



Deprived neighbourhoods, borders and type 2 diabetes

Using urban planning to cope with health issues?

Anastasiia Shotckaia

M. Sc. Urban Studies (Two-year master)
Master thesis (30 credit points)
Submitted in spring semester 2018
Supervisor: Christina Lindkvist Scholten

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Summary:

People do not live in a vacuum, in laboratory conditions, however it is mainly specialists from medical side, who investigate the health of people. Topic of health has to enter the discourse of Urban Studies as it is in many cases urban environments — social, economic and environmental — that pose a danger to humans' health. The paper aims at opening a discussion about connection between urban planning and health, ad hoc some particular diseases, which emerge in urban settings. Area where one lives plays a crucial role in the question of health. Thus, diabetes type 2 is scrutinized in connection to deprived neighbourhoods and borders. Literature review demonstrates that development of type 2 diabetes depends on genetic predominance and lifestyle. Among the most important factors, associated with type 2 is physical activity and obesity. Moreover, migration plays a pivotal role in question of diabetes type 2 because of stress levels. Many people upon arrival to new country reside in deprived neighbourhoods, and case of Malmö is no exception. The empirical data has revealed high levels of type 2 diabetes risk factors in Rosengård, and physical activity among others, and has proposed possible explanations for that. My hypothesis was that physical borders, surrounding the neighbourhood and cutting it from the rest of the city, are hindering improvement of physical activity of neighbourhood's residents. However, the city authorities have brought into life a project, which should have helped to connect the city with the area. The evidence shows that it did not succeed so far. Therefore, using theoretical concepts of Jacobs, Lynch, Harvey and Lefebvre, Madanipour and Valentine I try to explain the possible reasons behind it. Not having a single answer, I propose several possible explanations for it; it can be the lack of trust, constraining people from going to the city center or being active outdoors within the area; it can be misinterpretation of borders by the authorities as mostly physical, while they are being reinforced by mental ones; most importantly, it might be the wrong approach in planning to those neighbourhoods as such. While today deprived neighbourhoods and their residents are tolerated, they should be respected and appreciated instead, making them feel as full-fledged areas with equal rights to the city for all of its residents. All in all, the paper tends to show, that health has to take a solid position on the agenda of urban planners..

Key words: deprived neighbourhoods, physical and mental borders, deprived neighbourhoods, health, healthy urban planning.

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1. Introduction

Every year the population of cities worldwide grows. In Europe, for instance, it is predicted that more than 80% of people will be urban dwellers by 2030 (WHO & Gehl Institute, 2017). Thus, more and more people, and their health in the first place, are becoming exposed to the challenges and threats of urban environments. Health is determined by various factors: social, environmental and economic (Barton & Grant, 2011). In cities people are vulnerable to all of the aforementioned aspects and one of the tasks of urban planning is to create solutions to protect people from those. Thereupon it is an urgent need to consider health within the urban studies.

Diabetes is named among century's greatest medical challenges and type 2 is one of the most widespread health problems of today. World Health Organization even predicts a "new urban epidemic" of diabetes, which is exacerbated in cities (Cities changing diabetes webpage, n.d.). While some might argue that diabetes is not a problem in the European region (Matthews, 2008), the latest study shows that in the UK number of people having diabetes is expected to rise from 10.2% to 28% in 2045 (Boseley, 2018).

Nonetheless, diseases are not a common subject for urban studies, so why it is important to take a look at type 2 diabetes from the urban perspective? First of all, the development of type 2 is closely connected with the lifestyle. Established drivers of the rising trajectory include a growing ageing population and global trends, such as urbanisation, unhealthy diet and reduced physical activity (Cities changing diabetes website, n.d.).

Moreover, diabetes, being dependant on the urban environment, entails physical, psychological and social challenges for those who have it. In addition, on a macro-level, type 2 diabetes has a great burden on state budgets because of medical expenses for its treatment. If cities succeed to reduce obesity, it can not only help people, but also save millions of dollars in the healthcare expenditure (Cities changing diabetes website, n.d.). Hence, both from the social justice and economic points of view, it is better to understand the triggers of diabetes in urban setting and to target them in the future. Without a doubt, it is better to prevent emergence of type 2 diabetes, rather than cure it.

The glance from an urban perspective is needed as the disease has urban roots: prevalence of type 2 diabetes was found to be associated with the deprivation level of a neighbourhood. Several researches on the topic have found a correlation between the neighbourhood characteristics, health behaviours and outcomes in individuals with type 2 diabetes (Billimek & Sorkin, 2011; Brown, Ang, & Pebley, 2007; Gary et al., 2008; Jack, Jack, & Hayes, 2012; Kollannoor-Samuel et al., 2012; Salois, 2012; Stoddard et al., 2013). Such areas often become a new home for people with migration background, while studies show that they have a genetic predisposition to the disease. Another fact is that the disease can develop or not heavily depending on environmental and lifestyle factors (Wändell & Gåfväls, 2007). Therefore, deprived areas become of the utmost importance in question of diabetes type 2.

Moreover, type 2 diabetes appears more frequently in people with lower social status, while in affluent areas less people have type 2 diabetes compared to deprived ones (Andersen et al., 2008). Deprived neighbourhoods are often segregated, therefore, borders are present around them (Editorial, 2013). Hence, along with other diseases (Malmö stad, 2013), diabetes is not just a health issue itself, but an indicator, showing how equal our society is, which is valuable for urban studies.

Due to the novelty of the research topic, the aim of the study is to initiate discussion of the health topic in urban planning, in case when a particular disease, such as type 2 diabetes, is taken into account in urban planning process.

Research questions are:

1. How can health problems, in particular type 2 diabetes, be tackled within urban planning?
2. What connection exists between type 2 diabetes, deprived neighbourhoods and physical borders?
3. How does the connection between type 2 diabetes and borders manifest in the case of Rosengård, Malmö?

My hypothesis is that people in deprived neighbourhoods lead more sedentary lives because their areas are cut from the rest of the city by physical borders, which are not easily permeable.

To answer the research questions, theoretical concepts, which set a frame for understanding the topic are discussed in the second chapter. Afterwards, the literature review is presented, clarifying how healthy urban planning concepts led to emergence of deprived neighbourhoods and is followed by review of articles about diabetes and its causes. Moreover, the design, methods and limitations of the research are discussed. In the fifth chapter, the background information about health situation in Sweden is provided together with description of Malmö and particularly, Rosengård. After that, the empirical data, consisting of statistical and secondary data, policy documents and field observations is presented. Afterwards it is analysed and then discussed in reference to the theoretical concepts as well as propose areas for further research. The conclusion briefly summarizes the findings.

Novelty and significance of the topic

The novelty of this study is the urban approach to a specific health issue and its determination by the neighbourhood and surrounding borders. As mentioned above, the social, economic and physical environments play a pivotal role in question of health and type 2 diabetes in particular. The literature review has demonstrated that while the majority of papers on the connection between health and deprivation are proving such a correlation¹, they are written from the public health perspective, so there is a noticeable lack of papers discussing the causes of the health issue.

¹ For example: Smith and Davey, 2009; Bertotti et al, 2013; Watts et al., 2017.

Been addressed mainly by public health professionals, type 2 diabetes is quite a new topic for the field of Urban Studies. Although several studies were conducted in Sweden regarding the correlation between deprived neighbourhoods and type 2 diabetes (Bennet et al., 2011; Faskunger et al., 2009), the factor of living in a deprived neighbourhood was just a context, which was taken for granted and the focus was on medical data and ways of treatment. I propose that despite of dealing with health outcomes of deprivation, one has to take a look through the urban studies lens at the causes of the problem. Besides, the profession of the urban planner was created not on the last place because of the concerns about health of the urban population. Hence, I believe that it has to get more solid place on the agenda of urban planners once again. 2 out of 3 people living with type 2 diabetes reside in cities (Cities changing diabetes website, n.d.), they do not live in the laboratory conditions, but in a real world with their cultural, social and economic peculiarities, which have to be taken into account while discussing such a complex and paramount topic as health. Thus, the presented paper could contribute to the knowledge not only of social scientists, but also health professionals, bringing a social dimension into understanding of the urban planning for health.

However, it has to be articulated, that this paper is not proclaiming that health issues are solely an outcome of the location where people live. It would have been over simplistic to proclaim that; indeed, individual and “area” effects are interrelated and it is almost impossible to distinguish them. Hence, the presented thesis is only aiming at bringing up the topic of importance of neighbourhood environment for the health of its citizens. BY doing so, paper intends to draw attention of the city authorities to health issues in planning process.

2. Theoretical concepts

This chapter presents theoretical concepts, setting the ground for the further parts of the research. The first subchapter elaborates on the concept of the right to the city and how it is connected with the health questions. The second subchapter opens up with discussion about the borders and follows up by interpretation of the concept by K. Lynch. The last part of the chapter elaborates on the understanding of trust by J. Jacobs.

2.1 Right to the city and health

The term “Right to the city” was firstly introduced by French philosopher Henri Lefebvre in the same-title book in 1968. However, today the term turned into, how Purcell (2002) puts it, a catchphrase, as it became widely used in urban-related discussions and even was adopted by the United Nations as a part of the Human Rights Declaration (Harvey, 2006). Yet, it is almost never understood in depth. Moreover, I admit the point made by Purcell (*ibid.*) that Lefebvre's theory is more radical and problematic than it is often perceived. From the beginning, it is about radical approach to standing up for your rights. D. Harvey (2006), for example, presents the right to the city as “some kind of shaping power over the processes of urbanization, over the ways in which our cities are made and re-made and doing so in a fundamental and radical way”. For this paper, however, approach used by Martins et al. (2017) in their paper is closer as they address right to the city as a “guaranteed access to healthy urban spaces reducing inequities among the population, so that disadvantaged groups can also enjoy positive urbanization effects. In this sense, interconnection between right to the city and right to health promotes equity”. But who has a right to it?

First of all, it is important to highlight, that Lefebvre perceived the right to the city as belonging to all those who inhabit the city (Purcell, 2002). Question of using the term “inhabitant” rather than “citizen” is crucial as it includes a wider spectrum of people, not leaving out homeless, migrants and some other categories of non-citizens aside. Nevertheless, along with the criticism of Purcell (2002) it remains questionable, why Lefebvre does not discuss the point of one's class and race, gender and sexuality, treating very different people in the city as a homogenous group. Indeed, those factors ought to be taken into consideration as they are all fundamental to inhabiting the city and in many cases perform as a ground for conflicts between those groups, making them unable to cooperate for the sake of their rights.

D. Harvey (2006) proposes another point of high importance to the topic of the paper. He proclaims that the neoliberal way of constructing cities eventuates in loss of understanding common (communal) right to the city, so that personal interests start to prevail over collective rights. It is a result of tendency to privatize education, healthcare system, water supply and sewage system, so that the city turns into the crib for financiers, housing developers and speculators (Harvey, 2006). In the end it leads to a growing deprivation, such as unemployment and lack of housing (Faskunger et al., 2009). Hence, in the theory of Harvey,

the right to the city is not an access to the city resources by the rich, but everybody's right to transform the city according to their needs and desires.

However, this is all in theory, but how is it reflected in the real life? It might occur that the question of the right to the city, so actively discussed during the 20th century, should have entered the discourse of urban authorities worldwide and should be one of the basic principles of planning. However, the reality is different. According to Martins et al. (2017), in the Americas 43% to 78% of the citizens are slum dwellers; they are lacking in basic supplies, such as running water in houses, sewage or waste collection systems. Such basic services as education or health care are out of their reach.

Therefore it might be noted that neoliberalism is one of the keys of the inequalities in health. When only privileged have access to places of the city, or if the city fabric is shaped only according to their needs, those who are powerless are locked into the certain areas, which fall into deprivation. Moreover, it becomes crucial in the question of health, as it is not people's own choice to stay in certain areas, but the neoliberal reality of their lives, when they get locked in certain areas.

Moreover, deprived and segregated neighbourhoods are defined by the presence of borders around them. I suggest, that such borders (which will be discussed in the following chapters), even if they are physically removed, they obtain in the minds of people and the next subchapter elaborates on the reasoning behind it.

2.2 Capturing the borders

Used in different subjects, the concept of borders has a broad variety of definitions. Thus, the subchapter opens with several interpretations of the concept, which are followed by description of ways to grasp the borders by K. Lynch.

