

Social determinants of obesity in Georgia: study of district nurses and health policy/decision makers

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Thesis submitted in partial fulfilment of the requirements for the degree
Master of Philosophy (Health Promotion)
University of Bergen, 2014

Acknowledgements

My appreciation goes to the team of the Department of Health Promotion and Development, Faculty of Psychology at the University of Bergen, Prof. Maurice B Mittelmark, Dr Elisabeth Fosse, Marguerite Daniel, Torill Bull and all other teachers who have given us an insight into the health promotion philosophy, this new discipline for me, also into the academic research and great learning methods. It is a pleasure to learn and work with you all.

My special acknowledgement to my supervisor Dr. Elisabeth Fosse, Head of the Department, for her efforts and support in planning and development of this study and the paper. I think, she crowned the work performed by the whole team of the department to fully master me in health promotion and to cite her, to enable and empower me to see subjects from “health promotion glasses” too, as well as to master in the qualitative study design.

I would like to express special gratitude to Prof. Maurice B Mittelmark for his great role in establishment and loyalty to modern health promotion, great and interesting efforts to share this subject with students from different countries and among them for Georgians. I do hope that there will be specialists and, later, the whole systems in many countries soon, which I think, will work and live with a spirit of health promotion philosophy.

My special thanks should be paid to the Associated Professor, Marguerite Daniel, for her excellent approaches and efforts for mastering me and my friends in the field of health promotion and academic research, inspiring us in research and discovery.

My special thanks goes to the Associate Professor, Torill Bull, who was one of the first people to open a gate to the field of health promotion to us, for her academic excellence, warm and open relations and support.

My great thanks to all members of the international group who, in the presence of modern learning methods, planned by the Department, shared interesting and often crucial knowledge, discourse and experience with me, also for their friendship and relations.

I would like to express my gratitude to my colleague Dr. George Bakhturidze, the Head of the Health Promotion and Education Foundation in Georgia, for his recommendations which catered for me participating in the course of Master’s Degree in Health Promotion Philosophy at the University of Bergen. Needless to say that the background obtained at the University of Bergen will play a crucial role in achieving our shared aim to build a new health promotion system in Georgia.

I would like to express my appreciation to Natia Qaqutia, a Specialist of the National Center for Disease Control and Public Health, an assistant of my Master’s Degree study, for her help, ideas and attention. I really hope that her talent, diligence and kindness will be fully realized and appraised.

My special thanks goes to all participants of my study, among them to my colleagues at the National Center for Disease Control and Public Health, also to the managers and staff of Primary Healthcare Centers in Tbilisi and Imereti. Their contribution to this study has proved to be essential.

I would also like to express my gratitude to Bogdan Miroshnichenko, a teacher, a team leader and a teacher trainer at the British Council in Georgia who helped me with the language edition of my thesis proposal and the thesis itself. Without his professionalism and kindness, reading of this text would be hard enough.

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Acronyms and definitions

BMI – Body Mass Index

DALY – Disability Adjusted Life Years

EBRD – European Bank for Reconstruction and Development

GDP – Gross domestic product

GNI – Gross national income

HDI - Human development index

High income countries – countries with GDP \$12,616 or more according to WB.

LMIC – Low (GDP \$1,035 or less) and Lower-middle income countries (GDP \$1,036 - \$4,085) according to WB.

SES – Socio economic status

NCDC&PH – National Center for Disease Control and Public Health of Georgia

PHC – Primary Healthcare Center

PHCI - Primary Healthcare Center of Imerety

PHCT - Primary Healthcare Center of Tbilisi

Upper-middle income countries - countries with GDP\$4,086-12,615 according WB

WB – World Bank

WHO – World Health Organization

Abstract

Aim. Obesity and excessive weight have become one of the biggest problems in less economically developed countries, and among them in Georgia. A bio-medical explanation of this epidemic is quite restricted to give a room for planning effective interventions against it. The objective of this study was to identify social determinants of obesity in Georgia, to identify the primary social factors contributing to inequalities of spreading of overweight and obesity in different social groups.

Methodology. The qualitative case study design was used in this research. For data collection, semi-structured, face-to-face interviews with the open-ended questions were conducted with 6 district nurses and physicians from the capital, Tbilisi, and the villages of Imereti region, as well as with 4 policy/decision-makers from the National Center for Diseases Control and Public Health. The theory of Social Determinates of Health developed by Dahlgren and Whitehead were used as a theoretical framework of this study. Mainly the Thematic Network Analysis guided the analysis of the data.

Findings and discussion. The study has revealed the three main factors/global themes associated with spreading of obesity and excessive weight in different social groups: Transition, Active/Dominant “Obesogenic” Stereotypes and Lack of Literacy, and Policy Against Obesity. Those three themes were developed based on a number of findings and organizational themes, namely: 1. “Transition”, united issues/organizational themes, such as Stability, Sustainability, Predictability, Length of being in status, Transition political and economic periods, Changing roles and traditions, Increased accessibility, Paradoxes of Georgia in education and SES, Waves of progression; 2. “Active/dominant ‘obesogenic’ stereotype”, based on the issues of Instinct of energy reservation, Care on weight, Low physical expenditure and overconsumption with increasing mobility, “Obesogenic” traditions; 3. “Lack of

literacy and policy”, including the themes such as Positive effects of western integration and globalization, Values and care of young generation, the Role of new education, Increasing trends of good examples, Increasing resistance, Changing perceptions on weight, health and beauty, Absence of policy and interventions against obesity.

Conclusion and recommendations: The interplay of Transition, “Obesogenic” Stereotypes and Lack of Literacy and Policy Against Obesity probably are main social determinants of spreading of obesity among Georgian population. Inequalities in spreading of obesity in different social groups are closely related to those factors. Obesogenesis needs to be understood as a complicated chain with the interplay between human agency and environment being in its core, rather than treating it as a mere outcome of influence of separate factors. Western integration, globalization and, curiously, increasing scales of the problem too play a positive role against obesity in Georgia by increasing literacy, shifting a focus from survival to health and beauty.

It is highly recommended for the new policies against obesity in Georgia and countries of a similar context to be more of a “catalyzing” nature of the existing positive processes correlated with weight control and development in the wider society, advanced introduction to the literacy, carefully selected and stage by stage developments in the case of need to ensure sustainability of the process. At the same, time the focus on the policy need to involve the concept of interaction between the human agency and the environment and, therefore, use modern health promotion approaches, rather than merely behavioral or clinical interventions, or “nanny state” actions only.

1. Introduction

1.1 Background

Obesity is defined as a condition of abnormal or excessive accumulation of fat in adipose tissue to the extent that health may be impaired (Garrow, 1988). Obesity and fatness is a relatively newly recognized and, at the same time, rapidly progressive challenge for health care systems around the world, and the developing countries take some leading positions (WHO, 2000). The pandemic of obesity originated in the US and its subsequent arrival in Europe and the world's other flourishing nations before, remarkably, it penetrated into even the world's poorest countries, not only into their urban areas in particular, but also affecting their semi-urban and rural areas. The pandemic is moving towards subsidized agricultures and rich, transnational companies as a result of cheap, highly refined fats, oils, and carbohydrates, labour-saving mechanized devices, affordable motorized transport, and the seductions of sedentary pastimes such as watching television (Nishida, 2005; Prentice, 2006 Feb; Swinburn, 2004).

The Worldwide prevalence of obesity doubled from 6.4% in 1980 to 12.0% in 2008. One half of this rise took place in the 20-year period, between 1980 and 2000, and another one occurred in the last 8 years. At the same time, progression of the epidemic has slowed in the past ten years in some countries, such as Australia, China, England, France, Korea, the Netherlands, New Zealand, Sweden, Switzerland and the USA (Pérez, 2013; Stevens, 2012). The difference in the prevalence of obesity is more than a thrice higher in lower-middle-income countries compared with upper-middle income ones with 7% and 24% respectively. Obesity among women was

significantly higher than among men, with the exception of high income countries where this rate was practically similar (WHO, 2011).

In Europe, the prevalence of obesity among men has increased from 4.0% to 28.3% and the increase in women was from 6.2% to 36.5% in the period from 1998 to 2008.

An important geographic variation was observed: the prevalence rates in Central, Eastern, and Southern Europe were higher than those observed in Western and Northern Europe (Berghöfer, 2008).

The weight gain in adult life is associated with increased morbidity and mortality. The type II diabetes, cardiovascular diseases, and increased mortality are the most important consequences of obesity and abdominal fatness. However, other associations can be observed in musculoskeletal disorders, cancers, limitations of respiratory function, and reduced physical functioning and quality of life. Non-infectious disorders, related to obesity, are among leading diseases in morbidity and mortality in the majority of places of the world, except for Africa and some Asian countries. According to global estimations, for the year 2020 they will also take the leading positions as the main causes of death in those regions (Seidell, 2001 January; WHO, 2000). About 2.8 million people worldwide die each year as a result of being overweight (including obesity) and about 35.8 million (2.3%) of global DALYs are caused by overweight or obesity (WHO, 2011). According to WHO estimations, obesity directly accounts for about 2-6% of expenditures of the health system and indirect costs are about 3 times higher (WHO, 2008).

The main reason for typical overweight and obesity is energy imbalance. The increase in a daily intake of energy is a cornerstone for obesity and there is a major trend in literature, which explains this as a “nutrition transition” in the modern world. Diets of the developing world are shifting rapidly, particularly with respect to fat, caloric

sweeteners, and animal source foods (B. M. Popkin, 2004; WHO, 2000). A contrary pattern is observed in terms of physical activity. Urbanization and deviation from the high-energy expenditure activities such as farming, mining, and forestry towards the service sector, have also changed the modes of transportation and activity patterns during leisure hours and are named as another cause of this imbalance (Oldridge, 2008). Those intermediate factors are correlated with uneven distribution of income and wealth, education and other similar patterns (M. Whitehead, Dahlgren, G., 2007). The recent findings assert shifting the burden of obesity towards the poor (B. M. Popkin, 2004).

About 70% of mortality and morbidity in Georgia are related to non-infectious diseases, mainly to cardiovascular diseases and cancers (NCDC&PH, 2012). According to the first National Survey of Risk Factors of Non-communicable Diseases in Georgia conducted in 2010, 56.4% of the adult population, aged 18-64, are overweight, and every 4th adult is obese in this low-income country (BMI >30 kg/m²). Mean BMI in both sexes is 26.7 (26.6 among men and 26.8 among women); and is increasing together with age. The main waist/hip ratio is 0.9 and 0.8 among men and women respectively. The pre-obese conditions (BMI 25-30) in men are more prevalent than in women (36.8% vs 25.7%), though the obesity trends are contrary (21.8% vs 28,5%). According to the same study, there is no big difference in level of physical activity among different weight groups. Having said that, overweight and obese people, in comparison with people of normal weight, consume more carbohydrates, meat, dairy products, fish, fruit, and vegetables. The opposite trend was established in consumption of confectionary products. Regional distribution shows that the population of majority of regions are more likely to be overweight and obese than the dwellers of the capital. It should be taken into consideration that the

population in the regions of Georgia, if compared with that of the capital, are poorer, live in less urbanized areas and, at the same time, lead a more traditional style of life. Another important issue is that normal weight rate is the highest in the 18-24 year age group, the pre-obesity becomes apparent in the ages of 25-34, and the age group of 35-44 represents near-peak obesity indices. Those are the ages when people in Georgia become increasingly independent in their statuses of employment, occupation, income, and social networks, as well as achieve a certain self-esteem level and self-realization (NCDC&PH, 2011). The above-mentioned associations are worth a thorough explanation, as well as the factors and contexts of social life that aid people's weight gain and control. This is especially interesting from the discourse of people who care about population's health conditions, have close and long-term contacts with individuals, families, districts and the whole communities.

1.2 Problem statement and relevance of the study

Non-infectious diseases and, among them, obesity-related disorders cause a great deal of diseases and shorten life expectancy in Georgia as a whole, as well as other LMICs. Thus, obesity is recognized as a new challenge for health care systems and the population of certain countries. A quantitative study shows the association of overweight and obesity with some demographic factors such as sex, age, education, income, region, etc. The number of studies has been done abroad, mostly in the Western world and Latin America on the grounds of why there has been an increase in overweight in those cultures and different social groups. At that majority of them are influenced by deterministic approaches and/or targeting prevention objectives. Comparably rare evidence exists on grounds of socio-ecological and health promotion discourses. Literature lacks in a qualitative understanding of those reasons as well, particularly in the context of inequity and inequality, and country-specific issues for

Georgia. Understanding of those issues is important for activation and a better planning of future interventions in the countries such as Georgia.

2. Literature review

2.1 Biomedical and socio-ecologic approaches to obesity development

The obesity research was primarily informed by a biomedical model of health, therefore focusing on the physiological risks and temporal trends of obesity (Willms, 2003), as well as the demographic and socio-economic risk factors of overweight and obesity (Stam-Moraga, 1999). Medical approaches serve as a basis for classification and explanation of obesity development stages. First of all these include a well-known classification of obesity by the WHO, such as pre-obesity, I, II and III class obesity, that is based on body mass index calculations, including the waist/hip ratio and some others (WHO, 2000).

The cornerstone for development of obesity is a positive energy balance. A higher energy intake and a low level of its expenditure usually results in obesity (WHO, 2000). At that, there are deeper factors behind those individualistic or proxy ones which are responsible for a wide spreading of this problem in societies, such as genetics, metabolic factors and socio environmental characteristics to name but few.

The genome-wide association studies have identified a number of genetic versions attributed to obesity. To summarise this evidence, it suggests that having some genetic factors, metabolic characteristics, being overweight, or having certain diseases in the past increase the risk of obesity in the later stages of life (Bray, 1997; Korbonits, 2008; Winter, 2013). In addition, another fact is that obesity and overweight in adult life at the age group of 25 and over is twice more prevalent than in the early adulthood or prior periods, and affects more than a half of all adult

population in Georgia, as well as in many other countries (NCDC&PH, 2011). Subsequently, adult obesity and overweight cannot be fully explained from the above-mentioned viewpoint of individualistic, genetic factors, physiological and physical pre-morbidities, and risks.

There are many studies, which found relationships between obesity and socio-economic factors, such as education, income, occupation, social class etc. At that, some of those studies, influenced by the same biomedical discourse mentioned above, understand those sets of factors more in context of demography and as “passively applied statuses to a person”. In contrast to this discourse, a socio-ecological model of health suggests health be “created” by interaction of a human agency and the environment. This is a product, yet, at the same time, a resource of everyday life, a basic human right, an important component for the critical autonomy of a person necessary for the effective participation in social life and further to achieve life goals. In this context, health is understood as a continuum of interacting factors and dynamic dimensions rather than a constant status (Antonovsky, 1996; Green, 2010). Accordingly, health issues are going beyond “reasons”/etiological/risk factors of illness or being well, to comprehensive understanding of the world, including dimensions such as freedom of choice, centrality of power and its share. This approach is the basis for a modern health promotion approach (Green, 2010). This comprehensive understanding of health suggests going further from the above-mentioned restricted discourse to a wider and more dynamic understanding of socio-environmental factors and their attribution to health and, among them, to obesity.

