Particularly in adolescence, the influence of parents and peers starts to be very important in the determination of adolescents' risky behaviour. We explore the model explaining the influence of SES, parents and peers on adolescents' smoking behaviour; in chapter 7 we describe our findings.

Chapter 8 explains the role of social support in determination of health and socio-economic health differences among Slovak adolescents with regard to adverse gender differences in health and social support. The influence of social support on health among gender and socio-economic groups of adolescents is explored in a sample of Slovak adolescents.

Finally, the last chapter of this thesis, chapter 9, concludes the findings of the empirical analyses and discusses the results, implications for future research and recommendations for health policy.