The concept of border has been interpreted by many social scientists. J. Jacobs (1961) wrote that "a border — the perimeter of a single massive or stretched-out use of territory— forms the edge of an area of 'ordinary' city. Often borders are thought of as passive objects, or matter-of-factly just as edges. However, a border exerts an active influence". She also highlights, that visual boundary on the street is the first thing our eyesight catches, thus, its visual qualities in many ways define the way people perceive the street.

Often when scholars discuss segregation and deprivation, they have to deal with symbolic, rather than physical borders. Lamont and Molnár (2002) define symbolic borders as those dividing "people into groups and generat[ing] feelings of similarity and group membership. They [borders] are an essential medium through which people acquire status and monopolize resources". Nonetheless, in some cases, the situation turns out to be even more complicated — if some citizens freely pass some places, even without sensing that they crossed some kind of the border, while others see the territory behind that line as a no-go zone. Such a case is deliberately explained in I. Tsoni's paper "African Border-Crossings in a 'City of Others'" (2013), as during her autoethnographic research she encounters the "crack" in the very middle of one streets of Athens, as her migrant black friends did not dare to walk

on one side of a street as it is under jurisdiction of the police department, treating migrants inhumanly.

Shehab and Salama (2018) propose to look at borders from the point of view of socio-spatial segregation, understanding it as the “residential separation of groups within the broader population, whereby some areas show an over-representation and other areas an under-representation of members of a group”.

Madanipour (2000) suggests that once economic, political and cultural exclusion come together, it leads to special exclusion and borders are part of it. He suggests, that physical exclusion is reflected in several dimensions. One of the dimensions is mental space. He argues that mental space is the dimension, describing how we perceive places (ibid.). This dimension is based on signs and codes and is controlled by our perceptions or fears of activities in particular locations. As an example he suggests access to expensive-looking shopping mall, which is physically open for everyone, but lack of financial resources can hinder people from getting into it. Absence of social integration, which includes spatial exclusion and segregation, is portrayed by him as a core of social exclusion. “For those, who cannot move, however, a neighbourhood is a boundary which are very hard to cross...Revisiting spatial barriers and promoting accessibility are more spatial freedom can be the way... to promote social integration” (ibid.).

Why is it so important to capture the borders? The presence of borders is critical in discussions about deprived neighbourhoods. Deprivation exists not only in social and economic dimensions, it is reflected in the physical structure of the cities. Therefore, it is vital to find locations of the borders. They mark the territory of the vulnerable and unwanted, drawing a line between the places “they” reside and “us”. Ergo, while examining the problem of connection between deprivation and type 2 diabetes the borders have to be scented. However, as aforementioned, they are not necessarily visible for everyone, so that methodological tools are needed to seize them.

K. Lynch in his book “The image of the city” (1960) proposes that there are 5 types of elements in the city layout that should be considered when the image, perception of the city is in question: paths, edges, districts, nodes and landmarks. This typology offers an opportunity for analysis of physical, perceptible city objects. It is naturally limited as social, historical and even functional qualities of the place are left aside, but in combination with other methods, which help to keep those categories of the place in focus, it appears to be a great tool.

Lynch brings up the concept of the edge, instead of border and gives some examples of them — railroad cuts, shores, highways, walls or edges of development. Edges, according to Lynch, are generally boundaries. Nonetheless, they could perform as barriers, dividing two areas from each other, or, on the contrary, as seams, “sewing” bordering neighbourhoods together. Accordingly, a deserted street or a highway could be cutting the city districts, while a lively street on the border between two areas could be knitting them together.

He also highlights that some boundaries, which are particularly unpleasant, tend to be erased from the memory of citizens (ibid.). It can be added, that edges are called so as they

break two of the most valuable features of the city, which build its image — visibility and continuity. He brings an example, when a highway in Boston (the Artery) is eliminated by many people when they describe the district as if it did not exist (ibid.).

Edges become peculiarly noticeable when “two strongly contrasting regions are set in close juxtaposition and their edge is laid open to view, then visual attention is easily concentrated” (Lynch, 1960). However, some edges could serve as pathways, but one has to be careful while defining the prevailing function of the place — highways, for example, despite their transport function, are not imagined as pathways, but rather as edges and landmarks if they are elevated from the ground level and do not hinder “the flows” on the ground.

Talking about districts, Lynch (ibid.) mentions that the borders between them could be “hard”, meaning that they could be easily noticed, being definite and precise, while others are “soft and uncertain”. There are also neighbourhoods, where no boundaries are present at all. Lynch proposes that the borders have only secondary role as they “set limits to the district, may reinforce the identity, but have less to do with constituting it” (ibid.). Citing Madanipour (2003) “the boundaries that separate the two realms are the most visible spatial manifestation of this division of social life. [...] The challenge of boundary setting, i.e. the challenge of city building, is to erect the boundaries between the two realms so that they combine clarity with permeability, acknowledging the interdependence of the two realms, and supporting both sides of the boundary”.

2.3 Trust and neighbourhoods

Deprived neighbourhoods, which will be discussed later, are in many cases mass housing projects. J. Jacobs (1961) proposes a concept of “togetherness”, which is common for those areas. Lack of privacy is present there due to high density of residents, so the choices people have are extreme “togetherness” or almost none interactions at all. Many choose the second option. Jacobs proposes that this is the reason that makes mass-housing areas so deserted in a social way.

Togetherness is an old concept in the planning theory, which seems to work in the suburbs with a small number of inhabitants, where close relationship can be built with limited number of people. In the cities it has a destructive effect if people are forced to share too much of their private sphere with too many people. Jacobs believes, that privacy is a key here, and it should be kept on a certain level. A person should feel secure enough to leave the keys from the apartment at the corner store for a friend, but simultaneously be sure that the store owner would never cross the line of getting into apartment himself. So trust is created.

It takes time for trust in the city to emerge (Jacobs, 1961). It grows from fleeting public contacts on the sidewalk, from little conversations with shop owners, bartenders and greeting neighbours. As Jacobs states, creation of trust cannot be institutionalized.

Trust is often substituted by togetherness, but there is a core difference between those two. If togetherness is a force, which pushes people to enlarge their personal space, trust is a matter of privacy and respect; while having faith in your surroundings, deciding for yourself

how much of a private life you want to share. Even if in the area a lot of effort is made to create special places for socializing, to bring people together, it does not have the same effect as a sensitive and thin fabric of trust. And there might exist people in the area, willing to take a role of a leader in the process of creation of trust or improving social life, but they might not find followers. Jacobs believes, that such an “artificial” trust creating will not succeed due to the lack of natural public life.

3. Literature review: deprived neighbourhoods and type 2 diabetes

Literature review chapter presents history of urban planning, which led to emergence of deprived neighbourhoods as we know them today. Then It moves on to the concept of deprived neighbourhood itself and its connection with health is discussed. Finally, question of diabetes is brought up together with its causes, consequences and determinants.

3.1. History of healthy urban planning and emergence of modern deprived neighbourhoods

Even thousands of years ago health was discussed when cities were planned. Appearing as the first trade hubs, cities were growing in certain locations because of political and economic reasons (Trubina, 2011; Barton, 2017). They were bringing thousands of people to live together in density, which was causing health challenges. Geography was playing a crucial role as landscape could have been used — water and elevation were of the utmost importance for defense and economy. Hippodamus, an ancient city planner from 5th century BC, applied a grid street pattern in his work as he viewed the streets layout as a reflection of social order and believed that it should foster social cohesion (Barton, 2017). His ‘Miletian grid’ became so popular and handy because former curvy city streets were making it problematic to transport goods and well as to deal with sewage (ibid.). One of the cities, Priene, built on his ideas, not only had a clear street structure and strategic location of the main civic and religious bodies, but also had paved streets and running water in some houses (ibid.).

Cities were “gates” to other places (Trubina, 2011) or stopovers, and initially it was impossible to predict the rapid growth of urban population of the beginning of Modern times. As early as in the 19 century the cities were extremely overcrowded and in poor sanitary conditions, what was leading to physical and moral illnesses (Macintyre, Macdonald & Ellaway, 2008). Infectious diseases, curse of the medieval times, had a new coil in its development with the overpopulation, especially in big industrial cities like London. De Hollander and Staatsen (2003) present the numbers: in the 17th century 50% of Londoners died before their 15th birthday, 30% did not survive till their 5th birthday and only 10% lived over 40 years. Thus, active measures were needed to fight with the diseases.

The first steps were taken towards regulating the streets layout, making them wider, setting the standards for housing and generally dealing with urban space (Freestone & Wheeler, 2015). Already then E. Chadwick had noticed that there are significant differences in health and life expectancy between different social groups (Macintyre, Macdonald & Ellaway, 2008). At the time Farr, the British Register General, set the “standard” of the healthy neighbourhood, where the best health among the residents was reported. Afterwards it was used in evaluations of another city districts. Farr argued that it proves health to be determined by the environmental conditions; thus, many causes of premature mortality could be prevented (ibid.). Likewise, in Paris, not only in attempt to make the city more glorious, but also to improve diseased city conditions, Napoleon III and Baron Haussmann started the “renovation” of the city (Barton, 2017). It included changing the streets layout, as well as

starting the campaign against low-rise slums — they were replaced by 5-6 floor buildings around a courtyard.

On the turn of the century the figure of E. Howard was truly outstanding in regard to health in urban planning. He proposed the idea of a 'garden city', a satellite-town for everyone, with good public transport connection with the original city, good local facilities, but closer related to the countryside (Barton, 2017). One could say that Howard was ahead of his time — his ideas about sustainable, just and green city are relevant even today.

Between the 1920s and 1940s the urban planners in the US focused on creating infrastructure systems, as 'city functional movement' was gaining power. Hence, health was not any more the main point on the city planning agenda. At the time the idea of separation of different land-use places appears, which in upcoming decades has resulted in car-dominated cities (Freestone & Wheeler, 2015).

However, in Europe the planning was not following exactly the same path. P. Abercrombie is one of the figures in British urban planning that has to be mentioned. Creator of the "Greater London plan 1944", he admitted the importance of social support within the neighbourhood and treated planning with quite a social approach. According to Barton (2017), he proposed to create more open spaces along with better housing in the inner city, and surround it with a green belt to keep the air clean.

After the Second World War, as pointed in the work of Perdue et al. (2003), cities focused on economical and aesthetical aspects, or social in some cases, leaving health agenda behind. At the same time urban planning became even more car-oriented. It caused more pollution in the cities and the health questions arose again. In general, planning in 1950s could be characterized by N. Taylor term 'social blindness' — ignorance of importance of social life (Barton, 2017). New neighbourhoods were providing better physical conditions, but social life in the areas was suffocating, while being a crucial part of happy living. Enormous neighbourhoods and high-speed motorways were common traits of new areas of the time.

Le Corbusier was a prophet of his time and with his main works published from 1930s, his ideas came into urban planning fashion in the 60s (Barton, 2017). Proclaiming to plan on principles of rationality and human-scale (Le Corbusier, 2010), cities by him were not suitable to live in. More a piece of art, than a place for daily life, his city plans were proposing a solution for an urgent post-war lack of housing, therefore, they were used in planning of mass-housing districts. He proclaimed that the traffic has to speed up and planning has to be car-oriented. Old principles of walkable distances and uniqueness were denied in favour of new ones: separating the flows of cars from pedestrians and houses; constructing high-rise buildings and making the city more 'vertical'.

Sweden was among the countries appraising Le Corbusier's ideas. The Swedish welfare model implied equality, including decent homes, for all, therefore, modernist ideas of simple, but functional housing were a perfect match for that time. 'The modern project' was made to replace the slums and problem areas, existing in Swedish cities and to foster new citizens in the 'People's Home' (Turkington et al., 2004). Le Corbusier had a strong influence on

Swedish architects and planners, so as early as in 1928 the first proposals for a massive construction of high-rise buildings in Stockholm were set out (ibid.). Le Corbusier himself sketched out plans for high-rise buildings in central Stockholm, which however were never brought into life. Nonetheless, they gave an impulse to the new modern housing form, which would be booming 30 years later. New type of the neighbourhoods entailed shift in planning for transport flows as well. The working group from Chalmers university of Technology in Gothenburg (SCAFT) proposed to increase traffic safety. The group suggested to separate pedestrian, cyclists and motorised transport spouts from each other. Nonetheless, the car was in the centre of the proposed model as the main mean of transport. Such planning involved inner parts of neighbourhoods being car-free, while wide and straight motorways, enabling to drive on a high speed with few crossings or turns, were surrounding the block. Pedestrians (as explained with the safety reasons) were proposed to cross them using underground crossings (Planka.nu, 2016). Therefore, a big share of a road space for given for the motorised traffic, while sidewalks were redundant and very little space was left for pedestrians. Hence today cities face a struggle of claiming the space for pedestrians and cyclists back from the cars, which demand great financial and planning resources.