In this respect, going to a proper depth of the factors associated with obesity, firstly, we must mention the findings of Wilkinson (2003) which conclude that, in different countries and globally in general, life expectancy is shorter and most diseases and

their risk factors are more common the further down people are on the social ladder. These inequities in health, avoidable health inequalities stem from the conditions in which people are brought up, live, work, and become older, as well as the healthcare provisions to react to the illnesses in those places. Political, social, and economic forces, in their turn, shape conditions in which people live and die (Marmot, 2008). M. Whitehead, Dahlgren, G. (2007) developed a more structured and comprehensive concept of those social inequities in health for analysis and operation that give an opportunity to evaluate inequities between and within countries at different levels or layers of life, starting from individual factors, continuing with socio economic statuses and ending with the general political and economic environment, as well as find areas of their interconnectedness and plan specific to the problem interventions to avoid that health related negligence.

More and more recent evidences suggest that it is more fruitful to consider relation of obesity with the individual, socio-economic and environmental factors in light of the socio ecologic model and above-mentioned comprehensive approaches and concepts (Greenberg H., 2011; Lang T., 2007). Depending on the causality continuum model of Coreil J. (2001), Scott (2013) suggested using an ecologic theoretical framework for obesity research and interventions specifically in emerging nations. The author is arguing that apart from the proxy factors such as excessive energy intake and low expenditure, there are intermediary factors such as socio-economic and cultural characteristics, also distinct influences such as globalization and urbanization to be considered for explanation of the rapid increase of obesity in those countries.

2.2 Age and gender

There is a positive correlation between aging and obesity. Namely, the majority of studies suggest that people of older ages are more obese than younger groups. Age

groups 35-44 are characterised by the highest rates of obesity among age groups. The main underlying factors contributing to the increase in obesity in older age groups are those of socio-economic status, as well as metabolic, hormonal and related diet or life style, such as obesity among adult women after pregnancy and child delivery or slower metabolism and lifestyle in old ages (Cleland, 2010; Jin, 2013; NCDC&PH, 2011; Subramanian, 2011; WHO, 2000).

Gender is another important variable for overweight and obesity. In all continents and in the majority of countries, obesity among women is more prevalent than in men. The obesity prevalence in women is roughly twice higher than that in males in the WHO regions of Africa, the Eastern Mediterranean and South East Asia (WHO, 2008). In order to explain mechanisms of connection between weight and sex, some studies, sharing medical approaches, suggest three stages of weight gain among women, such as - at puberty (the onset of menstruation), after pregnancy, and around menopause. Moreover, some studies suggest a predisposition of women to consume more fat and transform energy into fat more (than among men who transform energy into proteins more) in particular after puberty named as “nutrient partitioning” (WHO, 2000). However, taking into consideration the fact that the prevalence of obesity among women is changing in country by country and from one society to another, many studies have recently suggested broader determinants to be included in women’s weight gain, such as gender related cultural norms, a role and position in the family and society (Lahmann, 2000; Novak, 2006).

Together with this knowledge on obesity among women, there is little evidence about specific factors associated with obesity among men. The only reasonable explanation based on the existing publications is that, in contrast to women, there are no known any gender specific metabolic factors that causes obesity in men. Hence, we can

suppose that obesity prevalence among men is more related to genetic, as well as socio-economic, behavioural or environmental factors.

2.3 Socio-economic factors

2.3.1 Socio-economic status and income

There is contesting evidence on how different authors describe and measure a “socio-economic status” or a social class. A number of studies align it to the family income and some other factors such as a level of education or occupational status. The measurements depend widely on the country context and the study goals (Aitsi-Selmi, 2013; Oakes, 2003).

There have been conflicting reports about SES–obesity relation in low- and middle-income countries: some researchers claim that the higher SES (versus the lower SES) is associated with the higher adiposity (Monteiro, 2007; Neuman, 2011; Subramanian, 2011), and others claim that higher SES is associated with the lower adiposity (Jones-Smith, 2011; C. A. Monteiro, Conde, W.L., Lu, B., Popkin, B.M., 2004). According to C. A. Monteiro, Conde, W.L., Lu, B., Popkin, B.M. (2004) and many other authors, having a low income and belonging to the low SES confers to a strong protection against obesity in low-income economies, but it is a systematic risk factor for the disease in upper-middle income economies with the Gross National Income at the value of about US\$2500 per capita. Aitsi-Selmi (2013) has found a positive association of the SES with obesity among women and, at the same time, a reverse association among men in Brazil. Some interpret these confronting data from LMICs by methodological limitations including the SES indicator used or “rudimentary” administrative tracking systems and internal migration in these societies. Despite this lack of data from LMICs, in a systematic review C. A. Monteiro, Moura, E.C., Conde,

W.L., Popkin, B.M. (2004) argue that three main conclusions can be made: 1. That obesity in the emerging nations can no longer be considered as solely a problem of groups with the higher SES. 2. The burden of obesity in emerging nations tends to shift towards the lower SES as the country's GNI increases. 3. The shift of obesity towards women with the low SES exists at an earlier stage of economic development than it does for men.

2.3.2 Social mobility and accumulation

As it is mentioned above, a large number of cross-sectional studies show correlations between socio-economic gradients and body weight among adults. Studies examining the determinants of these inequalities have mainly focused on the contributions of diet and physical activity in adulthood. However, both body weight and the SES develop over a life course. Overweight/obesity at an early age is associated with these outcomes in adulthood, and children born into deprived circumstances often follow a trajectory of socio-economic disadvantage in adulthood (Ball, 2005; Power, 2003). Accordingly, it is important to define the connection not only with the SES measured once in adult life, but its life course dynamics (social mobility and social accumulation).

There is a great deal of studies in high income countries, and very few ones in LMICs regarding the association between obesity, social mobility and social accumulation, whereas, with the first case a poor health state or high rates of obesity are found to be related to a certain movement (mainly downward) of SES from one person/generation to another or remain stable (Blanden, 2005; Goldthorpe, 1987; Karnehed, 2008; Langenberg, 2003; Stevens, 2012); and in the case of the second dimension, a poor health state results from a number of disadvantages or malpractices which arise in the run of the life course along with the critical periods influencing the factors in the early

life pathways (Lynch, 1997; Singh-Manoux, 2004; Stevens, 2012). At that, it has been found that in some countries, especially in LMICs, the association between the direction of mobility/accumulation and the health outcome are changing according to gender and some other characteristics (Aitsi-Selmi, 2013). Along with the awareness of those two issues, there is still an unachievable objective trying to disentangle those life course processes from the others, and, accordingly, it is suggested that it is an issue of selection or that “*the interpretation (...of relation between the SES and health outcomes..) must depend on prior knowledge of more specific causal mechanisms*” (Hallqvist, 2004).

2.3.3 Education and occupation

Many studies have discovered a relationship between the level of education and overweight/obesity. As a rule, the presence of higher education in western world is related to low levels of obesity. Therefore, some studies go deeper into understanding factors underlying the educational gradient. For example, a study carried out in North Sweden suggests that educational gradient in young adulthood is closely related to obesity and has different underlying factors in accordance with sex, such as parental support, physical inactivity, and alcohol consumption. All these factors are more common among men and women with a lower education than among those with a higher one (Novak, 2006).

The relationship between the level of education and overweight is different in the emerging nations. Namely, a systematic review done by Dinsa (2012) suggests that the more affluent and/or those with higher educational attainment tend to be more obese in low-income countries or in the countries with a low human development index (HDI). However, the correlation becomes largely mixed for men and mainly negative for women in middle-income countries or in the countries with a medium

HDI.

There is a well-known connection between some occupations and obesity. Some studies in the USA have shown the prevalence of obesity and overweight among fire fighters that importantly exceeds national average rates. The qualitative research performed among fire fighters found some undermining factors behind occupation related to obesity: fire department eating culture, night calls and sleep interruption, supervisor leadership and physical fitness, sedentary work, and age and generational influences (Dobson, 2013). In emerging nations, traditionally, it is known that people of occupations with low level of physical activity (that usually means higher level of education and those in the position of authority/skilled workers) are under a higher risk of being overweight than those with the occupations, which require intensive physical activity (associated with low education and low position/manual work). Modern trends of obesity in both developed and developing economies have totally changed those traditional aspirations, and spreading of obesity now has the opposite trends. For instance, some new studies carried out among Dutch workers have found out that BMI profile and prevalence of obesity differ between occupations and sectors, and tend to be more prevalent among unskilled workers. At that, those differences are partly explained by socio-demographic factors, such as age, sex and education (Proper & Hildebrandt, 2010). The study done in the UK had similar findings which has shown that the attribution to low SES and occupation were strongly associated with higher rates of obesity (Rosmond, 2000). A systematic analysis of the data on the SES and obesity performed by McLaren (2007) has shown that the overall pattern of results, for both men and women, was of an increasing proportion of positive associations, and a decreasing proportion of negative associations as one moved from countries with high levels of socio-economic

development to countries with medium and low levels of development. The findings varied by a SES indicator; for example, negative associations for women in highly developed countries were most common with education and occupation, while positive associations for women in medium- and low-income countries were most common with income and material possessions. The patterns for women in higher- versus LMICs were generally less striking than those observed by Sobal (1989), the author who was one of the first to make systematic reviews concerning the SES and obesity, arguing about contrast in associations of those factors among women in developed and emerging nations.

2.3.4 Marriage and family

Entry into a marriage for both men and women is associated with weight gain and a dissolution of a marriage with weight loss. According to S. E. Wilson (2012), it may be related to a broader set of shared risk factors, such as social obligations regarding meals. However, the shared risk factor model presumes that the intra-couple correlation should increase in respect to marital duration, yet, on the contrary, it declines. According to the recently promoted "crisis" model of marriage, differences in body mass are determined by marital transitions, not a marital status.

Intergenerational influences on parental health beliefs and knowledge suggest that health promotion strategies, targeted at obesity and overweight, such as promoting healthy eating habits and/or physical activity, may be more effective if orientated towards the wider family. Significantly, many parents believe that strategies to promote healthy weight should start early in a child's life (Pocock, 2010).

2.4 Survival instinct and cultural diversity

According to the report of American Medical Association “*The stage for today’s obesity epidemic was set in prehistoric times. To further the survival of the species, the human body’s cells are better adapted to absorb rather than shed calories. In this regard, our species has not changed. Our environment, on the other hand, especially in the past century, has evolved into one that churns out an abundance of high-fat, high-calorie food*”(AMA, 2004). David Katz, discussing the pandemic of obesity compared human beings to polar bears living in the Sahara Desert: “*...a polar bear can’t suddenly change his two-layer coat that is designed to help him survive the cold, and homo sapiens can’t change a body that is designed to live in a calorie-sparse environment*” (Katz, 2014). S. L. Wilson, Gallivan, A., Kratzke, C., Amatyia, A. (2012) are quoted saying “*no one demographic or socio-ecological factor appears to have a predominant role in predicting obesity*” and suggest that future studies focus on stressors in the culturally acceptable environment versus ideal notions of weight. Brown (1991) argued that obesity is best understood in the context of cultural and biological evolution and “*adaptive strategies of the past play a role in the aetiology of adult obesity today and can be found in the social structure, cultural beliefs about food and body size, the economy and the mode of reproduction*”.

According to Peters (2002) “*... the modern environment has taken body weight control from an instinctual (unconscious) process to one that requires substantial cognitive effort. In the current environment, people who are not devoting substantial conscious effort to managing body weight are probably gaining weight...*”

While it may seem paradoxical, there is a growing evidence that low income and under nutrition in the early years of life may predispose individuals toward obesity in adulthood. An reciprocity between stunting and overweight/obesity has been

demonstrated in children in LMICs such as Russia, China, Brazil, South Africa and others (B. M. Popkin, Richards, M. K., Montiero, C. A. , 1996), yet, Martorell (2001) argues that this reciprocity may only be expressed if individuals are exposed to high energy diets often seen in countries undergoing the nutrition transition.

A dominant approach can be observed in the literature about relationship of above-mentioned survival instinct and obesity. This approach means that the survival instinct is perceived as a stress that stimulates intake of energy and this is explained by physiological mechanisms (Freemark, 2010). In spite of this strictly medical approach to the problem, the survival instinct is probably much more than just a stress, even chronic one. Explaining the role of cultural diversity and its association with obesity, Brewis (2010) mentions the existence of “fat tolerant societies”, or societies where big and fat bodily images are culturally acceptable. The author asserts that those are historically accepted cultural preferences based on certain bodily ideals. This is mostly evident in poorer nations. This can be seen from the history of many nations as well as from those, which now have different ideals now, that overconsumption and big bodily image was a sign of flourishing, especially in the times of a hardship. For instance, at the beginning of the twentieth century in the USA “...*fat cheeks and ample stomachs were visual cues that individuals were healthy, not infected with the dreaded slim tuberculosis...*” (Grivetti, 2001). According to Renzaho (2004) the same issues are at play today in Africa where HIV, tuberculosis and other diseases associated with under nutrition, chronic poverty, war and natural disasters are widely spread. Considering this evidence against the survival instinct, there probably is a close relation between this instinct and “obesogenic” cultural norms and traditions, but literature lacks in research on this issue.

2.5 Weight perceptions, health literacy and policy

Weight perceptions and concerns include perceived weight status, body satisfaction, and concern of weight control, and are closely related to the health literacy and education. They can be viewed as kind of “indicators” of obesity-related literacy and policy in societies. Weight perception is usually defined by comparison of self-felt weight status and measurements of BMI and/or waist circumference. The published materials give little insight into a perceived weight status trends in emerging nations. The study done in eight different countries demonstrates strong cultural similarities in body satisfaction, but the differences occur in relation to a large body (McCabe, 2012). A weight goal refers to an individual’s aspirations regarding body weight and pertains to losing, gaining, maintaining, or doing nothing concerning weight (Neumark-Sztainer, 2002). The author also argues that co-existence of the obesity problem in high scales or/and policy against it strengthens success of weight goals of people. Existing publications provide evidence of socio-demographic, psychological, and social correlations of weight goals. According to Kottke et al. (2002), Ricciardelli et al. (2003, 2006), “... *weight status is the strongest predictor of weight goals with overweight people most often pursuing a weight loss goal and underweight people most frequently having a weight gain goal ...*”(cited from Roy, 2009). The path analyses showed that weight perceptions and weight management goals mediated associations between the body mass index and weight management practices (Shamaley-Kornatz, 2007).

According to Bankson (2009) a health literacy research and theory-building have been expanding at a rapid rate with a ten-fold increase in the number of journal articles published between 1997 and 2007. According to Baum (2007), achieving success in health equity requires a high level of participation and combining “a top down

political commitment and policy action with a bottom up action from communities and civil society groups.” This combination of so called “upstream” and “downstream” interventions gives the “nutcracker effect” in which only pressure from both sides can “crack the nut of health equity”. There are three shaped generations in development of the health literacy in literature. The last and most comprehensive one is based on developments of Nutbeam (2000) who suggested implementing social and political aspects in addition to psychological in order to achieve best results in modern health education and health promotion. Nutbeam suggested three levels of health literacy:

- * Basic/Functional literacy - basic reading, writing and literacy skills, as well as the knowledge of health conditions and systems which are the desired outcomes of traditional health education interventions;

- * Communicative/interactive literacy - communicative and social skills that can be used to understand meaning from different forms of communication, and, what is important, to apply this new information to changing circumstances;

- * Critical literacy – a higher level of cognitive and social skills required to critically analyze information, and to use this information to achieve a higher control over life events and situations. This is achieved through individual and collective action to address the social, economic and environmental determinants of health.

Moreover, the author argues that all those levels need to be accomplished at the same time because the upper level importantly depends on the lower one.

The last level, Critical literacy, is a better response to the modern challenges of health promotion. The movement from individual to collective responsibility and needs, increasingly political character of recent health promotion interventions need adequate goals and an approach for literacy attainment at the community and global

levels, overcoming structural barriers (de Leeuw, 2012).

Studies suggest that the low-level health literacy is associated with many aspects of adolescents' health problems, including their body weight. These results have public health implications on an important global problem of body weight (Lam, 2014). At that, the low health literacy is shaped on the individual as well as community and state levels. This partially is related to the fact that obesity pandemic is a new, yet, increasing problem for the world, which rapidly mobilizes our attention. The findings show that the prevention of interventions that address the broad spectrum of weight related disorders, enhance skill development for behavioural change, and provide support for dealing with potentially harmful social norms are better done and warranted in the existence of a high prevalence and co-occurrence of obesity and unhealthy weight-related behaviours (Neumark-Sztainer, 2002).

Peters (2002) argued *“It is unlikely that we would be able to build the political will to undo our modern lifestyle, to change the environment back to one in which body weight control again becomes instinctual. In order to combat the growing epidemic we should focus our efforts on providing the knowledge, cognitive skills and incentives for controlling body weight and at the same time begin creating a supportive environment to allow better management of body weight”*. Health literacy is formed by weak health education and promotion interventions worldwide and especially in LMICs. Despite the fact that WHO developed recommendations and some strategic directions against obesity and related noninfectious diseases, there is a low level of implementation of systematic activities against them in LMICs (WHO, 2004, 2011) and among them in Georgia and neighboring countries.

2.6 Economic development and transition

Economic development is the sustained, concerted actions of societies that promote the standard of living and a so-called economic health. Such actions involve multiple areas including development of human capital, critical infrastructure, regional competitiveness, environmental sustainability, social equity, inclusion, health, safety, literacy and other initiatives (Schumpeter, 2003; Todaro, 2011). The economic development differs from economic growth. Whereas economic development is a policy intervention endeavor which aims at economic and social well-being of people, economic growth is a phenomenon of increased market productivity measured in the percent rate of increase in *GDP* or its equivalent GNI (Bjork, 1999; Dickinson, 2011). Before industrialization and mass production, technological progress resulted in an increase in population which was kept in check by food supply and other resources, which acted to limit per capita income. In contrast to this period, the present-day economic growth occurs in excess of population growth because mechanization replaced hand methods in manufacturing and new processes are powered by electricity generation, production of chemicals, iron, steel, interchangeable parts, automation, transportation infrastructures, electric motors, mechanized and scientific agriculture. All those improvements resulted in mass production that is in the universal use today. Economic growth in the Western Nations slowed down after 1973, whereas the growth in Asia has been on the rise since then (Clark, 2007).

The main pathway of relationships between economic growth and obesity is a so-called “nutrition transition”, introduced by Popkin and widely used in recent literature (B. M. Popkin, 2001; WHO, 2000). Economic growth followed by shifting of dietary patterns from traditional cooking to western style food with a high-energy value (rich with meat, fat, bread, sugar and sodium) whose intake is the main characteristic of

this phenomenon. Nutrition transition is named as the main factor determining a rise of obesity prevalence in developing economies. At the same time, some authors argue that negative effects of nutrition transition are not inevitable because they occur in response to “*malleable social environments that are the product of evolving human cultures*” (Hawks, 2003; Kim, 2000).

The relationship between economic growth and human development is a well-known one. “*John Joseph Puthenkalam after analyzing the existing capitalistic growth-development theoretical apparatus, introduced the new model which integrates the variables of freedom, democracy and human rights into the existing models and argue that any future economic growth-development of any nation depends on this emerging model*” (cited from Ranis, 2000).

Another present day term actual for some LMIC countries, especially for those in Eastern Europe, is “transition economy”. This is an economy, which is changing from a centrally planned economy (established in the former USSR and Communist bloc of countries) to a free market. In essence transition in economies is the process that has two waves: the first one characterized by the economic crisis, which is taking place, and the next one when the economic growth is being observed. The economic transition process is usually characterized by the changing and establishing institutions, particularly private enterprises; changes in the role of the state, thereby, the creation of fundamentally different governmental institutions and the promotion of private-owned enterprises, markets and independent financial institutions, pluralism and development of new political directions and players. This process is followed by total socio-economic and political changes of societies. There are two types of economic transition: a partial and a whole one.. The whole transition is characterized by an aggressive and quicker-paced model of transition (such as

transitions in Georgia, Poland and other Eastern European countries) and the partial transition or gradual transition, that happened in China and Vietnam. As a rule, the countries with the whole economic transition are seen to be returning to and integrating into western socio-economic, political, cultural values in all aspects of life. The directions of formation of socio-economic statuses of people, factors influencing them and their values etc. are usually rapidly changing, chaotic and contesting, and do not always follow experience of high income countries (EBRD, 2013; Lavigne, 1995).

The rapid economic transition as a risk for Ischaemic Heart Disease was found in the natural experiment which studied Hong Kong residents born in economically developed Hong Kong and in contemporaneous residents born in undeveloped Guangdong province (Schooling, 2008). Some other studies suggest to further investigate the issue of rapid socio-economic changes and development in LMIC as anticipators of certain health-SES relationships (Aitsi-Selmi, 2013; Jin, 2013). M. Whitehead, Dahlgren, G. (2007) as well as Wilkinson (2003) argue about existing inequities in health conditions among developing and developed countries caused by factors such as crisis and economic transition on the one hand and stability on the other.

2.7 Socio-economic and political trends in Georgia

Before the 1980s, Georgia was a part of the Soviet Union, with a non-democratic, yet, socialistic political and commanded/centrally planned economic system, with high levels of and equity in people's income, employment, education, healthcare, social status, etc. At the beginning of the 1990s, the country gained independence and became a transition economy country. At that, the armed conflict with the separatist regions followed by a great number of refugees fleeing from one to another parts of

the country, and at the same time, the civil war took place in the 90s. Due to those dramatic processes, the economy declined by 78% which was coupled with hyperinflation (of about 70%). Georgia became a poor country with a minimal income. The duration of the economic decline was 5 years, which, if compared, was about twice longer than the Great Depression in the USA. The rapidly transformed economic and political systems critically decreased the GDP, increased the equity gap among social groups, and totally changed the labour market. Highly educated people were forced to resign from their appropriate posts, which led to a dramatic increase in the unemployment rate and migration to other countries as well as from rural to urban places. A huge part of the population of Georgia changed their socio-economic statuses, and the country as whole faced a widely spread absolute poverty with the deficit of essential goods, pharmaceuticals, etc. (EBRD, 2013; Nickel, 2005).

Nonetheless, by the end of the 90s, Georgia began building a new system based on the market economy and Western democratic, socio-economic, and political values that are followed by a rapid economic growth and development. In essence, the transition mode that Georgia chose is known as the “whole transition”, the functional restructuring of state institutions from being a provider of growth to an enabler, with the private sector as its engine (EBRD, 2013). In the presence of high unemployment, migrants in western and post-Soviet countries were providing their families and unemployed relatives with the means for living. Accessibility to essential, especially cheap food, cars, some other products, and services was rapidly and dramatically increased.

Throughout the period of 2004-2012, the country was governed by the right political ideologies and widely used neoliberal economic and political approaches that, despite the important progresses such as economic growth, building of governmental

structures and fighting with the crime and corruption (Papava, 2011), were lacking in strategies of decreasing inequalities between social groups (LAT, 2012). Despite the fact that the main direction of political and economic development of Georgia was targeted at integration into the European Union and NATO, the membership in those bodies is still not warranted. Along with this economic growth and development, the armed intervention of Russia took place in 2008, followed by strengthening of occupation of separatist regions of Georgia.

All those painful and rapid changes that, at the same time were followed by instability, have had an impact on the everyday life, social and cultural trends of Georgian society (WB, 2009). Due to the country's historical background, stage of development and economic growth, a low quality in formal education and problems of justice in employment sector, the role of formal education, occupation and income in determining social statuses are mixed and the perception of social statuses itself by the society is very specific. The trends of social mobility and social accumulation are rapid, rarely predictable, often reversal and do not follow a classic western trace and experience. Consequently, associations of many health outcomes with SES in Georgia often are different and sometimes paradoxical if compared with classic phenomena known from the published literature and in western countries.

The acknowledgement of the above-mentioned socio-economic, political, and other factors provides us with the insight of understanding some deeper determinants of obesity expansion. At that, except for some exemptions, in the great majority of cases, those are more mechanically, statistically adjusted associations to obesity. Data from LMICs and especially in the context of transition economies are very scarce. What this literature lacks in is a qualitative explanation from health promotion and socio-

ecologic prospective of health as to why those inequalities among different social groups in relation with weight status exist; and which factors in social life determine those associations specifically in the Georgian context.

4. Theoretical framework

The theory on Social Determinants of Health developed by Dahlgren (1991) is used in this study as a theoretical or conceptual framework because the theory is based on the socio-ecologic understanding of health and originally is designed to explain a complex of factors from the point of view of the equity in health, define the position and interrelationships among determinants of health. Graphically this theory resembles a rainbow and consists of different layers.

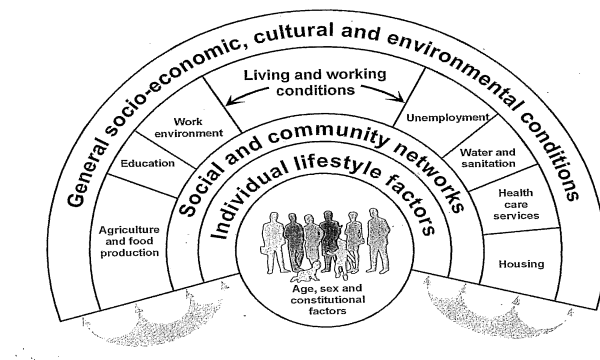


Figure #1. Social Determinants of Health (Dahlgren and Whitehead, 1991)

The model consists of 5 layers. The first layer is General Socio Economic, Cultural and Economic Environment. The frame of this layer gives me the opportunity to gather information and analyse factors such as general political and economic developments in Georgia, poverty, income, rural and urban developments, certain services in relation to obesity. The next layer (2nd) represents living and working conditions, its components such as education, working environment, employment,

access to products and services, living conditions were covered for the study needs. The third layer is comprised of the Social and Community Networks with inequalities arising from belonging to certain families, social classes, cultural and religious groups, neighbourhoods with specific traditions and levels of relations, friendships, professional groups were analysed in relation to the weight gain. The fourth layer, the Lifestyle Factors, include obesity related behaviours, such as diet or physical activity themselves. Together with them, inequalities among the other health behaviours were studied in light of obesity. According to the fifth, and the last layer of the model, inequalities among gender and age were studied.

The theory introduced by Dahlgren and Whitehead gave me not only the opportunity to plan data gathering, but also to systematize all findings of the study in accordance with suggested layers, namely, to develop and organize basic, organizing and global themes, find relationships between them and, as a result, identify some leading determinants contributing to spreading of obesity.

5. Methodology

5.1 Design and strategy

For purposes of this study, I used qualitative design and strategy of the case study because of their approaches to data collection, analysis, interpretation, and reporting. The qualitative design is a means for exploring and understanding the meaning of individuals or groups ascribed to a social or human problem. The research process involves emerging procedures; the data are mainly collected from the participants' setting, inductive data analysis, following a bottom-up manner: from particulars to general themes, thus, enabling the researcher to make interpretations of the meaning

of the data obtained. This design is focused on individual meanings and importance of rendering the complexity of a situation (J. W. Creswell, 2009).

The qualitative case study design has been chosen due to a number of reasons. Namely, as Yin (2003) argues, a case study design should be considered when the focus of the study is to answer “how” and “why” questions. One cannot manipulate with the behaviour of those involved in the study; one aims at covering contextual conditions as there is a belief that they are relevant to the phenomenon involved in the study, or the boundaries between the phenomenon and context are not clear. One of the common pitfalls associated with the case study is that there is a tendency for researchers to attempt to answer a question that is too broad or a topic that has too many objectives for one study. Stake (1995) suggested placing boundaries on a case to prevent this explosion from occurring. Suggestions on how to bind a case include: (a) by time and place; (b) time and activity; and, was (c) by definition and context which was the most relevant for my study (Miles, 1994).

5.2 The study Area

The study was carried out in two regions of Georgia – the capital city of Tbilisi and a region in the West of Georgia – Imereti. The main reasons underlying the selection of these areas were that Tbilisi is an urban and a well-developed area with the prevalence of obesity being one of the lowest compared to the other parts of the country; and Imereti, on the contrary, with the highest obesity rates, which is a more rural and poorer region (NCDC&PH, 2011). This gave me a chance to cover major urban as well as rural and different socio-economic groups and to consider the research questions from the point of various social discourses. At that nature of this study was not comparative and accordingly there was not done systematic comparison between regions of Georgia.

I conducted the study in partnership with the National Center for Diseases Control and Public Health (NCDC&PH) and Primary Healthcare Centers of Tbilisi (PHCT), and the villages of Imereti region (PHCI). NCDC&PH is a central body that plans and implements public health programs throughout the whole country and, therefore, has contracts with regional public health and/or primary healthcare centers. I have had a close relationship with the center for 14 years already, have worked there until 2011 in the field of health promotion. NCDC&PH is a “gatekeeper” that helped me in approaching policymakers who are work in the center (4 of them were participants and 1 participated in the piloting of the guide) as well as primary healthcare centers which are involved in the process of implementation of state public health programs, and employ district nurses. Having been appointed to the position of a researcher of the NCDC&PH, I officially approached participating of the primary healthcare centers, their physicians and nurses as well as the policymakers.

5.3 The participants

According to the purpose of this study and recommendations of the case study strategy, I used purposeful sampling to select participants. All in all, six district medical specialists (4 nurses and 2 physicians) were involved with the study, three out of whom were from Tbilisi (2 nurses and 1 physician), and the rest from the villages of Imereti. 4 Policymakers from NCDC&PH participated in the study as well. Apart from those participants, 2 persons (1 nurse and 1 policymaker) agreed to participate in the piloting of the study guide.

The main reason for involving district nurses and physicians in the study, was the “unique mix” of their social and professional positions, which gave an opportunity for observing individuals, families as well as communities from the health discourse and

also having close social interaction with the community members (Arnold, 2004; Band, 2003; D. Whitehead, 2000).

The main reason for involving health policy/decision makers from NCDC&PH was that those people possess the professional and working background of working with the multi-sectorial public health system and in the field of health promotion. Unlike nurses, they have a more nation-wide perspective of the health related issues and are rarely local.

The participation of both of those groups was complementary as well as some findings were crosschecked between them.

The procedure for recruiting the participants included an agreement with their home organizations' management (NCDC&PH and PHCs) and then the direct contacts with candidates using consent information were implemented. All candidates from NCDC&PH and regional PHCs participated in the study. Out of the 6 recruited candidates in Tbilisi, 2 did not participate in the study.