While Europe was oriented to the creation of high-rise neighbourhoods for everyone, USA was going towards less dense areas. Suburban sprawl, prospering between 1954 and 1997, was based on an idealistic idea of the Garden city from the early 20th century (Barton, 2017). Low-rise single houses with yards, low density of population, segregation of land uses and a lack of well-defined centers are well-recognised characteristics of this kind of planning (Goldfield, 2007). The suburban life, viewed from the beginning as a healthier alternative for better-off citizens, turned into a planning nightmare, while people became totally dependant on motorised transport, distances to places stopped being walkable and therefore, the social cohesion became loose. Urban sprawl turned out to be one of the unhealthiest ideas in planning, as it not only influences residents' daily physical activity, but also caused a greater car ownership and extensive land-use, leaving a negative footprint on the environment.

Hence, in a way, deprived neighbourhoods are the result of a "healthy approach" to urban planning. Undoubtedly, the initial task of mass-housing neighbourhoods was to create as many homes for people as possible, however, health was also in focus of those planners. In attempt to create a healthy environment for the citizens, the outcome was socially "sterile" neighbourhoods, with lack of space for interaction and obvious prioritisation of motorised transport. This, in its turn, has resulted in health challenges, entailed by the lack of physical activity as more people chose cars over active modes of transport.

3.2 Deprived neighbourhoods

3.2.1 Definition of deprived neighbourhoods

The reasons why people live in deprived neighbourhoods will not be discussed here, but rather will be taken for granted as they are beyond the scope of the research. The topic of correlation between deprived neighbourhoods and health is not novel as it has been discussed by several authors, drawing attention to physical and mental health of the residents of aforementioned areas (Fone et al., 2014; Shouls, Congdon, & Curtis, 1996). It is

not totally new in Swedish context neither — studies were conducted in Sweden (Faskunger et al., 2009; Mezuk et al., 2013) and some were deliberately examining association between type 2 diabetes and the level of neighbourhood deprivation (Andersen et al., 2008).

However, most of those articles were written from a public health, rather than a social sciences perspective. Thus, deprived neighbourhoods were considered predominantly as a statistical variable and defined in ratio of deprivation, while the term “deprived” remained unclarified. Therefore, there is a need to elaborate on the term itself.

According to the Cambridge dictionary (2018), the word “deprived” could be used to describe a case of “not having the things that are necessary for a pleasant life, such as enough money, food, or good living conditions”. The Oxford dictionary (2018) proposes that “deprived” refers to “suffering a severe and damaging lack of basic material and cultural benefits”.

Danish researcher H. S. Andersen (2002) points out that nevertheless, “deprived urban neighbourhoods are understood largely as spatially concentrated pockets of poverty”, their emergence cannot be explained simply as a result of increasing social inequality in the urban setting. He emphasises that deprivation and decay are more common for neighbourhoods with particular types of tenures and buildings. These neighbourhoods develop into “magnetic poles” that attract poverty and social problems, and repel people and economic resources in a way that influences other parts of the city. The issue with deprived neighbourhoods emerges above all in cities, where economic development and general growth in wealth in citizens is observed (ibid.). So while some are becoming even richer, others are falling into greater deprivation.

Once an area is labelled as deprived, excluded, exposed, or segregated it often evokes its stigmatisation and an unfavourable public image (Andersen, 2002). Therefore, deprivation becomes a vicious circle — “concentration neighborhoods can turn into breeding grounds for misery because they are labeled as such” (Bolt, Burger & van Kempen, 1998). Thus, deprived neighbourhoods turn into homogeneous areas where mostly those who do not have an option to move are tied up to. So the neighbourhood becomes even more unattractive for people with a bit higher income, supporting a downward spiral of socio-spatial segregation. Areas cannot “recover” from segregation on their own, thus, the assistance from the city is required.

3.2.2 Deprived neighbourhoods in question of health

Due to empirical studies, “who you are” (e.g. age, gender, race, social class) plays an important role in the question of health. However, the area of residence also has a strong influence on it. This was found true for some particular diseases as well as health-related behaviour such as diet, physical activity, smoking and alcohol consumption (Macintyre, Macdonald & Ellaway, 2008a). According to Macintyre (2007), it could be named ‘deprivation amplification’. The term describes “a pattern by which a range of resources and facilities which might promote health are less common in poorer areas”. The term is close to the idea of environmental injustice, when people living in the poorer areas and having the least power

in society are exposed to greater environmental threats to health — such as waste disposal sites, air pollution, toxic factory fumes etc. Generally, wealthier neighbourhoods are healthier than the poor ones (Macintyre, Macdonald and Ellaway, 2008b). Bennet et al. (2011) draw attention to the earlier studies which have shown the association between the neighbourhood's socioeconomic environment and prevalence of type 2 diabetes.

Smalls et al. (2016) state that residing in deprived areas may result in limited access to healthy foods. There may be fewer options for growing vegetables or having a plot in a community garden, limited availability of grocery stores supplying healthy products, an extended variety of fast food places, or other physical or built environment challenges to healthy eating habits.

Thus, many take it for granted that in more deprived neighbourhoods the accessibility to healthy food (like supermarkets) is poorer than in better-off ones. Nevertheless, country context has to be taken into account, as that assumption was based on the data from the US and has proven to be wrong for many other countries. For example, in New Zealand travel distances to supermarkets were shorter in more deprived areas than in more affluent ones, in the Netherlands more socio-economic disadvantaged areas provided higher proximity to food stores (Macintyre, Macdonald & Ellaway, 2008b). It is hard to draw a general conclusion in this regard for all the countries.

However, stressors of the socio-environment², namely neighborhood violence, access to healthy foods or lack of social support, were found to be the barriers to medication adherence (Smalls et al., 2016). Several studies have noted the direct effects of neighborhood characteristics, such as crime, violence, lack of resources, and lack of walking/exercise environment, on health behaviors and outcomes (ibid.).

Fox, Sönsken and Kilvert (2007) have discovered a highly suggestive association of lower educational attainment and higher risk for type 2 diabetes. Educational level is linked with the general socioeconomic status, therefore, the lower the education is, the higher stress levels appear (ibid.), leading to disruption in endocrine function. The other association, noted by the authors (ibid.) is between socioeconomic status and lifestyle as people with low socioeconomic status are more inclined to unhealthy lifestyle patterns. Smoking can serve as an example of such an unhealthy behaviour — as mentioned by Stafford and McCarthy (2005), residents of the most deprived neighbourhoods have 1.8 times higher likelihood to smoke compared to their peers in the least deprived areas.

All in all, it can be concluded that residence in deprived areas makes people more menaced to the risk factors of developing type 2 diabetes. At the same time, as articulated in the previous subchapter, deprivation often goes side by side with segregation as the rest of the city want to denote the “unwanted” area and constructs borders in attempt to do so. Those borders, as discussed in the second chapter are not easy to grip. They prevent deprived areas from merging with other places in town, drawing a line between “them” and “us”. It places a social and psychological burden on the residents of deprived areas. And for the

² Defined by Barnett and Casper (2011, as cited by Smalls et al., 2016) as “the immediate physical surroundings and social relationships within a given environment, such as a neighborhood”.

residents with such chronic diseases as diabetes it could be even harder as they also have to face neglect connected with their condition.

3.3 About type 2 diabetes, its risk factors and possible complications

Diabetes is among the diseases most people have a blurry idea of. Most know that diabetes is connected with levels of blood sugar. At the same time many do not understand the processes behind it and reasons of getting it. Therefore, this section is intended to provide some information about the disease for the sake of the better understanding of the research, albeit it does not claim any medical significance.

To start with, diabetes is a medical condition when too much sugar is circulating in the bloodstream (Matthews, 2008). The hormone that controls blood glucose is insulin, which is usually produced in appropriate amounts in the pancreas. Insulin deficiency — either complete or partial — is the basic mechanism behind diabetes (ibid.).

Type 1 diabetes, when the body cannot produce insulin in decent amounts, occurs in younger population groups, like children and teenagers, while those in middle age are more likely to get type 2. However, recent research shows, that type 2 becomes younger and cannot be seen as an issue of aging (Diabetes Wellness Sverige website, n.d.). One of the reasons for that is the increasing number of obesity among people (Fox, Sönsken & Kilvert, 2007). Also, more women are having diabetes type 2 during the pregnancy, increasing the chances of development of the disease in their children. Significance of this information lies in admitting the obvious fact that children are the future of our planet and if they are getting type 2 already at a young age, they could face more physical, work-related and social difficulties in the future. The American Diabetes Association states that 8 to 45% of newly diagnosed diabetes in children is type 2 diabetes (Erhardt & Molnár, 2004). Similar situation is observed in Japan, Australia and also in Europe: in Germany from examined obese children 1.5% already had type 2 diabetes (ibid.).

Some may say, that European countries are not that high in obesity rates comparing, for example, with Americas. On the contrary, Fox, Sönsken and Kilvert (2007) point out that if the situation is not going to change, Europe in 5 to 10 years is prognosed to face the same obesity epidemic.

Type 2 diabetes is proclaimed to have strong genetic determinants, however, the role of other factors remain significant (Scobie et al., 2009). Thus, even with genetic predominance to it, one can maintain it in “undeveloped” state by healthy lifestyle. Nonetheless, it was revealed by medical research, that some regions are more exposed to type 2 diabetes, for example, the Middle East is highly affected by the condition with a prevalence rate varying between 7 and 22% (Bennet et al., 2011). Carlsson et al. (2013) in their research detect that the most vulnerable to type 2 diabetes population groups are: women born in Iraq, North African countries, South Asia, Middle Eastern countries (above all Turkey and Syria) together with men from the latter region.

Therefore, if more people are being genetically inclined to type 2 diabetes, a closer look has to be taken at the lifestyles and the environment people live in. Generally, there is a substantial connection between risk of developing type 2 diabetes and obesity (Bellou et al., 2018). Obesity could be caused by genetics (Bennet et al., 2011), as well as socio-environmental factors such as diet and levels of physical activity (Smalls et al., 2016).

Bellou et al. (2018) conducted a review of 254 articles on risk factors of diabetes and highlighted the ones which certainly influence the likelihood of getting type 2 diabetes and afterwards grouped them. Talking about urban life-related factors, it was concluded that adiposity, psychosocial, dietary and lifestyle factors play a crucial role. The groups mentioned below should be of the particular interest for policy makers as they could be influenced by city, regional and national policies.

Factor of adiposity (high BMI) was already discussed above, so more attention will be paid to other groups. It became evident that such dietary factors as high consumption of red and processed meat, lack of whole grain products in diet, extended drinking of sugar-sweetened beverages and generally unhealthy diet were among type 2 diabetes risk factors. At the same time, such aspects as moderate alcohol and coffee consumption, generally perceived as unhealthy, have shown positive results on reducing the risk in question (Bellou et al., 2018).

Other determinants of type 2 diabetes are lifestyle factors, including insufficient levels of physical activity, prevalence of sedentary leisure time, TV watching, which is associated with the criterion mentioned before and also smoking (Bellou et al., 2018). It was confirmed, that physical activity plays a crucial role as people having moderate or vigorous levels of physical activity have much lower chances of getting the disease than those living sedentary lives (Salmon, Hume & Ball, 2004). Bennet et. al. (2011) state that migration is one of the factors that also increases the risk of diabetes as it is associated with great levels of stress.

Moreover, psychosocial factors were found to have significant association with risk of type 2 diabetes. They include low educational status and decreased conscientiousness in taking treatment from the disease and were discussed in the previous subchapter.

Having discussed the risk factors of type 2 diabetes, the health-related outcomes of the disease should be also brought up as they help to realise, what consequences people face if no action is taken. According to Smalls et al. (2017), people living with diabetes are not only suffering from the disease itself — they are at a higher risk of stroke, cardiovascular disease and non-traumatic limb amputations. In addition, most common complications of diabetes are eye, nerve, teeth and kidney damages (Fox, Sönsken & Kilvert, 2007).