5.3.1 Nurses

Two nurses and one family doctor, three medical practitioners from Tbilisi in total, as well as two nurses and one family doctor from the villages of Imereti region were included in the study. One nurse and a general practitioner serve in the central parts of the capital, such as Chugureti and Saburtalo districts, and another nurse serves in Didube district that is not central, but not peripheral one either with the population of a more middle class. Traditionally, all nurses are females, as well as general practitioners are mostly females too. One nurse works with children and their families, another one with children and adults as well, and the family doctor works more with 14-year-olds and older people. The medical practitioners from Imereti region are from Merjevi (Sachkhere rayon), Ianeti and Nabakevi (Samtredia rayon).

All medical practitioners of rural areas serve the whole population of all ages in the villages, on average 2500 inhabitants.

During the selection of the participants, I observed a strict hierarchical attitude to nurses, especially in the Capital. Despite the fact, that many nurses are respected persons in their working areas, in healthcare facilities a nurse is thought to be more of an assistant to the physician, rather than a specialist, an equal person or a colleague. This was expressed by physicians and nurses as well. They were surprised when I asked to interview a nurse and not a physician on “*such an issue*”. I observed that some facilities and candidates avoided participation in the research because of this attitude to nurses (managers, physicians and often nurses themselves were afraid to let nurses participate in or be a part of such a research). This attitude probably comes from the Soviet healthcare system and still remains in primary healthcare facilities which I visited.

All medical practitioners of the capital characterize inhabitation type of those districts as “mixed”, with people of various social classes living there. At that, it is known that the high income and high social classes can be found in central districts of the city more often than in the peripheral ones. Accordingly, when participants are talking about income and social class they have different measurements of this. For instance, while a nurse from a poorer district was talking about the rich, she actually referred to the middle class. Practitioners from rural Imereti claimed that mostly people of middle and poor classes live in their villages and their standards of living are more or less equal to one another's. Practitioners from Sachkhere rayon, on the other hand, claimed that the dwellers of their rayon are more well off than in the other regions of the country due to a relatively higher investment flow into this region compared to the other rural areas. .

The participants have a long working experience (25-42 years) as nurses/physicians. They have been working in the recent working place for more than 19 years, except for one nurse who began working in the current place 2 years ago. They all have some good and friendly rapport with the population, as they are respected people in the areas they serve.

The participants have also claimed that their functions have been reconsidered quite often during their working periods. For instance, especially those from Tbilisi, say that because of the policy issued by the Ministry of Health they are more indulged in the office and paper work as opposed to visiting patients at their homes in the past.

The main field of their work is provision of the medical services, such as immunization, treatment, care of patients with chronic conditions, etc. At that, they advise patients and their families on their lifestyles and the urge of changes in their behaviors.

The interviews have shown a strong medical discourse of the nurses and general practitioners. Despite the structure of the guidance and the manner of questioning by a researcher, they are starting/focused to find direct causes or risk-factors of health status and give less time and importance to social determinants and associations in all main questions regarding social determinants or associated factors.

5.3.2 Policymakers

I interviewed 4 policymakers who work at different positions in the NCDC&PH. The three of them work in the division of Non-communicable Diseases and Health Promotion and one in the Regional Department. As it is usual in Georgian Public Health System, all employees have their first degrees in medicine. Two out of them used to work as clinical physicians, and one of them still continues her practice. At that, her clinical practice is closely related to obesity. The other two participants have

practically never worked as physicians and did their PhDs and Master's Degrees in the medical schools in the western countries specializing in public health. All participants have a mixed practice in public health, starting from behavioural change and ending with policy/decision-making. All of them have experience in research and teaching in universities. The working experience of the oldest policy-maker in the Public Health System takes its roots in the mid-80s, and the experience of all the other ones - at the end of last century. The youngest employee in terms of working experience in the NCDC&PH started work 10 years ago.

The 3 out of 4 policy-makers were less influenced by a medical discourse than one of them. Despite this, all policy-makers talked on social issues and associations much more freely than the nurses. At that, policy-makers were more aware of the population research and issues of spreading of obesity or other factors in large scale populations, than the nurses. Also, their awareness of and attention to the problems of obesity were higher.

All the policy-makers know me well because I was their colleague. I did not feel any discomfort on participants' behalf or issues of power disbalance during the interview, they were freely expressing their opinions.

5.4 Instrument and data collection

I conducted semi-structured, face-to-face interviews. For this, I developed an interview guideline (Kvale, 2009). I used open-ended questions for discussion, rather than brief questions with formulated answers. This is especially important considering the fact that main focus of my study was to explore not only some unpredictable for me factors and their interconnections. Another important reason of why interviews were chosen as a recruitment and selection medium is that they allow to create a "safe" environment for participants to be open enough for free discussion, to voluntarily

express their opinions and to show evidence of various issues and among them sensitive ones for community, that often arise during discussion and were really crucial (Denscombe, 2010).

Audio recorders were used during the interviews to ensure that valuable information and quotes are not missed.

I translated the consent form and the interview protocol. I, together with my assistant, interchangeably did an interpersonal validity check among us. She is employed by the National Center for Disease Control and Public Health, in the Health Promotion Unit, and is concerned with the behavioral determinants of health, and has experience in conducting interviews and dealing with focus groups. We piloted the translated consent form and the interview guideline among us and corrected the protocol in accordance with the raised misunderstandings, which mainly were terminology-related issues.

Before the actual data collection, I had conducted 2 pilot interviews with 1 nurse from Tbilisi and 1 high expert of the NCDC&PH. All procedures were followed similarly as it is in the case of typical participants. The piloting mainly gave me a some kind “sense of control” not to deviate from the focus of the study, during discussion with participants that were free and often were very vague and also I found it fruitful to be flexible to ask “targeting” questions in the case of need.

The duration of each interview was 60 minutes. The interviews were done in the separate rooms in the NCDC&PH and PHCs. The field work was conducted in the period between October 2013 and February 2014, first with participants from Tbilisi and then in Imereti region.

5.5 The analysis

I was inspired by the Thematic Network Analysis approach to use in analysis of gathered data (Attride-Stirling, 2001). I used this approach, but did not follow it totally. Firstly, for ethical reasons, all identifiable data were coded. The list of them is stored in my personal, password protected laptop. Afterwards, all the interviews were transcribed in Georgian and then translated into English. The assistant of the researcher crosschecked all the transcripts to ensure that nothing was missing from the audio records. According to Attride-Stirling (2001) after reading of the data, the interviews were coded and fixed basic themes based on literature, theoretical framework and a common sense. Then all the basic themes were placed into frame of the theory on the Social Determinants of Health, that gave an opportunity to organize them in a more efficient way, namely to develop organizational themes and derive global themes. This stage was done very similar suggested by the another approach of analysis of qualitative data, namely Thematic Framework Analysis (Ritchie, 2003). Lastly, the description of the findings was developed and as it is recommended by many authors, among them (Attride-Stirling, 2001); J. W. Creswell (2009) and Attride-Stirling (2001) interpretation of the obtained data was performed.

6. Validity, reliability and generalizability

Validity in qualitative study refers to determining whether the findings are accurate from the viewpoint of a researcher, participants and/or the readers. Validity can also be defined as an idea, which is trustworthy, authentic and credible (J. W. Creswell, Miller, D. L. , 2000) and it is a much-discussed topic (Lincoln, 2000). Creswell (2009) and many other authors suggest following certain strategies to ensure the validity of qualitative data and analysis. One of those is the transparency of data or

member checking strategy. I have spent a long period in field for gathering the data, namely the interviews were conducted for 5 months from October 2013 till February 2014. My assistant did another type of checking at each stage, starting from process of coding to final stages of analysis and reporting. To identify bias of the researcher's and discrepant information, critical analysis of a researcher role was included in the thesis (see "Role of researcher").

The in-depth interviews have some worth-noting weaknesses, among which Silverman (1998) outlines the following: "fundamentally concerned with the environment around the phenomenon rather than the phenomenon itself". One of the key tools to partly compensate this weakness and ensure validity of the data is triangulation, or checking accuracy of data from different resources. To ensure this, the study included two groups of people who work at the different levels of the health care system such as high level policy-makers and district level nurses and general practitioners. This gave me the opportunity to fix and compare assertions, opinions and arguments of at least two key parties in healthcare sector, which are related to the problem of obesity, and critically evaluate them to develop the final statements. The quantitative data of the First National Survey on Risk Factors of Non Communicable Diseases 2010 was another source of information which were widely used in the thesis (NCDC&PH, 2011).

I observed that, at the end of the field work, the interviews became quite similar and new themes were not raised. Despite this, the study was framed with participants and the main data from the health sector that can be considered restrictions of this study. To partly compensate this weakness, I used the official data and reports published by the governmental structures, such as the Department of Statistics (Geostat, 2013), reports of different sectors such as the European Bank for Development and

Reconstruction (EBRD, 2013), the World Bank (WB, 2009) or the Liberal Academy Tbilisi (LAT, 2012). This information established a sense of general patterns of the whole population and particular groups of Georgia, and gave me the opportunity to critically analyze/reflect on/against findings of the study.

According to Gibbs (2007), the reliability of a qualitative study indicates, while the researchers approach, consistency across different researchers and projects. Yin (2003) suggests documenting as many procedures as possible. The steps recommended by Gibbs (2007) were followed to ensure consistency of the study. Namely, all interviews have been transcribed, assessment and evaluation have been conducted by my assistant as crosschecking of the codes and themes.

The questions which may arise to findings of this study in relation of generalizability can be as follows: Can we generalize those findings as the representation of opinion of the whole society of district nurses or public health policy/decision-makers in Georgia, Tbilisi or in the villages of Imereti? Or, Do the determinants identified represent obesity-related determinants in the World, Emerging Nations, Georgia, Tbilisi or the villages of Imereti?

The answer to the first question is partly mentioned in the part “Validity and reliability”. Namely, a low number of participants (as in all quantitative studies), cannot guarantee the representativeness of their opinions to all other policy-makers or medical practitioners. At that, it must be mentioned and considered that the last interviews became very similar and did not raise any new themes, also we had participants from at least two key parts of the health sector which are related to the problem of obesity.

The answer the second question is of a much broader nature. Green and Thorogood

(2009) assert that generalization means that the findings of the study can be extended to other settings, populations, or topics. Creswell (2009) claims that generalization is a term that is used in a limited way in a qualitative study. The author cites Greene and Caracelli (1997) arguing that qualitative studies are characterized by particularity rather than generalizability. Adding unique blocks to the existing knowledge on the topic is something that better characterizes qualitative studies.

Together with this, Yin (2003) supposes that some qualitative, especially case studies can be generalized into a broader theory. It is followed by a so-called replication logics used in the experimental research. For this, a good documenting of qualitative procedures is suggested. I suppose that the design of the research, also presented documentation on the procedures and problems of the study, will give many other researchers an opportunity, if relevant, to use similar model in other places too, mainly in emerging nations and especially in Eastern Europe.

Another issue on the subject of generalization was suggested by Green and Thorogood (2009). They shaped naturalistic, statistical, and analytical generalization. The latter type of generalization refers to the extent when findings of a certain study are extended to another one, based on the similarities found in participants, subjects and other components of the topic study. I hope components of this study are chosen in a manner as to open as many opportunities for this as possible.

7. Critical aspects of researcher's role

Considering the fact that all policy-makers who participated in the study know me, know about the fact that I am conducting a certain study, on the planning stage of the study I proposed some power imbalance during the interviews. My strategy to

neutralize this challenge was to “travel” together with the respondents rather than to be a “miner”. Also, I considered this in the structure of the questionnaire and the style of formulation of questions, namely to ensure that it is clearly seen for the participants that questions are oriented towards asking their opinions and attitudes and nothing “judges” them to give the “right” answers. My personal observation during the interviews suggested to me that these objectives were achieved. The balance was kept between being a person who asks questions and at the same ensuring a free discussion. There was a predictable power imbalance between the researcher and the medical practitioners, too. However, it undertook the other form and became the other kind of problem. Namely, I think, knowing the fact that I am from the National Center for Diseases Control and Public Health “strengthened” or at least did not weaken the existing medical discourse of the medical practitioners’. The nurses and physicians who participated in the study have a strict medical discourse. This is especially seen in Tbilisi where relationships between population and medical practitioners are strictly in the frame of medical services, compared with rural conditions where medical practitioners have more “natural” and broader relationships with the population, that enables them to be more open. Because of this discourse, they respond to the questions “with the responsibility of a medical practitioner”. Accordingly, despite the structure of the guide and style of questions, I suppose that some possible important issues from socio-ecological discourse of people who work at the district level was not mentioned. This problem was much weaker among policy-makers, but I cannot say that they are fully free from the medical discourse.

Another issue that can be critically evaluated in this study is imbalance between relationships of the researcher’s with different participants, particularly, the fact that I know and have had relationships with all policy-makers and meeting with the other

groups such as nurses and general practitioners for the first time. I believe that having relationships with policy-makers and better planning of the interview to avoid problems gave us the opportunity to ensure a much freer and exhaustive discussion than with the medical practitioners, which provided some free discussions along with some formal ones. One method, that I used to partly compensate this weakness, was to cross-check among different participants such formal issues during the analysis.

My assistant and I did not observe any problems in relation with my personal weight status and perceptions during the planning, implementation or analysis stages of the study. Also, another positive factor is that I am a citizen of Georgia, live in Tbilisi and, at the same time, originally come from Imereti region, have a house and keep close relationships with this region. This gave me the opportunity to completely freely discuss issues with all participants.

8. Ethics

The permission to conduct the study was obtained from the Department of Health Promotion and Development of the Faculty of Psychology of the University of Bergen, the Norwegian Social Science Data Services (NSD). Considering the fact that study did not contain working with any biological material or patient information, according to Georgian legislation and rules, there was no need to obtain a permission from any local authority.

The part of the participants of the study comprise of the district nurses/physicians and health policy/decision-makers. The motivation for those groups to participate and contribute to the study was mainly professional interest in the results of the study. By my observation, the information about the study, the structure of the guide and focusing on socio-ecologic issues happened to be useful details for participants, too.

As it was mentioned earlier, after the agreement with the management of the participants' home institutions, I directly contacted the candidates. As it is suggested by Sarantakos (2005), all recruited participants were provided with written consent information and form at the beginning of an interview and only after them having signed the forms, they were interviewed.

The interviews were conducted at candidates' home organizations, in separate rooms, face-to-face.

At the analysis stage, I used codes instead of the identifiable information of the participants'. I have created a separate list of pseudonyms in a separate file. All the recordings except for the de-identified personal data will be destroyed after the analysis of the data obtained. The remaining part of the data will be stored on my personal laptop secured by a personal password, for the period of at least 5 years.

All reports and documents used in the study were public domains and freely available for everyone.

9. Findings

9.1 Gender and age

9.1.1 Gender

Medical practitioners as well as policy-makers argue that there is some, but not too big difference in prevalence of obesity by Gender. Obesity is more prevalent among women than among men, but difference is not very big:

“It (obesity) was typical for Georgian women, I remember it from my childhood...”.

“I can not say that it is very big difference, I cannot provide the exact numbers, but it is not too high”.

Those findings of the study are in complete accordance with the National Survey of Risk Factors of Noncommunicable Diseases done in 2010 (NCDC&PH, 2011).

I observed that participants recognise the relation between gender and obesity as a very important one. This was expressed by naming gender-specific factors of obesity. The participants claimed that different factors are associated with obesity among men and among women. Physiological and metabolic characteristics, such as hormonal disorders after pregnancy of women were named as leading factors related to obesity among them:

“it can be related with many problems among women, for instance hormonal disorders among 40-50 year olds, problem of overweight starts from those ages, related with climacteric period, similarly is related with pregnancy...breast feeding, this is also a risk which triggers the weight gain...”.

Another factor mentioned as a possible reason was predisposition of women to stress. Taking some specific medicines by women was also named as a factor by one medical practitioner from rural Imereti. At that, they mentioned social inequality and inequity as one of the reasons for this difference, namely traditional role of women who perform more household activities which doesn't give them opportunities for physical activities and are stressed more, the finding is collated under the organizational theme named “Obesogenic traditions”:

“A housewife has some restricted functions, works all day, but has restricted mobility, men are the main suppliers of families, function of women was more to care for children and daily chores, such as catering, laundry. Women were active, but mainly at home...”.

At the same time men traditionally have had jobs outside their homes and are subject to more strenuous physical activities and, despite poor dieting, energy spending provides normal weight for them:

“Whether you want it or not, men have more vigorous activities and despite the inequality in feeding, he wastes more energy and probably it is one of the reasons”.

The above-mentioned differences in employment and the nature of work by gender in Georgia found in the study are widely known by other studies and statistical data, as well. Namely, according to the statistics as of 2013, 49% of women and 66% of men are employed. Among those people who work, women represent 47,4% and 52,6% is a men’s share. The household workers are 16% of women and 0% of men (Geostat, 2013).

The main factor associated with obesity among men is linked to traditional Georgian feasts, when men usually consume lots of alcohol and food and this is done with a high frequency. This finding was collated under the category of “Obesogenic traditions”

Together with above-mentioned, some participants disagree with the statement that difference between genders are related to inequalities in education or employment, hence, they argue that mainly lifestyle of family is common for all its members despite their statuses.

This, as well as other studies and statistical data (Geostat, 2013), witnessed that in the recent period traditional roles regarding being in homes and employment are changing, women become more active and become main providers for families, and work outside. On the contrary, in the times of the present crisis, more and more men cannot find jobs, and are to stay at homes, which leads to them becoming overweight.

Despite this, the prevalence of obesity still remains higher among women than men.

One policy-maker mentioned the following in this respect:

“Now many things have been changed in roles in a family..., but I cannot say that it (prevalence of obesity by gender) has become equal, women remain at this stage and men become more obese...”

The last finding has resulted in creating the theme - “Changing roles and traditions”.

9.1.2 Age

Logic of the results of this study suggests that obesity is the problem that can be differently understood in light of various generations. Despite the different prevalences in some ages, the social predisposition to obesity can be present in all other generations too, even for the reason of some factors (both positive or negative), it is not manifested. Accordingly, low prevalences in young age groups compared with the older ones is not a sustainable indicator and does not guarantee that this generation will have fewer obesity problems in the future.

In full agreement with the findings of Steps’ as of 2010 (NCDC&PH, 2011), all participants mentioned that obesity is more prevalent in older ages. The study has also found two types of factors associated with obesity among the elderly. The first factor describes obesity as the “passive result” of age-related metabolism and lower life rhythm/inactivity, and the second describes obesity as the “active result” of changing/weaker attitude and motivation to care for body looks and beauty, as well as having more responsibilities for the others (family members), taking care of them, and having less time and opportunities for themselves. Inequalities in income and economic status among the age groups, namely insufficient income in the elderly were found as one of the associated factors as well. The above-mentioned factors of age-related metabolism/physiology as well as the improper system of social security

have proved to be as one of the deeper causes of this inequality. On the whole, the study observed interconnectedness of many of those factors. Those findings contributed to the formation of the themes such as “Sustainability” and “Length of being in status”. Some quotations of participants on those issues are as follows:

“I think it is a natural reaction of the body to life style, or to say otherwise, people who enter older age have a sedentary lifestyle ... are excluded from many movements..”.

“Affection is more usual in young ages, of course, ... than in older ages, more women are married, have children, grandchildren, are making food for their families, etc., have much work and don't have time for themselves, care less and attempt to justify themselves by this”.

“It is not a surprise for me ...of course gaining weight must be proportional to age. Very rarely in older ages some people remain of normal weight...that is, first of all, because of body constitution and genetics ... or very few follow the sportive lifestyle.”

“I think this can be explained, first of all, physiologically, the change in life rhythm and then care for your beauty and control of stress”.

“To say simply - economical difficulty of the elderly”.

Being active at a young age is a phenomenon that is recognized as natural, was named as the main cause of more prevalent normal weight among the youth. Some participants argued that young people are more aware on this issue and take a better care of their bodies due to the fact that the problems for younger generation are clearly defined and there is an access to the global information (The themes – “Positive role of western integration and globalization”, “Role of new education”).

“The youth, those younger than 25, are physically active, also are engaged in fitness, have more possibilities for undertaking physical activities than the elderly”

“I think, the youth, aged 18-25, the new generation, are much more aware of the issue and have more opportunities than people aged 25-35”.

Together with this, some participants cast doubt on sustainability of high prevalence of normal weight among the youth, providing the arguments such as the following:

“My grandchildren have fewer problems, but let’s see what will the things be like when they become older...because he spends most of his time at work working on a computer, he does not move around or eat, they are less active...”
or *“...new generation for the time being ... don’t know what will happen after...may be we were the same at the young age ... when they become older and lifestyle will have changed, I cannot predict what the things will be like, whether it will be related to work or anything else... ”.*

One policy-maker mentioned that computers among youngsters are very similar to “kantora” (some bureaus in Soviet times where many people who were paid formally worked, in fact they did not really work, had sedentary lifestyles and were oriented towards drinking and feasts) in the past. The last two findings contributed to the creation of the organizational theme - “Changing roles and traditions”.

9.2 General politic and economic growth

The study has revealed that the main pathways of general politics and economic growth to spreading of obesity probably are represented by instability and income. Transitional political periods and economic growth associated with instability and increased income, when people who live in poverty begin to be satisfied of food needs, were named as the riskiest periods for the increase in obesity rates:

“I don’t know if there are any historical chronicles on this issue, but people who were at the starvation boundary in the 90s, are now becoming stable, experience economic growth and return to their old bodily shapes. This contributes to overweight”.

“I think this comes from the generation of the elderly who remember massive hunger, they try to feed their children as much as possible”.

“We generally have a stressful life ... this feeling of instability is very important”

“What to eat today? What to do for our children? We don’t know what the future holds. What will happen tomorrow”.

“I think transitional political periods are risky for obesity”.

Those findings contributed to the themes of “Stability”, “Predictability” “Transitional political and economic periods”, as well as “Increased accessibility” and “Instinct to reserve energy”.

At this stage the direct relationship between political ideologies and obesity were not clearly determined. More attention was paid to some characteristics of different governments. Namely, the generations which are at the top of the government, their style of governing and certain stereotypes were named as influential:

“I think ideology is a factor of less importance, those were periods of survival and making reserves...”.

“When we are talking about solidity (how public perceives the notion of a solidity of a person), the periods of Gamsakhurdia and Shevardnadze being in the office were similar in this respect, unlike the period of ‘Misha’, when young people, or people of a different “weight category” came to power...”.

The new developments, such as a computer and the Internet were named as potential risk factors, too. Together with all above-mentioned the absence of a certain policy to somehow control obesity is one of the greatest problems (The themes – “Absence of policy”, “Instinct to reserve energy”):

“Those computer games have changed people’s lifestyle, no neighborhoods, people do not meet each other, and do not play in yards, relationships are now in different dimensions, this also has an impact ...”.

“Elementary it doesn’t exist any politics in this field”.

One medical practitioner, who paid particular attention to national traditions that are being modified, had a different from this main direction opinion (The theme – “Obesogenic traditions”):

“In any period of crisis or growth, no restaurant in Georgia ever has a lack of clients, I think. Georgians are always oriented towards good feeding...”.

While having a discussion on the issue of the nature of the policies of the economy that can contribute to a decrease in rates of obesity, the participants named stability and equity in distribution of income, to name but two (The theme – “Stability”):

“If there were be a real economic growth, then people would be satisfied with their income, if income doubled, for instance, and when the future opportunities become better ...not when our economic growth is only on paper... then people would start to care about themselves and among the rest about their weight ... the people would start looking at their lives in the long run rather than taking one day at a time”.

“I think we need a longer well-being and stability in order to decrease the rates of obesity”.

The transparency of borders and information and globalization were found as positive factors for countries like Georgia that helps people, especially the youth to take a good care of their weight. The influence of films, music videos, global cultural acts and other are seen as important contributors to the development of different attitudes of new generation's (The themes - "Values and care of young generation", "Positive effects of western integration and globalization").

9.3 Socio-economic factors

9.3.1 Socio-economic status

During the study, I could observe that the participants do not pay big attention to differences between social status or classes, that may actually represent a historical characteristic (because in the Soviet times there was a strong state policy against segregation of social classes versus the capitalistic period which was introduced relatively recently). As a result, the understanding of what is a social class is very limited and people pay more attention to being resourceful and to the level of income. The difference between classes is more of an issue in the capital and is very rarely dealt with in the villages. The study has also found out that, there is a difference in spreading of obesity among social classes. Particularly, the trend is that obesity is more prevalent among low and middle classes, and that the rates are lower in the higher class. Just only two participants disagree with this statement. One of them argued:

"Social classes do not set a trend that they are associated with obesity. ...There are underweight as well as overweight people in all classes... In a low social class, they eat what they have and do not calculate calories, content of

food...the same can be said about a high social class, they have obese as well as people of normal weight’.

At that, this policy-maker mentioned that within a single social class, the level of education predetermines who will gain weight and who will not.

There are different determinants of normal weight in high and low social classes, namely it is caused by care about their health, body beauty and weight among high SES groups as a result of better literacy and possibilities, that probably is related with being in stability for a long time and can serve as witness that Georgian society in this transitional time is moving in a rather healthy direction (The themes – “Stability”, “Changing perceptions on weight, health and beauty”, “Increasing trend of good examples” and “Increasing resistance”):

“A higher social class is more disposed to show things that is acceptable for their class and is doing everything for this, right? ... to be in a good shape. The elite today pay great attention to their health and they have more possibilities”.

The reason for normal weight in the lower class is the absolute deficit and careful spending of the resources (food) and/or very high intensity of the physical labour. This sometimes causes underweight in lower class, too.

The main pathway to high prevalence of obesity in lower social classes is a certain stereotype, which was probably created on the basis of a survival instinct, that can be named as “obesogenic stereotype”. Due to restricted resources, people are oriented towards satisfaction of energy demand and they consume what they can gather. Accordingly, they do not show any interest in and do not pay attention to the problem of obesity and health in this respect (The themes – “Instinct to reserve energy”, “Less care on weight”):

“They have neither enough knowledge and opportunities, nor time, have more stress or, to say otherwise, are exposed to all risk factors that finally bring them to being overweight ... If a person is not totally hungry, of course, and doesn't have anything to eat...and I think there are very few who starve. The remaining part is at a loss and cannot define what to eat, buy what they can afford, and this very often is not balanced.. ”.

“The low class doesn't have motivation at all, they only care to survive, to sustain him/herself”.

Together with this, the participants expressed that the stereotype ‘obesity is sign of health and wealth’ is widely spread in Georgian society.

The key factor of obesity in the middle and high social classes is the combination of above-mentioned “obesogenic stereotypes” of poverty-stricken population with the increased accessibility to food and resources. The policy-makers explained this in the following way:

“They think that it is prestigious to have the best car, similarly they consider having on the table ten varieties of dishes and too much food as a positive thing”.

“In the past, the growth in hierarchy was associated with “solidity”, which also meant being considerable (overweight) with your body”.

Another factor associated with obesity in the high SES group is an inactive/sedentary style of work. At all, the last findings were interpreted into the themes such as “Instinct to energy reservation” and “Low physical expenditure and overconsumption with increasing mobility”.

9.3.2 Income

It is worth mentioning that all participants pay particular attention to the level of income as the key social factor related to obesity compared to other social factors. I observed that while having discussions about various social issues, such as employment, social class or even education, politics or economical issue, income was the central 'hidden' factor/player implied by participants.

There is a general agreement on the statement as to why obesity and overweight are related to lower and middle incomes. The dominant factors/themes for this are insufficient care for weight, abovementioned "obesogenic stereotypes" and at the same time enough/increased accessibility to high in energy food. The low income in this case does not include absolute poverty, because this kind of poor people do not have obesity or to cast correctly, despite their attempts, they cannot gain weight.

"When you don't have income you eat all that you can afford..".

"In the past, there were just one or two individuals who were not hungry and all those tragedies in the history happened due to hunger...and it was the Soviet ideology to show mainly overweight people and hardly ever people of normal weight in films, to show that the nation was satisfied...".

"When someone is considering (because of low resources) whether to buy bread and butter or bread and meat, they think differently, and if their income increases by 100 GEL they behave otherwise".

"I cannot say that rich men are not exposed to stress in Georgia... A few years ago, one day you were a rich man and it was possible to become poor the other...as a rule, income as well as all other issues in Georgia are very unstable...therefore, despite the fact that I am not a person of a low income

level, my life is not well planned...and I cannot guarantee that being more or less well off will change me... ”.

“...Middle income people are most stabile, I think, but being overweight will represent a greater problem for them than obesity”.

On the other hand, people with high income care more about their body and weight, consume healthier food, are more involved in physical activity and, therefore, obesity is not widely spread among them. At that, stability of income and length of being in this status were named as the crucial issues (The themes – “Stability”, “Length of being in status”, “Less care for weight”).

“If we take into consideration a longer lasting period of the income increasing, one becomes more accustomed to other things as well, one’s values change and one begins to care about weight control as well... ”.

“This is related to education...because many rich people have money but are not aware of many other issues, for instance, what healthy diet is, they might think that being in good health means being overweight... ”.

“More well off people have more possibilities, I think, to follow a good diet, when I think now, 10 years ago families did not care...and the concept of luxury has changed for them, they now think that luxury is following a healthy diet and watching one’s weight... ”.

As it was mentioned in the part “Social Class”, the transition of level of income plays a crucial role in increasing of obesity rate in the society, namely, becoming richer in the low class is associated with gaining weight rapidly (The theme – “Low physical expenditure and overconsumption with increasing mobility”), as one nurse mentioned in rural Imereti:

“We have one socially disadvantaged family, who were suffering from malnutrition and having been assigned to social welfare/pension, they have become obese in just a few days. They eat without control now, borrow money from neighbors (knowing that they can later reimburse it) and buy as much food as possible”.

9.3.3 Employment

The study has discovered that all participants, except for three, consider the status of employment as an important factor in inequalities of spreading of obesity. The first two exemptions were reflected in statements such as the following one:

“It must be more prevalent among instable employers, but in Georgia it is not the case ... may be because everything is instable...and you have a constant feeling of instability”.

Another different statement was that, despite the employment status, a person who is active by nature would always find something to do. A nurse characterized with a very medical and individualistic approach was the author of this opinion.