All in all, type 2 diabetes being determined by genetics, has proven by the research to develop under certain risk-factors. The guile of the disease is that it does not influence life of a person at the early stages, but it has an impact on a quality of life if not treated and most importantly, entails numerous complications which lead to death. Bennet, Groop and Franks (2014) show in their article that lifestyle interventions can reduce the incidence of diabetes by 50%. Therefore, city authorities have to take a closer look at psychophysical, lifestyle and dietary determinants of type 2 diabetes and analyse, how the present urban environment is

fostering or hindering emergence of the disease in the population and which improvements from the city policies side could be done.

3.4 Migration question and health in deprived areas

It has to be articulated in the very beginning of this chapter, that the vast majority of articles analysed regarding migration and type 2 diabetes were issued before 2014. Therefore, the conclusions and statements made in the chapter do not refer merely to the current situation, but reflect the processes ongoing for more than a decade now. This subchapter intends to prove importance of migration and urbanization as established risk factors for type 2 diabetes. Moreover, discussion of deprived neighbourhoods would have been confined without the migration topic as in many cases migration background and living in deprived neighbourhoods go hand in hand (Bennet et al., 2011; Bennet, Groop & Franks, 2014, Faskunger et al., 2009).

When referred to ethnicity in this part, I share the understanding of S. B. Rafnsson and R. S. Bhopals (2009) concept. They highlight in their article (Rafnsson & Bhopals, 2009) that “the concept of ethnicity implies shared origins or social background, distinctive culture and customs, and a common language or religious beliefs“. Therefore, to avoid misunderstanding, I apply ethnicity only in regard to cultural side, ad hoc food and physical activity habits, as they are the most relevant to my research.

One of the facts, affiliated with migration, which could hardly be denied is change in eating habits, as part of appropriation of receiving country traditions. Due to Burns (2004), migrants also often exposed to the worst of the Western food culture, namely, fast food. For example, refugee women from Somalia living in Australia were observed to have a high intake of processed food, like instant noodles, crisps and pizza, as well as substituting food products from Somalian traditional cuisine with more “westernised” (ibid.). The author of the article (Burns, 2004) also mentions that 60% of the women were overweight or obese.

Another factor, connected with migration is quality of medical care in the recipient country. Independent of the health care system, there is evidence that migrants remain undertreated compared with the native population (Testa et al., 2015). It can also be connected with the attitude and discrimination that people experience based on their ethnic origin. Authors also mention, that poorer health in people from high-pressure migration countries can be tightened with the fact, that they are more likely to contact doctors only in case of emergency, rather than for regular check-ups (ibid.). Also, the health care for newcomers in European countries is focused on urgent diseases upon their arrival rather than dealing with chronic issues like diabetes.

The research by Choukem et al. (2014) elaborates on the idea that moving to another country itself has a negative influence regarding type 2 diabetes. Their paper shows, that the median duration of stay of a migrant from Cameroon in France was 15 years before they were diagnosed with diabetes. However, compared with the reference group in Cameroon, migrants were 8.9 years younger at the time of diagnosis. The same pattern was noticed by Faskunger et al. (2009) as during the research on risk of obesity in immigrants and Swedes

in deprived areas the authors found out that most of the Iraqi participants have developed type 2 diabetes after moving to Sweden.

All in all, it could be summed up that authorities have to pay particular attention to the health of people with migration background in deprived neighbourhoods as they are vulnerable in regard to health and in particular, type 2 diabetes. People, who undergo the migration process face incredible stress levels which places them into even a greater risk of developing type 2 diabetes. Besides, many people develop the condition already in their host country, but they are less likely to seek medical help if the health issue is not urgent; also, as it was already described in previous chapters, type 2 diabetes is among diseases which could remain undisclosed for many years, so many do not know about having it. Moreover, it is important to keep in mind not only social, but also cultural aspect of migration as it often leads to mixture of traditions, especially in eating patterns and physical activity. Therefore, authorities have to make sure that, as proposed by Burns (2004), “migrants are encouraged to retain the best of their traditional diet while adopting healthy foods from host country”.

4. Methods

Before moving on to the analysis section, a discussion about methods is needed. The following chapter opens up with the research approach, later elaborates on the research design of the paper and the methods and then explains the selection of the case as well as poses the limitations of the research.

4.1. Research approach

This research being of a sensitive matter, I have decided to include a brief description of myself as a researcher, including my academic stand, so the reader can get a better understanding of the position I sit on.

My interest in the topic originates from my previous experience as an intern at the World Health Organization in the autumn semester 2017. Reading about various diseases, working side by side with public health professionals made me generally more cautious about health. One of the reports I spent the most time working on was a collaborative work of WHO and Gehr Institute about physical activity in the city. It inspired me to investigate that topic on example of Malmö and write a paper about it. While writing, I came across the topic of type 2 diabetes and my attention got caught by its epidemic scale. Knowing that most of the people today are already living in cities, I decided to investigate the topic of type 2 diabetes in the urban setting.

Not having a disease myself, being a voluntary migrant (for educational purposes) rather than being pushed to move to Sweden, I do not have similar experiences as people my paper elaborates on, therefore, my position to this research is of the outsider.

The epistemological approach that is closest to my understanding of urban problems is social constructivism as proposed by Berger and Luckmann (1966). I believe, that borders cannot be approached in the social sciences only on a physical level, contrariwise, they should be treated as a complex construct. Borders, in my opinion, are the results of social interactions and perceptions, institutionalised in beliefs and concepts.

4.2. Selection of the case and used methods

It was decided to base the research on a case study. Gomm, Hammersley and Foster (2010) point out that “‘case study’ refers to research that investigates a few cases, often just one, in considerable depth”. Such an approach was the most fitting to the aim of the paper to open the discussion as it allows to collect more information about specific subject on different levels (ibid.). It was important for this study as due to limitations and unexplored nature of the topic, it allows to get a deeper, rather than more broad and shallow picture of the problem.

The case of the Rosengård neighbourhood in Malmö was picked due to the several reasons. First of all, due to geographical closeness the city of Malmö opens a great opportunity for field observations. Secondly, it provides an example of a mass-housing area, which has fallen into decay and deprivation. Moreover, the case of Rosengård is of immense interest itself as it has undergone a drastic shift in image and perception in the city: from modern perspective neighbourhood to a stagnant and segregated area. Another fact also adds to the value of the area as a case — the Rosengård area is in a close focus of urban planners of the city, who try to change the area for the better and overcome stigmatisation (Parker & Madureira, 2016).

Several methods were used to collect the data for the research. First, a questionnaire was created to be distributed among people with type 2 diabetes via Diabetesförbundet (The Diabetes Association) in Malmö. Diabetesförbundet is a members-ruled non-profit association, aimed at helping people having diabetes by providing information and support. The questionnaire contained open and closed questions about the neighbourhood people are living in, their perception of it, about borders as well as movement-related patterns. Also, the questionnaire included questions about the city of birth of respondents and their parents together with additional question about self-reported ethnicity, which allows to avoid any presumptions. Such form of questions was deliberately chosen as it allows respondents to express their own perception of their identity (Rafnsson & Bhopal, 2009). Such formulation of this question can be not the most representative, but for this research, dealing with a sensitive matter of type 2 diabetes it was more important to be ethically correct and not hurt the feelings of respondents.

Having sent 30 questionnaires to the Association in paper, I got back 12 filled in forms. From analysis of the questionnaires it became clear that the Diabetes Association is working foremost with native Swedish population of older age. All of the respondents were born in Sweden as well as majority of their parents. Moreover, the respondents were living in rather better-off areas closer to the city center. Hence, they are not of a relevant group living in a deprived area I was looking for. Thus, the data gathered from questionnaires was not of a relevance to the topic my thesis was elaborating on. The data was not used in the empirical part, yet, it gave a rich ground for thought that will be brought up in the discussion section.

The other method was an expert interview with researcher from Malmö University as it provided me with a better insight into the situation with type 2 diabetes in the city. At that point I got to understand that making statistical analysis of people living in Malmö myself is not feasible as there is no data collection of the city of Malmö, but of the whole Skåne region. Thus, analysis of secondary data issued by Malmö stad in 2013 was applied instead. Moreover, secondary data analysis involved analysing the article by Sandström et al. (2015) as that study was conducted in Malmö and the topic of it was the closest I can find to my own research.

The borders how they are marked by the city administration were investigated during field trips, using visual ethnography methods, in particular, observations and photography. Photography was chosen as it provides views with an excellent sense of space and place, allowing them to speak for themselves (Garrett, 2014).

Furthermore, analysis of documents issued by the city administrations was applied, as it shows the underlying premises for the strategies and allows the city administrations' perspectives to be investigated. It was then contested by analysis of the report, containing observations of liveliness of places created as a part of regeneration of Rosengård.

4.3. Limitations of the research

There are certain limitations in the presented study. First, it was hard to get in contact with "gatekeepers" in the field, being not part of a medical academic society or at least a medical student. The procedure of "ethical approval", which is obligatory for PhD students, does not apply on master level, therefore, my position while contacting possible respondents was weak indeed. So at the beginning, due to the lack of contacts and navigation in the field of diabetes, a lot of time was spent on getting in touch with the relevant people. All the possible contacts were approached through email. The first letter was sent as early as 15 February 2018, followed up by letters to 10 other potential gatekeepers. The answering rate to my request was rather low. Besides, due to the sensitivity of the topic and absence of the ethical approval, many people rejected to provide any data or give an interview (even though the total anonymity was guaranteed). Among those, Region Skåne regarding the public health inquiry was contacted as it is an extensive source of statistical data, yet due to the lack of ethical approval I was not considered legitimate enough to get access to the data. At the end, it turned out to be possible to get help only from Diabetesförening in Malmö and to have an informal discussion with the researcher in the diabetes field from the faculty of Health and Society from Malmö University. That contact turned out to be one of the most fruitful sources of information on the topic and allowed to get better insights into situation with type 2 diabetes in Malmö. Moreover, even secondary data was not extensive on the topic as no ethnographic publications were found regarding life of people with type 2 diabetes in Malmö.

The other limitation was the language barrier as while I have a sufficient proficiency in Swedish, I am still not a native speaker; this turned out to be a valuable factor while conducting research on such a delicate matter as health issues and a definite complication while analysing official documents issued in Swedish. In addition, the author of the paper has a background in social sciences and not in the medical sphere or public health, so it occurred to be quite difficult to understand and analyse articles written by medical professionals.

Furthermore, the research would have profited from having interviewees from the deprived area itself; from more deliberate data on socio-economic status of patients with type 2 diabetes in the area, as well as from data about their own perceptions of the district. To gain deeper knowledge in that matter an ethnographic methods should be applied, e.g. in-depth interviews, which require a high level of trust between the researcher and the respondent. Presented study did not have enough resource capacity for building such kind of a relationship.

5. Background information of the case

This chapter provides an overview of situation with health and diabetes in Sweden as the readers from Urban Studies field could be not familiar with it. Then it presents in brief the city of Malmö, elaborating on the focus the city has in urban planning. Last part describes scrupulously Rosengård neighbourhood, history of its creation and its current state.

5.1 Swedish health context

In a nutshell, Sweden has good rates regarding public health in the world, life expectancy has reached 80.6 years in men and 84.1 years in women (Folkhälsomyndigheten, 2017). On the other hand, sedentary leisure time remains quite an issue in the country: in 2015 13% Swedish-born people were reported to prefer such a time spent, outnumbered by citizens born outside of Europe, 30% of which do not spend their free time actively (ibid.). At the same time the evidence shows that obesity, one of the major risk factors for developing of type 2 diabetes, has become significantly more present in Sweden over the span of 30 years: from 5% of population in 1980 (Faskunger et al., 2009), to 51% in adult population in 2016 (Folkhälsomyndigheten, 2017) being overweight or obese.

Regarding diabetes, it is estimated, that in Sweden around 5% of population have it, and type 2 diabetes is prevailing with 95% of those (Diabetesförbundet website, n.d). At the same time it is forecasted that 1 in 3-4 people have diabetes without knowing about it (ibid.). The cost of diabetes in Sweden, since 2005 is approximately SEK 11 billion a year (Drevinger, 2017).