In majority of cases, instable employment was seen as the main factor associated with obesity and, on the contrary, a stable job was considered to be a factor associated with normal weight. At all, stability of employment, which is closely related to the stability of income, was found as the key issue (The themes – “Stability”, “Predictability”). Only one participant had a different approach, stating that people who have stable work and live a monotonous life are subjected to obesity.

“I suppose that people with instable work are more overweight, because they are under stress all the time, have changing conditions and this is has a great influence...i.e. today I have and I eat and tomorrow - not... ”.

“Employed people have different problems, stress in their working places, working environment and opportunities of being fed...I cannot say that they are perfect in terms of obesity, there are also obese people among them, but compared with people who have instable jobs, where obesity is total...there are fewer overweight people”.

There was no agreement regarding unemployment and spreading of obesity among unemployed people. Namely, one group claimed that unemployed people have fewer resources and are spending them with a great sense of care or do not have enough resources and, accordingly, are not obese/or cannot gain weight. On the contrary, others argued that some people become obese because of them spending too much time indoors, having sedentary lifestyles and, therefore gaining weight. This statement is confirmed by the study conducted by the NCDC&PH, which found that pensioners, housewives and unemployed people with disability (unemployed people who at the same time have income) have one of the highest rates of obesity and students and people who can work but are unemployed have lowest rates of this problem (NCDC&PH, 2011). Despite those differences, if there is a deeper insight into those opinions, the basis of how unemployed people behave proves to be similar, namely, they possess an active survival instinct or “obesogenic stereotypes” - they do not consider obesity priority problem (at least on early stages) and control of food consumption is based mainly on material accessibility (The themes – “Instinct of energy reservation”, “Increased accessibility”, “Less care on weight”):

“Unemployed people practically are not doing anything, it can be said that all day long they consume food rich with hydro carbonates...”.

“Unemployed people are more or less stable, do not have fluctuations in life and, accordingly, utilize their resources with care..”.

“It seems that unemployed people do not have anything to do, but they have different types of movements, different factors ... (and do not gain weight)”.

The unemployment rate was rather high in the rural region of Imereti. Being unemployed in a rural region does not mean being out of job only, this also includes being self-employed (i.e. cultivating their own lands and farms), making this part the biggest factor in employment status of the villages. The study has revealed that obesity in the rural population who is employed in urban areas:

“Those who are employed, those who commute to their works by buses in the mornings are not obese at all, may be because they move more, take care of themselves, have more information about obesity...”.

Contrary to this, people who are employed in the villages, especially the government officials, have one of the highest risks of obesity (The themes – “Role of new education”, “Less care on weight”). A more varied statistical data can be observed among the self-employed and unemployed people.

9.3.4 Urbanization and working conditions

One of unusual findings of the National Survey of Risk Factors of Non Communicable diseases of 2010 was that the prevalence of obesity in the regions (more rural areas) is higher than that in Tbilisi. This qualitative study revealed that the participants (both from the capital and Imereti) were surprised when the researcher informed them about the above-mentioned differences between Tbilisi and Imereti. The majority of participants from the capital cannot rationally explain this, because they, in full agreement with the well-known “urbanization” or “nutrition transition” model of explanation of epidemics of obesity, think that in regions people work physically much more than in urban areas, and normal weight was more predictable among them. The only explanation for this irrelevance that participants from the

capital suggested was the different levels of education in urban and rural areas. One policy-maker also mentioned a low and instable income in rural areas and the active survival instinct to “reserve energy” (The themes – “Stability”, “Instinct of energy reservation”, “Role of new education”).

As opposed to the medical practitioners and policy-makers from the capital, the rural medical practitioners explained high rates of obesity in Imereti by higher hospitality, tradition of “judging to eat”, modified traditions of frequent feasts and many types of food, famous cuisine of the region (The themes – “Obesogenic traditions”).

All participants from rural Imereti agree that the lower obesity rate in Tbilisi is related to the fact that they pay more attention to cultural things and care about weight (The themes – “Care on weight”):

“They think about weight more, are more oriented towards the care of their bodies, have more culture to care about themselves”.

A part of policy-makers, while being questioned on the high rates of obesity in rural areas, argued that low levels in Tbilisi could be explained in a more detail. This is related to a greater care of appearance and weight, the opinion that coincides with the ones of rural practitioners (The themes – “Care on weight”, “Role of new education”). This last finding suggests that urbanization in Georgian context influences positively and decreases the level of obesity, and this is related to the literacy and healthier social norms associated with urbanization and development, despite the fact that rural population performs a more strenuous labor than that in the urban areas This once again put under a question deterministic explanation of obesity: a result of dieting and physical activities.

The study has found interesting issues regarding the association between obesity and working conditions. The participants argued that recently in Georgia there have been

no major inequalities in terms of obesity related to different working conditions. The main reason for this is that high ranking, office based organizations and their employees do not show any interest in a healthy diet and physical activity in as much as the outdoor or other kinds of workers and organizations (The theme – “Less care on weight”). All policy-makers suggested this position. The main factors, which contribute to the differences in prevalence of obesity among groups of people who work in different conditions, are stability and size of income as well as education, rather than working conditions as such (The themes – “Stability”, “Role of new education”).

“The atmosphere in our offices is the same as in the streets...because there are no means such as a kitchen to eat normally”.

“In contrast to foreign countries, we don’t have means in offices to eat healthily here”.

“Unlike in the past when every factory had canteens with free food, where people had an opportunity to eat...this doesn’t exist now...”.

Medical practitioners mainly mentioned sedentary style of working conditions as the main factor associated with obesity.

9.3.5 Education

The two main directions regarding the importance of education in scales of obesity have been found and only one dominant direction regarding the type of this association (negative associations between level of education and prevalence of obesity):

A half of policy-makers and two medical practitioners clearly stated that education is very important and all of them argued that there is a negative association between

them, i.e. people with higher education are less obese and obesity among lower educated people is more frequent.

“An educated person knows principles of healthy diet better, tries more, knows its importance for health and cares more...and also knows how to do it...”

The second half of policy-makers mentioned that it must be important and education and prevalence of obesity must have negative associations between each other as it is in theory and in other countries, but paradoxically this is not the case in Georgia, and habits/lifestyle and environment are more dominant players. The statement that there is no difference in rates of obesity by level of education in Georgia was also confirmed in the quantitative study STEPS 2010 (NCDC&PH, 2011). At that, this paradox can be explained by big transformations of Georgian society after the collapse of the USSR and while in transition when the role of old formal education in defining economical as well as social statuses of people in new context were dramatically changed and do not follow the classic standard that usually works in sustainable societies (The theme - “Paradox of Georgia in education and SES”).

“Logically, it is of course clear that a more educated person knows better those risk factors...and must avoid them, but paradoxically it doesn't happen, other factors are probably added here...”

The majority of nurses do not see education as an important factor in spreading of obesity, that probably is related to their strict medical discourse and more focus on lifestyle causes and less on social associations.

“Education is not important, because everyone knows that obesity is bad, but...”

“It is very chaotic, I cannot relate those to each other...”

The exception, in terms of type of association between education and obesity, was one rural physician who argued that educated people are more obese, because perform less physical job and have a higher income.

Among deeper factors associated with inequalities of spreading of obesity in people with different levels of education, the following were named: care, motivation and deficit of health literacy (The themes – “Care on weight”, “Role of new education”).

“People who are highly educated and have a high income are more aware and manage life style better”.

Together with education, there is critically important awareness and literacy about the problem of obesity. The study has found that together with the progressive nature of the epidemic, awareness, resistance to the problem and care, as well as some services that work against obesity are increasing, too(The theme – “Increasing resistance”).

There has been a change in perceptions of obesity, namely, if previously it was only a visual problem, now it is perceived as a health problem as well (The theme – “Care on weight”).

9.3.6 Social Networks

It has also been found that belonging to a certain social network is important in terms of spreading obesity. There was general agreement found by the study that some types of friendships tend more to remain within normal weight and some others which lead to being obese. Inequalities between friendships are determined by four main factors, namely, social class, age, education and traditions. In particular, belonging to the elite SES group, young age and also relations with modern/western education were named as strong factors of normal weight. On the contrary, friendships that have traditions of often meeting at feasts, accompanied by wine consumption and lots of national food tend to *be obese* (The themes – “Values of young generation”, “Positive effects of

western integration and globalization”, “Role of new education”, “Obesogenic traditions”).

“Being friends with the people (some of them from works) who have good education and income take a better care for themselves ... obese are those more old types of friendships of the people who have lived their whole lives according to certain stereotypes about their health and did not care”.

“I see every day on Lisi lake that some friends come in the morning, exercise, some just sit and talk, and when your friends are physically active you do the same...”.

“Who is often meeting on parties they are more obese of course”.

As opposed to the importance of friendships, there was not full agreement on the importance of ethnicity and religion in spreading of obesity. A great part of participants argued that national and religion traditions, style of life and education are strong determinants of weight status. Another group does not give high importance to this, because despite different characteristics, all ethnicities and religions in country live under similar conditions and environment, which finally determines their weight status:

“There is no difference at all among ethnic groups who live in Georgia...Because of my work, I had very long relation with them and I don't see any difference in their constitution...you mentioned their different lifestyles...but our life frame and environment are similar...”.

Some other, rarely mentioned issues of social networks that have importance in inequalities of spreading obesity have also been found in the course of the study. Social networks stemming from the nature of occupation, from the relatives and the level of following religious traditions within religious groups are some of them. For

instance, one policy-maker mentioned the inequalities between some occupations that are linked with the care for appearance and body, relations between different genders and are also linked to some kind of competition (The theme – “Care on weight”):

“I think some occupations force you to be in a good shape and also relationships with women, being in love make you keep fit...because he/she wants to have some advantage compared with others ...”.

Another one claimed that some people follow religious traditions, such as fasting more which predetermines normal weight in those subgroups. One participant also mentioned that genetic predisposition and interpersonal influences within families are the main factors predetermining various patterns of spreading of obesity among different relatives.

9.3.7 Marital status

All participants, except for one nurse and one physician, agree that there is a difference in obesity patterns in single and married people. The nurse, we mentioned, thinks that the main factor is “being busy”, or what a person does daily and not the marital status itself. In fact all, except for this nurse and both family doctors, reckon that obesity is more prevalent among married people, or people who have/live in families than among singles. The STEPS 2010 found this correlation as well (NCDC&PH, 2011). The leading factors contributing to sustaining normal weight among singles are represented by taking a better care and opportunities of care of bodily look and fewer opportunities and attention to food consumption.

“Single people probably have more time to take care of themselves, try more to be in a good shape, especially if they still want to get married...”.

“Single girls as well as boys pay more attention to their health”.

The main factors for obesity among married people are more consumption and provision with food, they also include less care of personal health and lower level of attention to visual issues of body:

“They now care for their children, have less time to think about their appearance, or even about their health...”

One family doctor who had a contrary opinion said that she does not have exact understanding of this issue and theoretically supposes that obesity is more prevalent among singles, because of their low motivation and “simple”, unhealthy diet. The main themes which collated the findings in relation to marital status were “Care on weight” and “Changing perceptions of weight, health and beauty”.

9.4 Perception and literacy on obesity

9.4.1 Scale and perception of the problem

The study has found that neither medical practitioners (nurses and family doctors) nor policy-makers perceive existing scales of spreading of obesity as dangerous or dramatic. The medical practitioners mainly mentioned that there are some cases of obesity and it is slightly increasing. All practitioners claimed that prevalence of obesity has been increasing and continues the trend. In all cases they do not have exact data and numbers of prevalence, unlike the rural practitioners who know better their service areas, and suppose that obesity rate is about 20-30% that is close to the evidence.

The policy-makers have more information on prevalence, they also treat this problem with a greater importance than the practitioners, however, despite this, they still did not have full and clear attitude for prioritization of this issue. High and increasing prevalence of the problem is shaped in statistical data, number of patients in clinics, increase of awareness of professionals and people, care about weight (The themes –

“Increasing resistance”, “Absence of policy against obesity”, “Care on weight”). They present their opinions differently, such as:

“This problem is really on agenda, because in the past in our country it was considered as a problem of developed countries and the problem was not so acute in Georgia, but in recent years...people have become much more interested...”

“This problem is separated now, or to say otherwise, if in the past obesity was related to endocrinologic disorders, some medicines, such as steroids, now obesity has become active as independent problem...” or “... for example, a typical case is that patients do not have any troubles but are overweight and want to become pregnant..and gynecologists know now and are keen on regulating this problem which will solve the main problem...”

Together with these mixed positions regarding the scale and importance of the problem, the policy-makers strongly assert that the problem of obesity is increasing with time. The participants argued that dynamics of the problem is progressive, and also is characterised by some kind of waves (Theme - “Waves of progression”):

“It is my feeling that during a certain period, in the times of hardship (years after 1993-94) it was decreased ...and after some period, quite recently (5-7 years) step by step it has started increasing again”.

“When people overcome a crisis, they start to become obese... there was an increase which began in 2005-2006 and continued onward”.

The study has found some perceptions of population regarding obesity. Namely, the participants mention that if in the past obesity was perceived as a visual issue more and people did not care about this issue guided by medical motivations, now it has been changed and it is not just an issue of beauty:

”Now they know that overweight and obesity is not only a visual problem. Many activities are not limited to the healthcare sector, but they are present in people too, they care more about physical activities and healthy diets, and this can be observed in daily life...there is a substantial increase in visits of patients to physicians regarding this issue”.

The same policy-maker, together with a confirming progressive nature of epidemics of obesity, has also mentioned some positive aspects of this, such as:

“With the time the problem will increase, of course, and together with this the people’s awareness will increase as well...some curative centres, also the Georgian Association of Obesity has been established ...”.

The last two findings were the basis of forming the themes “Increasing resistance”, “Care on weight”, “Changing perceptions on weight, health and beauty”

9.4.2 Access to healthcare

All medical practitioners and many policy-makers mentioned that being advised by a physician or any other medical specialist is an important factor for people in terms of controlling weight. Accordingly, possible inequalities between people with different accessibility to healthcare are connected more with health literacy:

“Advice given by a physician is very influential and I know from my practice that many patients followed what I told them and they are better now...”.

At that, policy-makers have mentioned an issue which is witnessing a low level of literacy and the development of obesity prevention awareness, as well as an increasing health control services in the country (The theme – “Absence of policy against obesity”):

“Those who visit physicians have a reason for this and they are disposed to follow their recommendations, but it often is too late...”.

Another finding has shown that the participants relate a lower accessibility to healthcare with income status and employment as being in absolute poverty or having good income predetermines the frequency of referring to physicians to address various health issues. Accordingly, the primary determinant in their weight status is credited to those factors and not to accessibility to the healthcare system:

“First of all, we must understand why they do not visit physicians... the unemployed and the poor do not make appointments...compared with those who have a good income.”.

“This (the reform – Healthcare for All) happened just yesterday and it is now accessible for everyone, but there hasn’t been enough time to differentiate the relation to obesity...”.

“One thing that is worth mentioning is that those who pay for healthcare insurance from his/her pocket, care more about their health...”.

In this chapter were collected all main factors, basic and organizational themes related with obesity in different social groups and population in whole. The next chapter is considered to present discussion based on all those findings; also the literature reviewed previously, theoretical framework and analytical tools of the study.

10. Discussion

The Theory of Social Determinants of Health (Dahlgren, 1991) was used for gathering the data as well as in their analysis.. For the analysis, findings of the study were systematized into basic themes considering the approach suggested by the theory, literature and general sense and by means of using the system of Thematic Network as main analytical tool (Attride-Stirling, 2001). Arranging those themes into layers of the theory rainbow or “social layers” gave me an opportunity to easily organize them and derive organizational and global themes. The study has defined the risk as well as protective and enabling or contextual factors/themes related to the spreading of obesity in Georgia. All those factors are present all together in some form during the whole life, but weight status is determined by some of them, which are active in certain contexts, during certain time periods. The center of those factors is usually present in some “social layer”, however, it can be represented in other layers too and is interconnected with different factors.

The three global themes were developed based on findings and organizational themes:

1. “Transition”, which collated issues/organizational themes, such as Stability, Sustainability, Predictability, Length of being in status, Transition Political and Economic Periods, Changing Roles and Traditions, Increased Accessibility, Paradoxes of Georgia in Education and SES, Waves of Progression;
2. “Active/dominant “obesogenic” stereotype”, based on issues of Instinct of Energy Reservation, Care on Weight, Low Physical Expenditure and Overconsumption with Increasing Mobility, “Obesogenic” Traditions;
3. “Lack of Literacy and Policy”, considering the themes such as Positive Effects of Western Integration and Globalization, Values and Care of Young Generation, the Role of New Education,

Increasing Trends of Good Examples, Increasing Resistance, Changing Perceptions on Weight, Health and Beauty, Absence of Policy and Interventions against Obesity.

10.1 Transition

One of the main categories derived from the analysis of the data was “Transition”. I chose this word hoping to unite/summarize meanings of dimensions such as certain type of change, development, stability/instability, sustainability/unsustainability, length of being in some status, etc. As it is mentioned in the chapter “Findings”, the study has found that a rapid and unpredictable change of social status, income, instability and short time of being in certain SES is related to the higher rates of obesity. Inequalities among social groups caused by “transition” are a major social determinant of obesity in Georgia. To put it in other words, the groups who, despite the ongoing changes, have a more stable and long-term/predictable income, employment, social statuses or stable upward mobility are less obese than those who are drifting in the waves of transition.

At that, the life-course changes of SES in context of Georgia, as a transition economy, are a bit different than those in the classic understanding of social mobility or accumulation which are understood mainly as stability, upward or downward movements on social ladder (Blanden, 2005; Stevens, 2012). The participants argued that SES mobility and accumulation of big part of population during last 20 years was chaotic in Georgia, rarely predictable, instable (and not necessarily downward), also those processes are massive and accordingly not only personal life, but whole social environment too are perceived as instable. Subsequently, in presence of such an instable environment, the short-term exceptions of individuals in having a good SES does not necessarily change their health outcome, and mainly only being in stable SES on a long-term basis (low, middle or high) is related with a decreased risk of

obesity and this can be named as a transitional characteristic. This finding differs from those of other studies, especially in high income countries, which argue that merely downward trajectory or stable social mobility is related with obesity (Karnehed, 2008; Langenberg, 2003; McLaren, 2007) or even with findings of studies in some LMICs when different health outcomes of similar directions of social mobility or accumulation by gender were revealed (Aitsi-Selmi, 2013).

The transition is fully represented in different social layers of life in Georgia. The center of the transition is present in the last social layer - “Politic and Economic Growth”. The study has found that the periods when governments and political systems as well as characteristics of economic growth are changing, especially when the gap and inequalities between the social groups is increasing, are associated with clear fluctuations of the weight status. In the periods of crises, when absolute deficit of resources were evident, the rates of obesity were decreasing, yet, at the same time the survival instinct that becomes active during this period, after economic growth, represents the main reason for obesity (see the next chapter) until the stabile development and status are achieved.

The transition, as a factor of obesity, is represented in working and life conditions of the society by instable employment and income, rapidly changing social statuses of people, paying less attention to cater for the environment for the issues such as weight control. The periods of crises and their following transition periods do not enable people and society to take control over their health and weight.

On the level of social networks, the study has found protective factors as opposed to the “transition”, such as stability and length of being in a certain status, positive values and weight perceptions as substantial players in decreasing the rates of overweight. Obesity is very rare among young friendships and elite social networks

which cater for weight because of the modern perceptions of bodily forms and beauty, as well as for the health reasons.

The study has also found that the transition can be observed even on the level of individual lifestyle or even age and gender characteristics. Transition, particularly, a personal sense of instability, a low predictability of the next day, a lower income and care about oneself at the older ages or changing traditional roles of people by gender, all cause changes in lifestyle of people that can be a reason for fluctuations in rates of obesity.

The transition in context of our study exists not only in the form of being internal, individual, but also in the form of being an external, environmental factor, as it is understood from quite deterministic discourse of social mobility, when, if simplify, the downward movement or stability of SES in high income countries can be observed and as opposed to the mobility in LMICs (Blanden, 2005; McLaren, 2007), social accumulation (Lynch, 1997; Stevens, 2012) or even dimensions such as “nutrition transition” or “urbanization” (B. M. Popkin, 2001, 2004) when inexpensive food high in energy or lower need of energy spending determine high rates of obesity. In contrast to those, transition in its whole, can mean a generation of reciprocal processes, can influence and exist inside a human agency (for instance, represented in the form of a sense of instability) as well as in the environment (i.e. transition in income, employment, diet, physical activity, etc.). At that, no player of this interaction (human agency and environment) are constant, both of them are dynamic and closely related to a specific context. In light of this discussion, inexpensive food high in energy of “nutritional transition” and low energy expenditure life of “urbanization” must be understood as not only reasons, but first of all, as result of a certain human need, its interaction and it is not a determinant, yet, an important link inserted into a

bigger chain that finally “produces” the problem of obesity in certain countries. This is a probable answer to the question as to why in difference to many other countries, we found higher rates of obesity among rural population than among urban in Georgia, or why there is no big difference in the level of physical activity of obese and other people, as well as to why people with normal weight consume less fruit and vegetables than the obese ones (NCDC&PH, 2011) as well as routine questions in all countries about age and gender differences in obesity rates, etc.

10.2 Active/dominant “obesogenic” stereotypes

Inequalities between social groups in terms of stability and sustainability of access to resources, employment, income, education, social status and so on are shaped by the existence of the active/dominant obesogenic stereotypes in lower social groups, that does not enable people to adequately control their health in a new context. At the same time, in more stable and higher status groups focus on care is not a survival or reservation, but, instead, are values such as beauty and health, and, for this, represent a more rational type (for new reality) of consumption and care that enables them to control their health in this new context.

The stereotype “good life - eating more” is still active for the majority of the Georgian population and is one of the main social determinants of widespread obesity in this society. Despite to the fact that, frame of this study does not allow to fully prove following statement, probably this stereotype is a shape of survival instinct. The instinct that is “static”, innate to humans and animals, pushes people to “reserve” as much energy as possible or achieve a “positive energy balance” in the period of absolute deficit of resources (Katz, 2014; Peters, 2002). Probably the instinct is active/dominant and forms a certain stereotype and lifestyle in periods of crisis among the people, but it continues to be active in a transition period or in a period when

resources become more accessible. At that, the length of being in this status is quite short to start caring about other issues rather than about the survival. According to the findings of the study, the activated instinct and the related stereotypes in a transition period trigger people's intake of more energy and, therefore, it turns into an "obesogenic" factor.

After the Second World War, the deficit of resources in the USSR was decreased considerably. To follow the findings of the study, despite this development, "body solidity" was popular in the society as a kind of shape of "no hunger" but still alive, nourished a survival instinct at the same time. However, later in the 90s, when the USSR collapsed and Georgia became transition economy, and the period of deep economic crisis took its positions, this old, forgotten instinct and related stereotypes were awoken once again and still remains to be actual/dominant despite the development of the country's economy in such a short period of time.

Many national, religious or other traditions, which were discovered by the study as being related with obesity, are also connected with this stereotype. We can consider those traditions as a kind of "cultured survival instinct". The tradition of holding feasts at which the hosts prepare as much and many types of food as possible, cooking specific food high in energy, also 'encouraging' guests not to hesitate and eat as much as possible, consumption of alcohol, were probably all related with a lack of resources and a kind of survival instinct attributed to the society in the past and were healthy practically throughout the whole history. However, since the second decade of the 20th century and even now, in the period of transition, when access to food has changed dramatically, when access to energetic food is on the increase, people from lower social classes did not manage to "adequately adapt" those traditions to new realities, and, instead, transformed them into the opposite, not pragmatic direction. To

be more exact, they have started organizing the feasts of the kind rather too very often with the rich assortment and amount of food, and high consumption of alcohol. Accordingly, the study shows that the tradition that used to be pragmatic and healthy in the past has turned into “obesogenic” in the new context, similar to findings of Brown (1991).

One of the main “reflectors” of all other social determinants of obesity is a lack of care. Based on the study, probably, the first social construct above etiological, proxy and individual factors of obesity, which summarizes and reflects all other “obesogenic” social issues of spreading of obesity, is taking care of weight. The absence of/less motivation and practice of care among elderly, married people, lower educated people, individuals of a lower social status, in certain social networks, at workplaces, during periods of crisis and transition is probably the reason of dominant of those statuses of the survival instinct and the “obesogenic” stereotype. As opposed to this, care of the body beauty and health among the young, well-educated, stable income, higher SES people predisposes people to the normal weight.

In contrast to the findings of studies that see survival instinct as a stressor that activates some physiological circle to excess intake of energy (Freemark, 2010), findings of this study suggest that long-term activation of the survival instinct is much broader and is a different social construct and phenomenon than just stress or even chronic stress. Should this logic be merged with the findings of Brewis (2010) on the subject of “fat tolerant cultures”, it can be assumed that historically this instinct is transformed into a more cultural and social phenomenon such as “stereotypes”, tradition and overconsumption of energy which becomes a more “cultural norm” and not a mere response to stress. Accordingly, in difference with “instinct” or stress, this is not something that cannot be learnt and intervened. In opposite we can suppose

that probably, after a certain period the obesity pandemic will have become another experience for humans as to “what our instinct can do during a crisis if we do not learn how to control it”.

10.3 Lack of literacy and policy

According to the study, the level of awareness regarding the problem among specific groups of population and society as a whole is critically low. This includes issues starting from inadequate perception of how widespread and serious the problem of obesity in Georgia is, and ending with a low awareness of the issues of how to control this problem. This lack of information and motivation of general public is “generalized” on the environment, namely, neither society nor government show any concern of developing a protective environment and infrastructure to maintain normal weight and decrease rates of obesity. There is still a critically low number of individuals who care on this regard. There is not even a single policy at the state or other levels concerning obesity. Based on all above-mentioned, there is no well-developed system of providing the population with fitness, healthy food, or even medical services to control or treat weight; only a few people have access to such rare services. At that, there is a very limited popularity of walking, jogging, or exercising in nature or other such “free of charge” activities.

The “paradox of formal education” in Georgia (see Findings/Education), revealed by the study, must also be taken into consideration. Namely, the level of formal education in Georgia, in spite of the standard expectation, does not play a role in the rates of obesity. This probably stems from the crisis of the 90’s of last century which was also a part of country’s transition, when the role of “old formal education” in formation of socio-economic status of people was changed totally/weakened, including people’s health awareness with the weight status among them (EBRD,

2013; LAT, 2012). In the light of these findings, another very important finding of the study has been revealed. It can be evaluated as some kind of “light at the end of tunnel”, in particular, the study has found that the access to global information, transparency of borders, high level and modern education and literacy, loyalty and belonging to western values, sustainable development or, to say otherwise, all main components that are valuable at this stage (the transition period) in the general vision of development of the Georgian society positively contribute to normal weight of groups that have access to those “goodness” in Georgia. This finding is consistent with the result of the study that compared obesity trends in Czech Republic and Poland versus Russia which have found belonging to western values as protective factor to obesity (Pikhart, 2007) and at the same time contrary to the dominant understanding and logics in literature of “nutrition transition”, urbanization or globalization (B. M. Popkin, 2001; WHO, 2000).

One good finding related with high rates of obesity in Georgia is that together with increasing and prolonging existence of this problem, awareness and resistance against it is rapidly increasing as well. A similar research has been done in other LMICs and other countries, the findings of which claimed that the high rates of obesity were positively influencing on achievement of changes in behavior and social norms of the public to decrease obesity (Lam, 2014; Neumark-Sztainer, 2002). Considering the direction of development of Georgian society, the above-mentioned fact is strengthening my hope that a critical part of responsible stakeholders and the society as a whole will soon reach the end of “Georgian obesity tunnel”.

11. Conclusion and recommendations

Interplay of transition, “obesogenic” stereotypes and lack of literacy and policy against obesity are main social determinants of spreading of obesity in the Georgian population. Inequalities in spreading of obesity in different social groups are closely related to those factors. “Obesogenic” stereotypes like soldiers of the Trojan Horse are activated by transition and weak literacy/policy which, in their turn, rapidly increase the rates of obesity in developing societies.

According to the findings of this study, dimensions of transition and “obesogenic” stereotypes and their relation to obesity are not framed by classic understandings known in the published literature. Namely, the transition covers/includes not only economic or political transition, social mobility, accumulation, nutrition transition or trends of urbanization, but together with these it is represented in all layers of social life and influences human agency as well as the environment, certain interaction of which finally produces the problem of obesity. “Obesogenic” stereotype, which probably is based on the survival instinct, must be understood not only as stress, but more social phenomenon such as “obesogenic” conglomerate including cultural norms and traditions, lifestyle and motivations. To follow the logic of the results of this study, at this level of human development, probably this “obesogenic” conglomerate is completely based on the survival instinct, it is usually passive during stability and high SES, as a rule “wakes up” during a crisis (both personal or country wide) and forms obesity during the increasing accessibility to food, fashioned energy saving lifestyle (periods of transition and/or early/medium stages of economic growth), stems from weak literacy and policy, and lasts until stability and a long-term being in the high SES, as well as establishment of the effective measures to control weight. Accordingly, the problem of obesity in Georgia is a result of poverty, and

normal weight represents itself as a sign of common well-being. Obesogenesis needs to be understood as a complicated chain with the interplay between human agency and environment being in its core, rather than treating it as a mere outcome of influence of separate factors such as bio-chemical, genetic, socio-economic, nutrition transition or economic growth. In this context it can be concluded that any society, in the light of globalized economic and modern agricultural and industrial possibilities, can find a way to high-energy food and lower physical activity, and transform their diets and daily lives as well as develop conditions for weight control in the opposite direction.