Due to the data from the International Diabetes Federation, in Sweden several cases of type 2 diabetes is found in children, however the ratio, according to Erhardt and Molnár (2004), in 2003 was only 0.5%. From the gender perspective, as stated by Carsson et al. (2013), Swedish-born men have a higher age-standardized prevalence of diabetes (3.9%) than Swedish-born women (2.5%). Age-wise, in 2016 diabetes was found predominant in people in the age between 65 and 84 years with 14%, followed by the age group from 45 to 64 with 6.3% having it (Folkhälsomyndigheten, 2017). According to Bennet et al. (2011), the prevalence of type 2 in Sweden has been estimated to be 2-3 times higher amongst immigrants from the Middle East as compared to inhabitants of Swedish origin.

The responsibility for health and medical care in Sweden is shared by the central government, county councils and municipalities. All the hospitals, even if they are located in the cities, belong to a county (landsting) level of regulations. County councils being responsible for public health facilities, can also buy services from private health care providers (Sweden.se official website, 2018), which makes it even harder to have a decent statistical information about ratios of certain diseases.

5.2 The city of Malmö

To understand the background of the case, more extensive information about the city of Malmö itself is needed. The city in Southern Sweden with a population of around 300 000 people, it has undergone transformation from an industry-based town to a city with ambition to appear on the global map.

Over the course of 20th century Malmö was developing mostly due to the shipping industry and harbour which were located here. The recent history of Malmö starts in 1990s, when the industries collapsed, people lost their jobs and the city started to fall into decay. Therefore, in 1994 the new council chairman of Malmö decided to “reinvent” the city (Listerborn, 2017). As an inspiration in building an image of a creative and knowledge-based city, he used the ideas of R. Florida and E. Glaeser.

New direction in city development led to several grand development projects, namely construction of the sustainable Western Harbour (Västra Hamnen) area, of Hyllie district, aimed mostly at Danish professionals (Baeten, 2012) and building of the Öresund Bridge. The new landmark of Turning Torso, the bridge, connecting the city with the international Kastrup airport and Copenhagen, and the creation of Malmö University in 1998 were contributing to the plan of converting Malmö into a global city.

At the same time, problems in the existing neighbourhoods did not evaporate and have deepened instead. Already in the second part of 20th century Malmö became a multicultural city, becoming a home for many refugees from Former Yugoslavia, then Iraq and afterward from many other countries. Most of newcomers resided in areas outside of the city center and such neighbourhoods like Rosengård and Fosie became known as multicultural districts. In 2012 it was estimated that 42% of the citizens of Malmö had a migration background.

The position the city has taken was ambiguous. Mukhtar-Landgren (2008, as cited in Listerborn, 2014) highlights that “in the planning documents of Malmö the municipality on the one hand describes the city as multicultural and embracing the diverse population in a process of becoming a vibrant and creative city based on knowledge economy. On the other hand the municipality has made claims on national level to get help to steer migrants away from the city to other municipalities”.

While attention of the municipality was focused on new perspective areas, some neighbourhoods were falling more and more into decay. It has been reflected in the health data: the differences in health of citizens are remarkable between the neighbourhoods — the gap in life expectancy is more than 6 years and the percentage of population with diabetes is 6% (Bennet, Groop & Franks, 2015). However, already in the beginning of 2000s the city authorities started working proactively towards improving those “left aside” areas.

5.3 Description of the case of Rosengård

“Rosengård in not geographically a suburb, mentally it is”
— D.Fredholm, 2012³

One of the most famous areas in this connection was Rosengård, the neighbourhood with a population of approximately 22 000 people with high proportion of youth (around 16%). The residents are also very diverse — 60% of the inhabitants are born abroad and 86% have a migration background (Listerborn, 2013). The area of Rosengård contains of several smaller neighbourhoods, with various types of housing (mainly mass-housing blocks, but also villas). Being a rental housing area from the beginning, several years ago the municipal housing association MKB has turned some of the estates in the northern part of Rosengård into apartments for sale, which was made only with approval of the city authorities (Parker & Madureira, 2016).

Rosengård was constructed as a part of the “Million Homes Programme” (1965-1974). Sweden was facing severe lack of housing and it was decided, in the flow of modernist tendencies, to make high rise mono-use housing buildings, unified and simple from architectural side, but functional; with extensive green spaces in between dwellings; connected to the city center by straight broad motorways. On the contrast to Gothenburg and Stockholm, where these type of estates are located in the suburbs (Blomé, 2011), Malmö has a more concentrated urban design and the landscape is very flat, thus Rosengård is not as spatially detached from the city as in aforementioned examples.

Nevertheless, Rosengård has been constantly labeled as a dangerous area, as a no-go zone in the media inside and even outside of Sweden (Parker & Madureira, 2016). Such an extensive attention to it has also contributed to the alienation and segregation of the place.

However, it would be wrong to assume, that the city authorities were just ignoring the troublesome situation in Rosengård. On the contrary, over the years there have been several attempts to solve problems. All around the country the large housing estates produced in the “Million Homes Programme” (Blomé, 2011) were targeted with social and physical strategies for improvement and Malmö was a part of it. Renewal “turn around projects” were mostly aimed at rapid improvement of the area’s attractiveness in the eyes of better-off citizens, so they would be interested in moving in there. Covered up by the idea of mixed-areas, in Malmö several projects of a similar kind are on different stages of realisation — they will be scrupulously discussed below. Öresjö (1996 as cited in Blomé, 2011) argues that instead of improving the area, such transformations will make the unwanted households relocate to the other parts of the city and thereby transfer the problems rather than solve it.

In Malmö in line with regeneration strategies, the bus number 5 was introduced, connecting Rosengård with the city centre and further to the Western Harbour. Developing the discussion about transport, in the Rosengård neighbourhood there are no rental bike

³ from the article “Another side of Malmö's infamous Rosengård” in *The Local* (2012, March 2).

stations today. Nonetheless, the area is located on a “bikable” distance from central parts of the city —2,5 km from Bokalerna to Triangeln Station (Starck, 2009) and has a high proportion of young population, which can profit from it. However, the Malmö by bike company has announced (Sandberg, 2018) that as soon as in 2019 several rental stations are planned to be created in the neighbourhood.

In 2007, the calculated CNI (care need index) in the most affluent Swedish neighbourhoods was -52.5 with 87.6 being a rate for the most deprived neighbourhood (Bennet et al., 2011). Rosengård had a CNI score of 61.1, making it one of the most deprived neighbourhoods in entire Sweden. Nevertheless, Rosengård is not a “classic” deprived area. Roads, pathways and housing are quite well maintained. There is a lot of greenery and playgrounds. Moreover, from my own observations I know that there are multiple places for outdoor activities: playgrounds, courts and outdoor gyms.

However, the reality is that the area has high evidence of people having diabetes type 2. The research on the disease, conducted in Rosengård and described by Bennet et al. (2011) involved both native Swedish population and people with Iraqi background. Not denying the aforementioned genetic aspect, researchers concluded, that all the “residents in Rosengård seem to be at higher risk for Type 2 diabetes than those living in other parts of Sweden, [...] what corresponds well with previous studies that reported that the neighborhood socioeconomic environment has a strong impact on the development of the disease”.

6. Empirical data

The empirical part of the paper consists of two major blocks: “secondary data analysis” and “tracing borders in Rosengård...”. The statistical analysis section gathers type 2 diabetes-related data and advocates that the theoretical ideas about deprivation and the disease discussed above are validated. The second part elaborates on the strategies planned and brought to life in the area, combined with description and visual analysis of the borders and realised projects in the area. In the spotlight of the last part is placed the urban development project “Rosengårdsstråket” by Malmö stad and choice of this case is explained in the same part.

6.1 Secondary data

This subchapter presents statistical data on indicators of type 2 diabetes, related to urban planning as well as secondary data found on the related topic. It provides the ground for answering the research question about the connection between type 2 diabetes and borders in Malmö. Factors, relevant to the development of type 2 diabetes in people will be analysed and interpreted. There were many factors mentioned in the third chapter, yet here I will focus on obesity and overweight, sedentary lifestyle, consumption of unhealthy food and trust into people as they are the most relevant to urban planning. As explained before, physical structures in cities, which are not encouraging physical activity, providing access to unhealthy food etc. lead to prevalence of sedentary lifestyles and overweight. Trust is used here, as it has been argued in the previous chapters to play a crucial role in these areas and is shown to affect people’s readiness to spend time outside. The data from the article by Sandström et al. (2015) elaborates on migrant women’s perceptions of physical activity, which is proven to be one of the major factors for development of type 2 diabetes. Therefore, it proposes an insight into the reasons lying behind the statistical data. This chapter reflects my interpretation of that data, taking into account my approach to the problem and previous knowledge about the area.

Trust is one of the pillars of fostering a community feeling or sense of belonging in the neighbourhood (Jacobs, 1961). It influences the appearance of the streets as more people choose to go outside, to move around without a car, to let their children play outdoors — if trust in people around and in the neighbourhood as such exists. As it is clear from the following table (Table 1), retrieved from the official report “Välfärdsredovisningen för Malmö stad 2013” (Malmö stad, 2013⁴), the area of Rosengård had the highest level of lack of trust to other people both in men and women. One of the possible explanations is the alienation and “fear of other” that newly arrived people experience in a new city. As mentioned before, it could hinder people’s willingness to go out of their neighbourhood or even out of their homes.

Being overweight or obese has a direct impact on the likelihood of developing type 2

⁴ The data dating back to 2013 is used due to the fact, that 2013 was the last year when the city produced the report on health and well-being of its citizens.

diabetes once a person has a genetic predisposition to it. With the data mentioned above about the higher prevalence of the gene in people from the Middle East, the following table provides another possible explanation, why there are numerous incidents of type 2 diabetes in Rosengård.

Table 1. Percent of population in the age 18-80 with low confidence in other people by Malmö stad 2013.

Stadsdel	År 2002		År 2004		År 2008		År 2012	
	Kvinnor	Män	Kvinnor	Män	Kvinnor	Män	Kvinnor	Män
Centrum	53	37	48	41	36	30	32	39
Södra Innerstaden	47	46	54	49	45	41	40	41
Västra Innerstaden	43	44	44	42	34	29	38	41
Limhamn-Bunkeflo	34	39	40	34	31	29	32	33
Hyllie	46	51	50	48	42	44	39	45
Fosie	56	49	57	57	47	53	61	53
Oxie	46	46	49	48	36	35	42	36
Rosengård	56	57	66	57	54	57	63	57
Husie	44	41	44	43	40	33	40	41
Kirseberg	45	44	57	53	46	50	38	39
Malmö totalt	47	45	50	46	40	39	42	42

Källa: Folkhälsa i Skåne år 2000, 2004, 2008 och 2012, Region Skåne

Table 2 shows that starting in 2000, the number of people with BMI over 25 has been steadily growing until it reached the number of 54% in women and 65% in men in Rosengård. Taking into account that many people in the area have a migration background from the Middle East, acknowledged to be in more vulnerable position to the risk of type 2 diabetes from genetic side, those two facts are of the high importance for the research.

Table 2. Percent of population in the age 18-80 who are overweight or obese (BMI over 25) by Malmö stad 2013.

Stadsdel	År 2000		År 2004		År 2008		År 2012	
	Kvinnor	Män	Kvinnor	Män	Kvinnor	Män	Kvinnor	Män
Centrum	31	42	28	44	26	41	30	42
Södra Innerstaden	29	45	28	43	39	43	37	42
Västra Innerstaden	30	47	27	45	24	51	28	53
Limhamn-Bunkeflo	31	49	31	54	37	64	32	59
Hyllie	37	51	45	58	45	61	50	62
Fosie	50	59	49	56	50	62	52	66
Oxie	42	61	42	62	51	68	44	64
Rosengård	41	58	51	62	46	61	54	65
Husie	38	55	48	61	48	56	47	67
Kirseberg	47	50	40	53	39	59	41	63
Malmö totalt	36	51	37	52	38	54	40	56
Skåne	37	52	39	56	41	57		

As it was aforementioned, consumption of unhealthy foods, rich in sugar and fat in particular, is one of the major contributors to the growing number of people with developed type 2 diabetes. Looking at it in young population rather than in adults is even more relevant as kids that are exposed to consumption of such products, have higher chances of developing the

disease in the future alongside with obesity. Table 3 depicts the summed up percentage of school children, who reported to consume sweets, chips, cheese snacks and soft drinks almost every day and several times a day (Malmö stad, 2013). In the majority of the neighbourhoods in Malmö the numbers are below or around 30%, while the area of Rosengård has the highest indexes.