Western integration, globalization and, curiously, increasing scales of the problem too play a positive role against obesity in Georgia by increasing literacy, shifting a focus from survival to health and beauty. No matter how small, yet viable this can be in a new context of developing findings and examples, this can shed some light on solutions and ways out of the existing situation regarding obesity in Georgia and may function as a reference for other developing countries to refer to. At that, considering the fact that democratic development and economic growth nowadays are “natural”, and usually majority of emerging nations and, with Georgia among them, attempt to follow this direction. It is very likely that the trends of “nutrition transition” will be continued and, in spite of the arguments and examples of few countries (Kim, 2000), they are unlikely to be avoidable, especially for the countries like Georgia whose dietary style is very western-like. Peters (2002) arguments should also be taken into consideration, as it is claimed that we cannot return back to our old lifestyles and dietary or activity modes. The logic of this study suggests that the best solution to the problem is to look further, adapt to the new contexts rather than see back. In other words, it all depends on our approach, believing that nutrition transition and all other

developments represent an only part of the chain of “obesogenesis” which is importantly influenced by human needs and agency. This belief can be merged with John Joseph Puthenkalam’s suggestion who argues that modern economic development integrates variables of freedom, democracy and human rights (Ranis, 2000), the dimensions are widely shared by the new health promotion approach too; we must use modern health promotion instruments to enable people to control their weight alongside with the ongoing economic development.

Multi-strategy, multi-sector and multi-setting and comprehensive interventions, including critical literacy on obesity suggested by Nutbeam (2000), need to be used in the Georgian context as well, which will enable a shift of focus from old stereotypes and understanding of survival to new ones such as health and beauty of more and more people alongside with the changes in the environment in order to achieve an effective control of their weight. At that, it must be considered that this issue is closely related to problems such as transition, economic growth, stability of income and SES, survival instinct, or issues that are not merely malleable to “interventions”. Therefore time and general development are other constituents needed for this. It is also crucial to consider that modern trends of development in Georgia already contain pragmatic direction and examples of solution. As a result, new policies must serve a better function of being “catalyzers” of those processes in the wider society, lead advance in literacy, be carefully selected, implement stage by stage processes in the case of need, and ensure sustainability. At that, considering multiple industrial and other interests, as well as experiences of some developed countries, we cannot leave unattended the importance of sufficient, timely, a bit advancing and comprehensive interventions/regulations of food and sectors related to the physical activity, as well as the improvement of clinical services shall be of high priority. At the same time focus

of key figures who will be at the top of policy need to be aimed at addressing the concept of interaction between human agency and environment and, therefore, the use of modern health promotion approaches, rather than of mere prevention, behavioral or clinical interventions, or “nanny state” actions only.

12. Limitations of the study

Together with the weaknesses and limitations of this study, mentioned in the parts “Methodology, ”“Validity, reliability and generalizability”, “Critical aspects of researcher’s role”, and “Ethics”, it is particularly important to consider the general issue related with the limitation of this study. In particular, this study, first of all, based on its qualitative design, mainly provides analytical data and somewhat analytical “ideas” connected to the specific issue of obesity, rather than giving a proof of something or providing wider data on different aspects of obesity. Accordingly, there is a need of further studies (not only more quantitative, but also qualitative ones) to prove, reject or modify results of this study, rather than to take them into account as accomplished evidence and statements. Along with this general issue, it will be interesting to conduct studies based on a similar research question with participation of specialists from other sectors, such as social, economic and politic and/or general public. Also, a more in-depth research regarding issues of relationships between obesity, related to them stereotypes and the survival instinct should be conducted.

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Appendices

Decision of Norwegian Social Science Data Services

Norsk samfunnsvitenskapelig datatjeneste AS
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Vår dato: 27.06.2013

Vår ref:34773 / 3 / AMS

Deres dato:

Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 18.06.2013. Meldingen gjelder prosjektet:

34773	<i>Social determinants of obesity in Georgia: study of district nurses and health policy/decision makers</i>
Behandlingsansvarlig	Universitetet i Bergen, ved institusjonens øverste leder
Daglig ansvarlig	Elisabeth Fosse
Student	Kakha Gvinianidze

Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

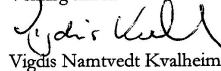
Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, ombudets kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, <http://www.nsd.uib.no/personvern/meldeplikt/skjema.html>. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://pvo.nsd.no/prosjekt>.

Personvernombudet vil ved prosjektets avslutning, 15.06.2014, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen


Vigdis Namtvedt Kvalheim


Anne-Mette Somby

Kontaktperson: Anne-Mette Somby tlf: 55 58 24 10
Vedlegg: Prosjektvurdering
Kopi: Kakha Gvinianidze, 18b Politkovskaia str app #8
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Consent information

The study “Social determinants of obesity in Georgia: study of district nurses and health policy/decision makers” concerns the subject of obesity expansion in Georgia. The study is conducted within the frame of Master Thesis Research of Kakha Gvinianidze of the Master Program of Philosophy in Health Promotion, University of Bergen, Norway. The study is done in collaboration with the National Center for Disease Control and Public Health. The study aims at inquiring your opinion on the subject of obesity expansion in various groups. If you express your good will to participate in the study, you will be involved in the personal, face-to-face interview (with the duration of up to 1 hour).

I will analyze information collected during interviews and will develop master thesis (to be ready by about May, 2014) and with a possible publication of the outcomes of the study in a scientific journal (by about August, 2014). The overall aim of the present work is to increase scientific knowledge on the issues related to obesity for scientists and practitioners in Georgia and globally.

Your experience in relation to obesity in the society is key information to the study. If you agree to participate in the study, your own name or any identity information will not be used in the written report and it will not be possible to trace who said what. To ensure this I will use pseudonyms for you and all other participants of the study to avoid revealing any identities. This will be implemented at all stages of data processing. Whatever is said in interview will not be passed on to other people in the community. All data will be kept in my personal, password-protected laptop.

Upon your consent, I will record the interview by means of an audio recorder. This recording is needed not to lose any information obtained at interviews. I will also have a written record of the interviews. All those recordings of the interview will be destroyed after analysis of the data (probably by May, 2014).

Upon your consent, the interviewer will contact you by phone or will arrange a personal meeting to check together with you how correctly the information obtained from you at the interview has been interpreted and realized. You are totally free to choose whether to participate in this process or not.

If you agree to participate in the study, you are free to withdraw at any time or may refuse to answer any of the questions asked, may allow or not audio recorder and may participate in the process of checking of data during analysis or not.

If you agree to participate, please read and sign the statement below.

My contact details: 995599920760 (Mobile phone), address: Politkovskai str. 18b, app #8, Tbilisi 0186, Georgia.

Thank you for cooperation. Kakha Gvinianidze

Written consent

The purpose of the study has been explained to me and I understood what it is about. The participation will involve an individual interview and possibly evaluating data during the analysis.

It has been made clear that if I agree to participate in the study, my own name will not be used and in the written report, as well as during process of analysis it will not be possible to trace who said what. Whatever is said in the interview will not be passed on to other people in the community. Recordings of the interviews will be destroyed after the analysis.

I am free to withdraw at any time or may refuse to answer any of the questions asked, and I may well agree or disagree to be audio-recorded, as well as it is up to my choice as to participate in the process of data analysis stage or not.

Name

Signature

Date

Interview guide for nurses

Social determinants of obesity in Georgia: study of district nurses and health policy/decision makers

Before starting of the interview I want to mention that discussion is around ordinary obesity, usually caused by imbalance between energy intake and it's expenditure and not about cases of obesity that are result of specific diseases.

1. Before starting of the main discussion let me ask you about your job and the community where you serve.

Probe: Working experience, How many years of experience, general information about communities.

Main part

Now we are going to begin main part of our discussion.

2. Scale of the problem

Please, what do you think about spreading of obesity in the community where you serve?

Probe: Scale, different groups, dynamics in time

3. Gender

According to the National Survey of Risk-Factors of Noncommunicable Diseases in Georgia done in 2010 obesity is more spread among adult women than among men population. What do you think about differences of spreading of obesity among men and women in the community you are working?

Probe: Scale of the difference, gender specific roles and status in family/community, traditions, income, occupation, education, concerns and care about weight, dynamics in time.

4. Age

According to the National Survey of Risk-Factors of Noncommunicable Diseases in Georgia done in 2010 obesity is more prevalent in older age groups. What do you think about differences of spreading of obesity in different age groups in the community you are working?

Probe: Scale of the difference, dynamics by age of values, income, employment, marital status, roles in family/community and society, traditions, concerns and care about weight.

5. Marital status

What do you think about differences of spreading of obesity among single and married people in the community where you are working?

Probe: Scale of the difference, Values, Income, Cohabitation, Role in family, Employment, Traditions, Opportunities to cook at home, Concerns and care about weight.

6. Education

What do you think is it any differences between spreading of obesity among people of different education level in the community you are working?

Probe: Scale of the difference, Dominant social status, values, occupation, income, employment, level of participation, stress management, concerns and care about weight.

7. Social class

What do you think is it any differences between spreading of obesity in low, middle and high social classes within the community you are working?

Probe: Scale of the difference, Values, Concerns and care about weight, Income, Availability of certain type of food, Availability of certain type of physical activity, Level of stress, Level of education, values and its dynamics, Employment and position in job, Participation in decision making, Position in community, Specific traditions, Lifestyle and behaviours, Dynamics within and among classes.

8. Neighbourhoods

What do you think is it any differences between spreading of obesity in different neighbourhoods within the community you are working?

Probe: Scale of the difference, dominant social status, values, number of members, level of relativeness, place of residence, traditions.

9. Other social networks

What do you think is it any differences between spreading of obesity in different social networks within the community you are working?

Probe: Ethnic groups, Religious groups, Professional Groups, Friendships, Types of families/relatives.

Follow up probe: Scale of the difference, level of participation and relativeness, dominant social status, values, number of members, place of residence, traditions.

10. Working environment

What do you think is it any differences between spreading of obesity among employed people of different working environment in the community you are working?

Probe: Scale of the difference, Dominant social status, income, employment, level of participation, stress, specific traditions.

11. Employment

What do you think is it any differences between spreading of obesity among unemployed, without stable work and stable employed people in the community you are working?

Probe: Scale of the difference, Dominant social status, income, employment, level of participation/isolation, stress, specific traditions of unemployed and employed people.

12. Access to healthcare

What do you think is it any differences between spreading of obesity among people with low level of access to healthcare services and staff and compared with those having high level of access?

Probe: Scale of the difference, Knowledge about disease and motivation, Concerns and care about weight, Dominant social status, income, participation, education.

13. Income

What do you think is it any differences between spreading of obesity among poor, middle income and rich people in the community you are working?

Probe: Scale of the difference, Dominant social status, occupation, employment, education, level of participation, level of stress, specific traditions, access to healthy food, lifestyle and behaviours, concerns and care about weight, dynamics of income.

14. Urbanization

According to the National Survey of Risk-Factors of Noncommunicable Diseases in Georgia done in 2010 obesity is more prevalent among regions of Georgia and among them in Imereti region than in Tbilisi. What do you think about this difference?

Probe: Scale of the difference, Income and its dynamics, Employment, Education, Values and its dynamics, Traditions, Participation in decision making, Opportunities to healthy food, Opportunities for Physical activity, Lifestyle and behaviours, Concerns and care about weight.

15. Politics and economic growth

15.1 What factors of general economic policy are influencing on spreading of obesity in Georgia?

15.2. What factors of general economic policy are influencing on unequal spreading of obesity in different social groups?

15.3. What general political factors are influencing on spreading of obesity in Georgia?

15.4. What general political factors are influencing on unequal spreading of obesity in different social groups?

16. Diet

What do you think about differences in eating characteristics of the obese and non-obese people in the community where you are working?

Probe: Overeating, consumption of bread, potato, fat, sweet, meat etc.

17. Physical activity

What do you think about physical activity of the obese and non-obese people in the community you are working?

Probe: At work, transportation, home work, leisure time

Final part

18. We are finishing the interview. At the end I want to ask you if you would like to add to this discussion that may be I missed or didn't considered during the interview?

Interview guide for policy/decision makers

Social determinants of obesity in Georgia: study of district nurses and health policy/decision makers

Before starting of the interview I want to mention that discussion is around ordinary obesity, usually caused by imbalance between energy intake and it's expenditure and not about cases of obesity that are result of specific diseases.

1. Before starting of the main discussion let me ask you about your job and opinion on behavioral risk factors in Georgia?

Probe: Field of work and experience, leading factors for health, opinion on social determinants.

Main part

Now we are going to begin main part of our discussion.

2. Scale of the problem

Please, what do you think about spreading of obesity in Georgia?

Probe: Scale, different groups, dynamics in time

3. Gender

According to the National Survey of Risk-Factors of Noncommunicable Diseases in Georgia done in 2010 obesity is more spread among adult women than among men population. What do you think about differences of spreading of obesity among men and women in Georgia?

Probe: Scale of the difference, gender specific roles and status in family/community, traditions, income, occupation, education, concerns and care about weight, dynamics in time.

4. Age

According to the National Survey of Risk-Factors of Noncommunicable Diseases in Georgia done in 2010 obesity is more prevalent in older age groups. What do you think about differences of spreading of obesity in different age groups?

Probe: Scale of the difference, dynamics by age of values, income, employment, marital status, roles in family/community and society, traditions, concerns and care about weight.

5. Marital status

What do you think about differences of spreading of obesity among single and married people?

Probe: Scale of the difference, Values, Income, Cohabitation, Role in family, Employment, Traditions, Opportunities to cook at home, Concerns and care about weight.

6. Education

What do you think is it any differences between spreading of obesity among people of different education level?

Probe: Scale of the difference, Dominant social status, values, occupation, income, employment, level of participation, stress management, concerns and care about weight.

7. Social class

What do you think is it any differences between spreading of obesity in low, middle and high social classes?

Probe: Scale of the difference, Values, Concerns and care about weight, Income, Availability of certain type of food, Availability of certain type of physical activity, Level of stress, Level of education, values and its dynamics, Employment and position in job, Participation in decision making, Position in community, Specific traditions, Lifestyle and behaviours, Dynamics within and among classes.

8. Neighbourhoods

What do you think is it any differences between spreading of obesity in different neighbourhoods?

Probe: Scale of the difference, dominant social status, values, number of members, level of relatedness, place of residence, traditions.

9. Other social networks

What do you think is it any differences between spreading of obesity in different social networks?

Probe: Ethnic groups, Religious groups, Professional Groups, Friendships, Types of families/relatives.

Follow up probe: Scale of the difference, level of participation and relativeness, dominant social status, values, number of members, place of residence, traditions.

10. Working environment

What do you think is it any differences between spreading of obesity among employed people of different working environment?

Probe: Scale of the difference, Dominant social status, income, employment, level of participation, stress, specific traditions.

11. Employment

What do you think is it any differences between spreading of obesity among unemployed, without stabile work and stabile employed people?

Probe: Scale of the difference, Dominant social status, income, employment, level of participation/izolation, stress, specific traditions of unemployed and employed people.

12. Access to healthcare

What do you think is it any differences between spreading of obesity among people with low level of access to healthcare servicers and staff and compared with those having high level of access?

Probe: Scale of the difference, Knowledge about disease and motivation, Concerns and care about weight, Dominant social status, income, participation, education.

13. Income

What do you think is it any differences between spreading of obesity among poor, middle income and rich people?

Probe: Scale of the difference, Dominant social status, occupation, employment, education, level of participation, level of stress, specific traditions, access to healthy food, lifestyle and behaviours, concerns and care about weight, dynamics of income.

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According to the National Survey of Risk-Factors of Noncommunicable Diseases in Georgia done in 2010 obesity is more prevalent among regions of Georgia and among them in Imereti region than in Tbilisi. What do you think about this difference?

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