Table 3. Percent of pupils in the school year 6 that state that they often eat sweets, chips, cheese snacks and soft drinks or similar by Malmö stad 2013.

Stadsdel	År 2009			År 2012**		
	Totalt	Pojkar	Flickor	Totalt	Pojkar	Flickor
Centrum	72	77	68	16	18	14
Södra Innerstaden	78	80	77	24	25	24
Västra Innerstaden	61	70	53	4	6	2
Limhamn-Bunkeflo	67	78	56	6	8	4
Hyllie	73	74	72	21	21	22
Fosie	76	82	69	30	26	33
Oxie	73	77	69	17	17	16
Rosengård	78	83	73	47	52	40
Husie	73	79	67	19	24	13
Kirseberg	66	73	59	11	9	12
Malmö totalt	72	78	65	21	23	20
Skåne				13	15	11

One of the most frequently mentioned factors in accordance to diabetes type 2 is the lack of physical activity. The statistical findings (Table 4) of Malmö stad (2013) proclaim, that Rosengård can be named the area with the highest percentage of people stating that they spend their freetime sedentary.

Table 4. Percentage of population in the age 18-80 years, that reported low physical activity (sedentary freetime) by Malmö stad 2013.

Stadsdel	År 2000		År 2004		År 2008		År 2012	
	Kvinnor	Män	Kvinnor	Män	Kvinnor	Män	Kvinnor	Män
Centrum	13	21	13	17	11	9	10	6
Södra Innerstaden	20	25	14	17	15	18	16	11
Västra Innerstaden	7	12	12	13	10	8	6	12
Limhamn-Bunkeflo	14	14	9	13	13	8	9	12
Hyllie	20	15	20	18	23	27	16	15
Fosie	34	24	26	31	21	28	23	26
Oxie	23	10	15	16	17	21	16	16
Rosengård	40	34	32	37	31	33	33	27
Husie	16	20	16	17	12	17	19	18
Kirseberg	17	21	17	17	12	21	19	18
Malmö totalt	19	20	17	20	16	18	15	15

It must be noted, that in 12 years from 2000 till 2012 there is a noticeable improvement in that index — in 2012 less people reported to have an inactive lifestyle compared to 2000. Bennet (2017) warns, that one has to be careful with self-reported data on health as “once

people have to report their own habits, they tend to describe them better than they actually are — especially about physical activity”.

For this section the analysis of the secondary data from the article by Sandström et al. (2015) was conducted. The authors of the article (ibid.) performed a study on levels of physical activity among migrant women in Malmö and their attitudes towards and experiences with it. The respondents migrated from Bosnia, thus cannot represent the other groups with migration background. Yet that research provides a better understanding of the possible reasons behind lack of physical activity among migrant women in Malmö. The study was not focused on women with health issues, or in particular type 2 diabetes, nor was it mentioned in relation to any of the women. Therefore, those women did not have the same circumstances as the ones having type 2 diabetes knowing about their diagnosis as they did not get a specific advice to exercise more for the medical reasons.

The study results depict barriers by and large of a social kind, rather than physical, yet they provide a good food for thought. The researchers have revealed that first of all, the women from the rural areas reported loss of natural physical activity (for example, while working or doing household duties), while they were not used to the concept of exercising just for physical activity. One of the respondents said “... we walked up and down the hills and there was no need for exercise. I was as thin as a stick” (Sandström et al., 2015). In the same line, not having experience with planned physical activity hindered women from even trying it. Another factor was climate as some reported a relation between times spent actively outdoors (e.g. walking) and the time of the year as during summer women were more likely to be active. Another factor obstructing physical activity is interests and duties that women have. Among those could be named family, work, school and club activities; also, some respondents simply do not perceive physical activity as an interesting and meaningful leisure-time activity. Watching television and socializing with the family were inactive occupations, prioritised over physical activity.

In a nutshell, the study Sandström (2015) shows that “family plays a major role and since these women were not only migrants but also refugees [...] they might have experienced loss of family members, so to keep close to family and friends was important to them”. Economic conditions had a significant role as well. Diet was also mentioned in the research (ibid.) and the women shared that their diets had changed radically since they came to Sweden. The reasons behind that they explained as the lack of time, prices and limited supply, preventing them from eating traditional food, which they consider to be more healthy.

Another noteworthy conclusion of the research was that activity level during adulthood depends on the experiences of physical activity earlier in life. Earlier research by Schäfer-Elinder and Faskunger (2006 as cited in Sandström et al., 2015) shows that previous experience with exercising among migrant women in Sweden had a higher significance than such factors as duration of living in Sweden or their language skills.

Substantial for this paper is that in the research by Sandström et al. (2015) none of the women listed lack of facilities among the obstacles for the physical activity: “The problem was to find an activity that felt suitable or was affordable”.

6.2 Tracing borders of Rosengård: development strategies and visual ethnography

Moving from the city scale to the neighbourhood level, in this part I focus specifically on Rosengård. The previous part has demonstrated the lack of physical activity and high proportion of people leading sedentary lives in the area, so in this part I try to show connection between those factors of development of type 2 diabetes and borders.

The problems of segregated areas within Malmö is acknowledged and addressed in several of the city's strategies. To get a better understanding of the public approach to health in connection to urban planning the following documents were analysed: Report of Malmö Commission (Commission for a Socially Sustainable Malmö, 2013), Comprehensive plan (Malmö stad, 2014), "Planprogram för Törnrosen och del av Örtagårdstorget" (2015) and "Användandet av offentliga platser på Rosengårdsstråket" (2017). Rosengårdsstråket was chosen as the main focus for this chapter as this development project was aimed at unifying the East (Rosengård) and the West (Västra hamnen) of the city by a pedestrian and cycling path stretching through the city center. Therefore, unifying as such includes tearing down the borders, so it is a representative example of how the city deals with such issues. All the phases of the project were realised, so today there is a chance to evaluate the project's performance and not just an intention.

The Commission for Socially Sustainable Malmö (2013) states that "Good health is a prerequisite for a society to grow and develop socially, economically and ecologically". The Commission acknowledges the role of social urban factors in question of health and takes into account the problem of bad health in segregated neighbourhoods, paying extra attention to the segregation itself. The report (Commission for a Socially Sustainable Malmö, 2013) was the first step for accepting health as one of the prioritised action areas. Creating a healthy city is mentioned as one of the priorities in the Comprehensive plan (Malmö stad, 2014). The same document mentions that "physical and mental barriers should be bridged through building, for example by densification along certain roads, transforming them into city streets" (ibid.).

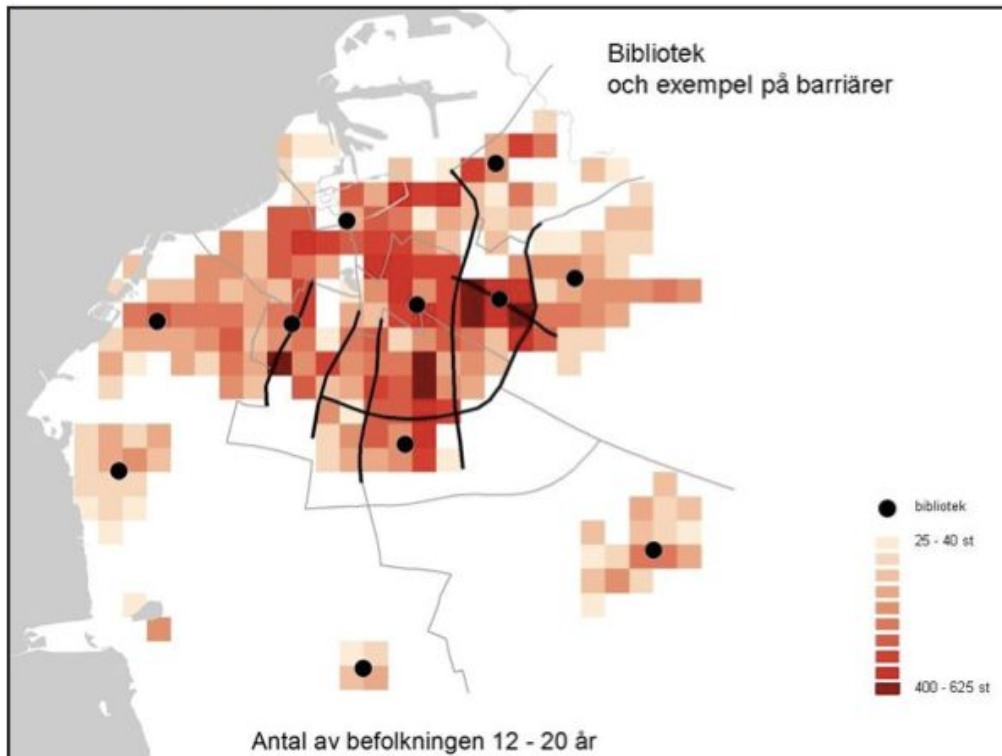
The Commission's report directly articulates that an absence of physical barriers to walking and cycling is directly connected to health. The Commission (Malmö Commission, 2013) also states that it is in the hands of the municipality to "remove spatial barriers between segregated areas [...]. Urban planning as a tool therefore provides the opportunity to transform the physical barriers that separate residential environments into more linking areas, change infrastructure for improved access, transform roads into city streets and reinforce routes through mixed functions".

One of the important highlights of the report is that segregation should be addressed from both sides, rather than just from the "victim side" (ibid.). Segregation becomes one of the objectives the Commission advises to tackle, proposing to transform barriers into linking elements between the areas. Densification is supposed to bind districts better to each other, mixing different types of tenure in the area. More vibrant street life should be created by

increased security and extended number of services (ibid.). The report (Malmö Commission, 2013) elaborates on the importance of sustainable modes of transport in this relation.

According to the map (Figure 1) from the article by Dock et al. (2012), there are several borders that are in or around the area of Rosengård, namely highways of Inre Ringvägen, Amiralsgatan and Trelleborgsvägen. As mentioned in the second chapter, Lynch (1960) proposes that railways and motorways are serving as borders, cutting territories from each other.

Figure 1. The map with borders in Malmö from Dock et al. 2012



Development of Amiralsstaden is an umbrella project that should by physical interventions be health-promoting and bridging barriers. It is a project about creating a new environment and perception of the area around Amiralsgatan. One of the steps is turning this road with intense traffic, being one of the main barriers dividing the city, into a city "street" with space for humans, not only for cars. Another barrier is the Continental train line, is supposed to be bridged by creation of a new railway station. Redevelopment involves as well "densification" of the area by new housing and mixed type buildings (Malmö stad, 2015). Today the area has a variety of lifted pedestrian crossings and tunnels, stretching under the highways or railways (Figures 2- 5).

Therefore, the clear perception of entering another zone, of crossing the border appears, even though the areas "before" and "after" the border do not differ from each other that much income-wise. However, "after" the railway bridge, right where Rosengård starts, Amiralsgatan becomes much wider, creating a feeling of the highway outside of the city rather than inside it. Lower density of houses contributes to that feeling as well.

Figure 2. Photo of the tunnel under Västra Kallarpsvägen



Figure 3. Photo of Amiralsgatan under the railways



Figure 4. Photo of the “bridge” of Rosengård Centrum



Figure 5. Photo of the bridge over Amiralsgatan



Figure 5 depicts, how little space is left to the pedestrians and bikers on Amiralsgatan. It is also visible, that pedestrians and bikers could move only on one side of the road on certain parts. And there is certainly enough space for them — the street has 111 m in its widest place.

Rosengårdsstråket: plans

Rosengårdsstråket is a project, pervading two parts of Rosengård: Törnrosen and Örtagården. It is a part of the overarching project Amiralstaden and was one of the early parts of it being brought to life (started in 2009). In December of 2018 another big part of Amiralstaden is planned to be finished— Rosengård train station. The station will be a part of a Circle Line, connecting districts in the outskirts of Malmö with the Central station, Triangeln, and Hyllie and later with Ystad and Copenhagen.

Rosengårdsstråket is a “path” for pedestrians and bicyclists, which at the same time incorporates several public places along it. They were intended to increase safety and also to turn the “path” into a meeting place and a transport link for the citizens of Malmö. Apart from the bike lane, Rosengårdsstråket consisted of the following development projects: Örtagårdstorget and Bokalerna, the Red Carpet project (Rosens röda matta), and Culture Casbah (has not been built yet).

Örtagårdstorget is a former parking lot, which during the development process was rebuilt into a square. It was envisioned as a meeting and leisure spot for the local residents. The design of the square also allows to transform it into an event venue on special occasions. On one side of the square, separated from the rest of the space by the biking lane, Bokalerna is located. Once used as just a residential building, in 2009 the house was redeveloped to host several small local businesses. MKB took the leading role in the project in order to establish the long-run positive results for its housing units (Parker & Madureira, 2015). Bokalerna are supposed to provide more opportunities for local residents to create their businesses. From a design side they were conceived to cultivate social interactions, which now are happening under the protruding ceiling. The whole venue was inspired by the image of an oriental bazaar.

The Red Carpet project was brought to life in 2013 with the conversion of a parking spot into an “activity space”, which was aimed at young people, specifically girls. Previous research has proven them to be underrepresented in places of activities in Rosengård comparing to boys (Björnson, 2013). The built elements include space for events and activities as well as playground components, such as a climbing wall. It is a unique project based on the participatory approach to planning, which is several times mentioned in strategies of Malmö. So, the city planners involved several local girls into the planning process.

Another part of the development of Törnrosen and part of Örtagård, which yet has not been brought to life is the Culture Casbah — a collaborative project of MKB and the municipality. The Culture Casbah is a tower, which is planned to be created next to the biking line of Rosengårdsstråket. The Planprogram (2015) comprises grand changes in the built environment of the area. In addition to the tower, which is supposed to become a new

landmark of Malmö, and host various facilities— from a library to a rooftop cafe as well as variety of businesses, the project contains low rise new housing, redevelopment of roads and creating even more public spaces along Rosengårdsstråket. As a part of construction of the Culture Casbah project the tunnel (Figure 2) will be demolished and the crossing will be on one level, giving priority to Rosengårdsstråket (Malmö stad, 2015). In the last phase of the program it is planned to make a community center at Törnrosensplats. Development of new houses in that area is heavily dependent on opening of Rosengård station as walking distance to it is one of their main benefits.

Rosengårdsstråket: reality

Due to limited time I was not able to make field observations on the locations of Rosengårdsstråket over a longer span of time. Therefore, the research “Användandet av offentliga platser på Rosengårdsstråket” (2017), conducted in August-September 2017 was proven to be very handy. It is a supply of an extensive data based on observations made between Enskifteshagen och Rosengårdsbiblioteket, which is the part of the project, where stråket enters the neighbourhood and crosses the railways. It is also supported by my own observations documented in photography in Rosengård in May 2018. All the photos were taken as part of the research during my field trips on Saturday afternoon (12. 05. 2018) and Sunday morning (13.05.2018), while observations were made on both days on the morning (10-11 am) and evening hours (6-6.30 pm).

Figure 6. Photo of “Zlatans” tunnel under the railways, “entrance to Rosengård”



The group of researchers of “Användandet av offentliga platser på Rosengårdsstråket 2017” made observations at the spots of Rosengårdsstråket, including those described above. I

paid particular attention to the data from those points and Zlatans tunnel. The tunnel is an important point as it gives a broad picture of overcoming the border of the railroad.

As expected, the tunnel was mostly used for transport purposes, more specifically, for biking and walking. An interesting observation was that one of the main reasons to stop in front of the tunnel (Figure 6) was to take a picture of the citation of Zlatan Ibrahimović: “You can take a boy from Rosengård, but you cannot take Rosengård out of him” (“Man kan ta en kille från Rosengård, men man kan inte ta Rosengård från en kille”). At the same time, from my own observations I came to the conclusion that the tunnel is a clear entrance of the area as on the other side of it is stated “Welcome to Rosengård”.

Observations at Örtagårdstorget (Figure 7) have shown that the biking lane between the square and Bokalerna stores has a heavy traffic in mornings and afternoons. Also, some parts of the square are used for parking a car while the driver goes for a short shopping trip at the stores. The people who stay for longer periods on the location are mainly men. The men sit next to Bokalerna or on benches on the square while eating or talking with others. The women moving on the spot do not stay for as long as men do, they shop and then leave the square.

Figure 7. Photo of Örtagårdstorget



When it comes to Rosens Röda Matta, observations show, that the space is quite poorly used. Despite all the physical structures available on the site and encouraging different forms of active use, it is a place with few activities. The benches on the lifted level are mostly empty as well as the “playground”. The main users of the site are those cycling or passing by on their way.

Researchers acknowledge a high quality of physical environment to Rosens Röda Matta (Figure 8) and state that it is outstanding even in comparison with other districts of the city; yet it does not attract people neither from the area itself, nor from the neighbouring areas. At the same time, that project is of a high importance if we talk about health and urban planning as it proposes a playground for active time spending and was designed for girls. So the Röda Matta project is an example of how even very fine planning cannot attract people alone if they do not want to go to the area in the first place.

Figure 8. Photo of Rosens Röda Matta



Women and girls were spotted to spend time mostly around Rosengård Centrum. During the observations it was the only place where women stayed as a group for long. A general conclusion drawn by authors (Malmö stad, n.d.) from the observations is that the places that women visit are commercialized sites.

In a nutshell, from that field study it can be noticed that the percentage of men is prevailing over the number of women spotted during the observations at all locations. As mentioned above, Örtagårdstorget tends to be a place for men to meet and spend time. One of the most apparent aspects of Rosengårdsstråket is the lack of women, above all, young girls. Neither at Örtagårdstorget, nor at Röda Matta are they dominating the space or at least equally presented. So, if women are not being outside even in their own neighbourhood, how can they have high levels of physical activity? As one of the researches (Malmö stad, n.d.) states in her reflections in regard to females using the space (especially young girls), "it is

necessary to understand the cultural background and find solutions where they can be more integrated and feel welcomed in the public space”.

Figure 9. Photo of the barrier on the pedestrian and bike lane next to Rosengård library



Furthermore, the barriers were spotted not only on the “borders” of the area, but inside it as well. For instance, the Rosengårdsstråket stretches till Rosengårds library, and between Rosengård Centrum and Rosens Röda Matta has two “barriers” (Figure 9), which supposedly should make cyclists slow down, but in reality it created human and bike jams on those spots of a lively route.

7. Analysis

The report by the Malmö Commission and the Comprehensive plan give an overview of intended changes in the area. "Planprogram för Törnrosen och del av Örtagårdstorget" portrayed concrete changes that the city authorities want to make in the area. After reading these documents and looking at their implementation in the city, several conclusions were made.

All in all, the city recognises health as one of the key problems in Malmö and mentions it several times in the documents. Particularly after the report of the Commission for a Sustainable Development, health became widely used in the relation to urban planning by city authorities as it is a neutral and positive term, hard to argue against. The term "health-promoting urban planning" was introduced to be used in the planning discourse (Malmö Commission, 2013). Borders, both geographical and mental, are indicated several times in the documents and the will to overcome them is even expressed in the objective of one of the strategies proposed by the Commission. The Commission proclaims that the city can destroy the borders by a joint movement from both sides: making Rosengård more interesting to visit for everyone and making people from the area feel more "belonging" in central areas of the city.

Suggested ways to deal with borders are densification, a better transport connection and vibrant street life. Those ideas are embodied in the "Planprogram för Törnrosen och del av Örtagårdstorget". The Planprogram states that new housing for sale will be created in the area and one of the aims of it is to bring together people with different social and economic backgrounds. Additionally, the Planprogram suggests different interventions to connect Rosengård with the rest of the city, among others the bus number 5, the new railway station and Rosengårdsstråket's direct biking path from the city. Talking about active street life, this objective found its shape in the creation of several "spots of interest", meeting spaces along the Rosengård "path". Even though the planning department was creating quite unique places, taking into account the needs of the area and even involving target groups into the planning process, the report "Användandet av offentliga platser på Rosengårdsstråket" (2017) portrays that none of the places were as actively used as planners have hoped. At Bokalerna most of the interactions were noticed right next to the stores. Thus, the project did not manage to expand its "vibrant" power further than the edge of the shops and did not create a truly vibrant place at Örtagårdstorget. Moreover, it creates quite limited space for business possibilities, which remained on the level of fulfilling only neighbourhood needs.

So, one of the key findings from "Användandet av offentliga platser på Rosengårdsstråket" (2017) was that there is no place along Rosengårdsstråket that is dominated or owned by women. They tend to group next to Rosengård centrum, not using the public spaces to a full extent. At the same time, as it becomes clear from the statistical data from the previous chapter, the creation of outdoor spaces should be aimed at women deliberately due to high levels of obesity and sedentary time in them. Furthermore, the analysis of secondary data has revealed the importance of family for women with migration background. Therefore the question is: maybe the aspect of high importance of time spent with a family should be

closely considered while creating public places and facilities? Nonetheless, I do not intend to underestimate the attempt to involve girls into planning of outdoor spaces. Rosens Röda Matta was an important initiative, especially taking into account the findings by Sandström et al. (2015) about the crucial role of physical exercises in early life on the probability to be physically active in adulthood.

During the observations it was also detected that borders are visible today in the area. When one enters Rosengård either by foot or bike under the railway, or by going under the bridge on Amiralsgatan, the feeling of entering a new zone emerges. The image of the area changes as well, for example, at "Zlatans tunnel", there is a sign "Welcome to Rosengård". Hence it can be concluded, that the changes that were made were not sufficient to crash the feeling of encountering a border. Another noteworthy observation is that there exist plenty of borders within the area: pedestrian zone dead ends, tunnels and bridges, fences to slow down the traffic on the bike lanes as well as gates surrounding the houses, breaking the flow of pedestrians.

To sum up, the text by B. Bartley (2000) describing the case of a neighbourhood in Dublin seems to depict Rosengård itself: "The structure of the roads [...] is such that anybody who does not need to visit the area for a specific purpose will automatically bypass it. Of course, it is unlikely that the residents from more prosperous parts of the city would seek out the limited range of facilities [there] [...] in preference to [...] more extensive range available in their own localities". Rosengård does not provide any attractions of interest of the residents of the inner city, all of its facilities are aimed at the local users. Amiralstaden, however, is planned to create points of interest for other citizens too; combined with better transport access, the project is of high hopes for the municipality. At the same time, the creation of the station will probably not contribute to overcoming the borders, it will just improve the connectivity, but will still remain as a fragmented spot. The district of Hyllie is also easily accessible by the train and there are even buses going there, yet it still feels detached from the rest of the city. If not for the Emporia shopping center, it might have stayed as unappealing for Malmö citizens as Rosengård. Therefore, the creation of new landmarks is a big step forward, so that people from the rest of the city would have a reason to go there.

8. Discussion

Today many people are at a higher risk of developing type 2 diabetes in Malmö. Health is in the legislation of the county, however, it is not possible to prevent the spreading of type 2 diabetes by the instruments of the health sector only. Therefore, the city authorities have to step in and support the health sector by actions in urban planning.

The first research question about how health problems can, in particular type 2 diabetes, be tackled within urban planning, thus be answered as follows. Not just proclaiming orientation on health in city strategies or fostering active transport, but reducing the borders, both physical and mental, health problem can be addressed, so that people feel more engaged into the planning process, and their actual needs are taken into account. It has a psychological effect on people to feel that they are not closed down in their areas, but welcome in other city parts. To move around more, people have to feel their right to the city.

With the help of the literature review and empirical part it became possible to answer **the second research question** about connection between type 2 diabetes, deprived neighbourhoods and physical borders. As the literature shows, type 2 diabetes is more prevalent in the population of deprived neighbourhoods. Yet, it is not always the lack of healthy food or facilities. It is about borders and lack of trust, that make the outdoor areas to be perceived as dangerous or unwelcoming. It is also about creation of spaces on general principles of planning, instead of taking a thorough look at the residents of the area and their habits and needs. Therefore, from the outside it may seem that all the built structures for healthy lifestyle are present, it is just people, who do not use them. Yet, it just means that existing outdoor spaces do not fulfill the needs of the people. Therefore, deprived neighbourhoods should be in focus of policy makers, including health status improvements. Borders, being often surrounding deprived areas should receive particular attention as they “rigidify” the problem.

Examining the specific case of Malmö, **the third research question** about how the connection between type 2 diabetes and borders manifest in the case of Rosengård, Malmö got an answer in empirical chapter and analysis sections. All in all, Rosengård, the deprived neighbourhood in Malmö, has shown to have high percentage of people with type 2 diabetes. Factors related with diabetes, e.g. obesity and sedentary lifestyles, are on exceptionally high levels there as well. At the same time, borders surrounding the area are acknowledged by the authorities and traced during the field observations. The city administration is trying to overcome them in its strategies, however, has not yet succeeded.

Indeed, the city of Malmö is working towards this goal of overcoming the borders and reducing the health differences in the city. The attitude to borders the city applies even correlated with the ideas of K. Lynch (1960) about edges: Malmö stad want to turn barriers into linking elements. Nonetheless, as it becomes clear from the analysis, borders are still present even when connecting development projects are brought into life. What are the possible explanations for it?

It takes time to create trust

One of the possible explanations can be the traceable lack of trust. Trust is the cornerstone in question of making people move in outdoor settings within their area and between city districts. As J. Jacobs (1961) writes about trust and time, it is hard, almost impossible to “implant” the trust into the neighbourhood. She suggests, that trust is a material of respect and privacy. Jacobs states that it cannot be artificially cultivated in special places for socializing, it can only grow with time if there are also some stores and services in the space that help that trust growing. Moreover, fences and borders, so present in Rosengård, even within the area, indicate the lack of trust and even fear. An increased level of trust will not only make the place feel more interesting and safe for the local residents, but also will help to attract people from outside. As understood by Jacobs, trust is created during numerous small interactions on the streets. Therefore, maybe Rosengårdstråket will become lively and actively used, it just needs time as trust grows, it does not emerge over the course of a night. So the question remains: does that “ordinary” trust need more time to grow in Rosengård to help tearing the borders down?

Treating borders

The other possible explanation is that the borders are perceived in one way, while they are actually different. As mentioned above, strategies used by the city of Malmö correspond very well with ideas of Lynch or turning borders into “seams”. Yet, if the target is right, but the result is not achieved, maybe borders exist not only in the physical dimension? And while city authorities are trying to tackle them, thinking that mental borders are where the physical borders are, but maybe there are many more borders?

Diabetesförbundet is working mostly with the elderly Swedish population, and it was also mentioned during the dialog with the researcher from Malmö University that people with migration background do not go there. The same information has been proven by the data from the questionnaire. It seems to be quite an interesting observation as the organisation, which is supposed to help those living with diabetes does not cover the growing group of people with type 2. The logic behind the decisions not to seek help there can be various, but I assume that one of the possible reasons is that people with migration background feel a mental border, hindering them from going there. As said, current members are older than people with type 2 diabetes in Rosengård, all of them were born in Sweden, so they can not relate to the challenges, people faced with migration. So, even though residents from Rosengård with migration background having diabetes are not restricted from joining Diabetesförbundet, they can feel a mental border of not belonging there.

At the same time, the city is planning to make the area denser and less homogeneous by building new housing and densifying the neighbourhood. The intention to bring different people together is positive, but it contains the hidden risk of gentrification of the neighbourhood, when improvements in the built environment, followed by construction of the better housing trigger a change of the image of the area. So “unfitting” people have to leave and the former problems are just relocated to other places rather than solved. Thus, maybe

the ideas of regeneration, as described by Blomé (2011), are still at the bottom line while making changes in the area.

Therefore, another question arises: what is the right to the city in Malmö and who has it? According to Lefebvre (1968) and Harvey (2006), it should belong to all of the dwellers of the city, but it can be seen as if the borders are contouring the area, to which non-native Swedish population has a right to. Do people from Rosengård feel their right to the city center as all the other citizens or do they feel unwanted there? Do people from other parts of the city feel a right to the area of Rosengård?

Powerplay in planning approach?

At the same time, from the documents analysed, only Rosens Röda Matta was a project, in which the target group was involved on a planning stage. All the other projects, even Bokalerna, which were supposed to have an oriental look, did not involve people in the process. Nonetheless the planning process today cannot be named directive, there is still a sense that planners try to set how people should use the outdoor space. If the planned activities fail to appear there and all the principles of planning were followed, it is very easy to fall into blaming residents of the area for not using it as planned, due to their culture, traditions etc.

I hold the opinion that such an approach to planning is of the “tolerance” kind, as described by G. Valentine (2008). She argues that “to tolerate” does not equal “to respect”. Tolerance in her interpretation builds on a position of power. Tolerance is a tool used by privileged groups and does not contain equality. It seems that planners just tolerate the presence of people in those areas, while in their strategies they dictate them a change of their living space, presenting it as “improvement”. The strategies to densify or open up the area also can be interpreted in the same line of thinking. Valentine (2008) writes that recognition and mutual respect are needed instead of tolerance. So, local residents should get more involved into the planning process, so that the changes do not end up in gentrification. In short, creating a development strategy, cherishing the diversity of Rosengård rather than turning it into another area with modern architecture would have been closer to the recognition and respect concept.

As an example, Örtagårdstorget could have been treated not just as a square of local importance, but as a vivid multicultural public space with restaurants, stores and cafes, with the potential to be a landmark of a city-scale. It would have contributed to the creation of encounters, where people get to know better the culture of the “other” on the basis of mutual interest. It could have caused voluntarily crossings of the border from the city center side and yet appraise the identity of the area.

At the same time, if planners take a closer look at the population of the area itself, of their history and needs, it could greatly contribute to understanding the planning. For example, as previously mentioned, time spent with the family is much more relevant to women with a foreign background than physical activity as such. Hence, maybe instead of pinpointing to people that they should lead a more active life, the city can create outdoor areas, with

different options for activities for people of all ages. This could stimulate activity in people without enforcing them to do so.

In addition, there could be a matter of a mental border between residents of the area and the authorities. Local residents have to be trust authorities and feel welcomed to share their opinions and to collaborate with planners. Otherwise, money will be spent and new public spaces created with no use.

8.1 Further research

Women and type 2 diabetes

As emphasized in previous chapters, one of the most vulnerable groups for type 2 diabetes today in Sweden are women with migration background from the Middle East. Hence, a gender-focused study about women in Malmö and the condition could make a tangible contribution to the field of urban sociology and urban studies. A healthy lifestyle, including a decent level of physical activity and healthy eating, is a crucial moment when one talks about such a disease as type 2 diabetes. Previous research (see Listerborn 2014) demonstrates, that women wearing a veil outside of their neighborhoods face aggression and discrimination, which has a crucial effect on their willingness to even go into the city. It would be interesting to see, how they perceive the city, where do they feel the borders and what is their attitude to new development projects. Those factors can influence their levels of physical activity and in its turn, outbreak of type 2 diabetes.

Does mixing help?

One of the questions I had after my research was if the health of people from deprived neighbourhoods improve, once they move to more affluent areas. As stated before, health, including the rate of type 2 diabetes, in more affluent areas is better comparing to more deprived ones. Taking into account that the concept of having mixed neighbourhoods remains canonic for a long time, it would be valuable to conduct a study about improvements in health, and particularly, type 2 diabetes, among those, who moved from poorer areas to better-off ones. A study from the USA, in which more than 4500 families participated in a relocation program (some moved and some stayed and were a control group) showed some positive results in the beginning, but a long-term follow-up research has proven that for the age group of people between 15 and 25, it had no significant improvements in health, behaviour or education levels compared to the control group; yet, differences were noticed between girls and boys (Cheshire, 2007). However, as mentioned above, reality in Sweden and USA often does not entirely correlate, thus, it would be interesting to see the results of a similar study in Sweden as it could provide extensive knowledge on the impact of relocation on health.

9. Conclusion

The research intended to reinvent the topic of health in urban planning. Reality of today is that in the vast majority of Western cities there are no severe infectious epidemics; instead, there are health challenges of another kind. Alarming levels of obesity and lack of physical activity—risk-factors for type 2 diabetes — are among them.

Moreover, as shown in the literature review chapter, diabetes type 2 is genetically stipulated, so some people have genetic inclination to developing it. One of the biggest groups at risk is people with the migration background from the Middle East. The data has shown (Bennet et al., 2011) that native Swedish population has 2-3 times lower chances of developing type 2 diabetes than people from that region.

According to Andersen (2002), in cities with growing economy deprived areas are very likely to emerge. As seen from the history of Malmö, the city is no exception. The area of Rosengård has one of the highest ratings in deprivation in Sweden. Overall, residents of deprived neighbourhoods, no matter their country of origin, are more disposed to the risk factors of type 2. Indeed, medical research proves that there are quite some people having type 2 diabetes in that neighbourhood. Hence the city has to take into consideration health of that large group of people, vulnerable to the disease and look at the risk factors of it.

Physical activity and obesity rates in Rosengård are on the dire level with around 30% of people having sedentary lifestyles in the area and around 60% being overweight (Malmöstad, 2013). At the same time trust levels are low. Due to the roots of the neighbourhood in the modernist ideas, it has a physical environment that can hinder evolution of trust. Trust is of utmost importance in questions of physical activity and well-being as such. Rosengård is cut by the highway and railroad from the rest of the city, which serve as physical borders. Thus, the borders can negatively influence residents' physical activity.

Thus, the health sector cannot cope with diabetes type 2 alone, the city has to fight against its causes, grounded in the built environment. So, what has been done in Malmö? In general, the city of Malmö has adopted the healthy approach in planning, referring to health in all the levels of planning documents for the neighbourhood. The borders are not forgotten either. The intention to overcome them and to connect or even “merge” Rosengård with the city is proclaimed and planned in “Planprogram för Törnrosen och del av Örtagårdstorget” (2015). Nonetheless, merging two parts together means that they are treated as equally important. However, the strategy seems to be aiming at bringing the new image of progressive and modern Malmö into the area, by building of new housing and train station and plans to create new points of attraction. Thus, if not proceeded carefully, it could lead to gentrification of the area. At the same time,

Moreover, one part of the plans is already brought into life. Rosengård stråket is a pedestrian and biking “path”, connecting the central districts with the neighbourhood, which

was hoped to create a “thread”, knitting the parts of the city together. The approach to it could be named canonic — instead of just making the transport route, the city tried to “revitalise” the area and turn the path into an interesting passage. In reality the research “Användandet av offentliga platser på Rosengårdsstråket” shows that the public spaces are not as actively used as planned, disregard their high quality. And there is still a clear feeling of crossing the border even if one follows the path.

All in all, the borders are still present around the area and as it was proposed in hypothesis, they are locking down people in the area. Worth mentioning, located in the city center the Diabetesförbundet, which should help people with the disease, has an overwhelming number of members of Swedish origin of older age, while today they are not the most vulnerable group.

Hence the question appears, why do the strategies to overcome borders around deprived neighborhoods do not succeed? Not denying that the issue is complex and does not have a single answer, I propose, that one of the possible reasons is the approach the city apply to borders and Rosengård as such.

First of all, trust, an issue of utter importance, lack of which was obvious in the area can be an answer. The strategies of the city incorporate the term, as trust is the main component for creating a vibrant street life and increasing the livelihood and safety feeling in the area. However, I believe that the urban redevelopment projects in Rosengård have to be given more time as results of planning disclose not that fast. So trust, cultivated by them, as proposed by J. Jacobs (1961), does not emerge over a night.

I believe, that physical borders are reinforced by mental ones. And these borders cannot be easily torn down. As Madanipour (2000) writes, this sort of borders is based on our perceptions and fears. Today Rosengård does not have points of attraction for the rest of the city, while the reputation as a no-go zone is still in the media. So, the fear and lack of points of attraction prevent people from the rest of the city to go into the area; from the other side, prejudice that people, looking different from native Swedish population (Listerborn, 2013), face that can stop them from getting into the city.

Thus, the question of the right to the city appears. Public spaces in the city should be welcoming for everyone, all city dwellers have to feel right to it (Harvey, 2006), disregard where they live. It will help to create better unity among the citizens, so no one is left behind. In addition, people have to be invited into the planning process and their interests have to be truly embraced in it, rather than tolerated. If this point is ignored, the city planning can fall into, what G. Valentine calls, “tolerance”, which is a position of power from a stronger side, rather than mutual respect. Position of power can not help in tearing down the borders, building trust and therefore, improving health.

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